HISTORIC AND DESIGN REVIEW COMMISSION

June 19, 2019

HDRC CASE NO:	**2019-228**
ADDRESS:	218 PARKVIEW DR
LEGAL DESCRIPTION:	NCB 6918 BLK LOT 17 AND W IRR 25 FT OF 18
ZONING:	R-5, H
CITY COUNCIL DIST.:	3
DISTRICT:	Mission Historic District
APPLICANT:	Abraham Diaz/City of San Antonio
OWNER:	Kenneth and Rebecca Minica/PALENCIA MINICA REBECCA
TYPE OF WORK:	Demolition with new construction
APPLICATION RECEIVED:	April 17, 2019
60-DAY REVIEW:	August 15, 2019 (60 day demolition hold)
CASE MANAGER:	Edward Hall

REQUEST:

The applicant is requesting a Certificate of Appropriateness for approval to:

1. Demolish the existing, historic structure at 218 Parkview.
2. Construct a new, 1-story, single family residential structure.

APPLICABLE CITATIONS:

UDC Section 35-614. – Demolition

Demolition of a historic landmark constitutes an irreplaceable loss to the quality and character of the City of San Antonio. Accordingly, these procedures provide criteria to prevent unnecessary damage to the quality and character of the city's historic districts and character while, at the same time, balancing these interests against the property rights of landowners.

(a)Applicability. The provisions of this section apply to any application for demolition of a historic landmark (including those previously designated as historic exceptional or historic significant) or a historic district.

(3)Property Located in Historic District and Contributing to District Although Not Designated a Landmark. No certificate shall be issued for property located in a historic district and contributing to the district although not designated a landmark unless the applicant demonstrates clear and convincing evidence supporting an unreasonable economic hardship on the applicant if the application for a certificate is disapproved. When an applicant fails to prove unreasonable economic hardship in such cases, the applicant may provide additional information regarding loss of significance as provided is subsection (c)(3) in order to receive a certificate for demolition of the property.

(b)Unreasonable Economic Hardship.

(1)Generally. The historic and design review commission shall be guided in its decision by balancing the historic, architectural, cultural and/or archaeological value of the particular landmark or eligible landmark against the special merit of the proposed replacement project. The historic and design review commission shall not consider or be persuaded to find unreasonable economic hardship based on the presentation of circumstances or items that are not unique to the property in question (i.e. the current economic climate).

(2)Burden of Proof. The historic and design review commission shall not consider or be persuaded to find unreasonable economic hardship based on the presentation of circumstances or items that are not unique to the property in question (i.e. the current economic climate). When a claim of unreasonable economic hardship is made, the owner must prove by a preponderance of the evidence that:

A. The owner cannot make reasonable beneficial use of or realize a reasonable rate of return on a structure or site, regardless of whether that return represents the most profitable return possible, unless the highly significant endangered, historic and cultural landmark, historic and cultural landmarks district or demolition delay designation, as applicable, is removed or the proposed demolition or relocation is allowed;

B. The structure and property cannot be reasonably adapted for any other feasible use, whether by the current owner or by a purchaser, which would result in a reasonable rate of return; and

C. The owner has failed to find a purchaser or tenant for the property during the previous two (2) years, despite having made substantial ongoing efforts during that period to do so. The evidence of unreasonable economic

hardship introduced by the owner may, where applicable, include proof that the owner's affirmative obligations to maintain the structure or property make it impossible for the owner to realize a reasonable rate of return on the structure or property.

(3)Criteria. The public benefits obtained from retaining the cultural resource must be analyzed and duly considered by the historic and design review commission.

As evidence that an unreasonable economic hardship exists, the owner may submit the following information to the historic and design review commission by affidavit:

A. For all structures and property:

i. The past and current use of the structures and property;

ii. The name and legal status (e.g., partnership, corporation) of the owners;

iii. The original purchase price of the structures and property;

iv. The assessed value of the structures and property according to the two (2) most recent tax assessments;

v. The amount of real estate taxes on the structures and property for the previous two (2) years;

vi. The date of purchase or other acquisition of the structures and property;

vii. Principal balance and interest rate on current mortgage and the annual debt service on the structures and property, if any, for the previous two (2) years;

viii. All appraisals obtained by the owner or applicant within the previous two (2) years in connection with the owner's purchase, financing or ownership of the structures and property;

ix. Any listing of the structures and property for sale or rent, price asked and offers received;

x. Any consideration given by the owner to profitable adaptive uses for the structures and property;

xi. Any replacement construction plans for proposed improvements on the site;

xii. Financial proof of the owner's ability to complete any replacement project on the site, which may include but not be limited to a performance bond, a letter of credit, a trust for completion of improvements, or a letter of commitment from a financial institution; and

xiii. The current fair market value of the structure and property as determined by a qualified appraiser.

xiv. Any property tax exemptions claimed in the past five (5) years.

B. For income producing structures and property:

i. Annual gross income from the structure and property for the previous two (2) years;

ii. Itemized operating and maintenance expenses for the previous two (2) years; and

iii. Annual cash flow, if any, for the previous two (2) years.

C. In the event that the historic and design review commission determines that any additional information described above is necessary in order to evaluate whether an unreasonable economic hardship exists, the historic and design review commission shall notify the owner. Failure by the owner to submit such information to the historic and design review commission within fifteen (15) days after receipt of such notice, which time may be extended by the historic and design review commission, may be grounds for denial of the owner's claim of unreasonable economic hardship.

When a low-income resident homeowner is unable to meet the requirements set forth in this section, then the historic and design review commission, at its own discretion, may waive some or all of the requested information and/or request substitute information that an indigent resident homeowner may obtain without incurring any costs. If the historic and design review commission cannot make a determination based on information submitted and an appraisal has not been provided, then the historic and design review commission may request that an appraisal be made by the city.

(d)Documentation and Strategy.

(1)Applicants that have received a recommendation for a certificate shall document buildings, objects, sites or structures which are intended to be demolished with 35mm slides or prints, preferably in black and white, and supply a set of slides or prints to the historic preservation officer.

(2)Applicants shall also prepare for the historic preservation officer a salvage strategy for reuse of building materials deemed valuable by the historic preservation officer for other preservation and restoration activities.

(3)Applicants that have received an approval of a certificate regarding demolition shall be permitted to receive a demolition permit without additional commission action on demolition, following the commission's recommendation of a certificate for new construction. Permits for demolition and construction shall be issued simultaneously if requirements of section 35-609, new construction, are met, and the property owner provides financial proof of his ability to complete the project.

(4)When the commission recommends approval of a certificate for buildings, objects, sites, structures designated as landmarks, or structures in historic districts, permits shall not be issued until all plans for the site have received approval from all appropriate city boards, commissions, departments and agencies. Permits for parking lots shall not

be issued, nor shall an applicant be allowed to operate a parking lot on such property, unless such parking lot plan was approved as a replacement element for the demolished object or structure.

(e)Issuance of Permit. When the commission recommends approval of a certificate regarding demolition of buildings, objects, sites, or structures in historic districts or historic landmarks, permits shall not be issued until all plans for the site have received approval from all appropriate city boards, commissions, departments and agencies. Once the replacement plans are approved a fee shall be assessed for the demolition based on the approved replacement plan square footage. The fee must be paid in full prior to issuance of any permits and shall be deposited into an account as directed by the historic preservation officer for the benefit, rehabilitation or acquisition of local historic resources. Fees shall be as follows and are in addition to any fees charged by planning and development services:

0—2,500 square feet = $2,000.00
2,501—10,000 square feet = $5,000.00
10,001—25,000 square feet = $10,000.00
25,001—50,000 square feet = $20,000.00
Over 50,000 square feet = $30,000.00

Historic Design Guidelines, Chapter 4, Guidelines for New Construction

1. Building and Entrance Orientation

A. FAÇADE ORIENTATION

i. Setbacks—Align front facades of new buildings with front facades of adjacent buildings where a consistent setback has been established along the street frontage. Use the median setback of buildings along the street frontage where a variety of setbacks exist. Refer to UDC Article 3, Division 2. Base Zoning Districts for applicable setback requirements.

ii. Orientation—Orient the front façade of new buildings to be consistent with the predominant orientation of historic buildings along the street frontage.

B. ENTRANCES

i. Orientation—Orient primary building entrances, porches, and landings to be consistent with those historically found along the street frontage. Typically, historic building entrances are oriented towards the primary street.

2. Building Massing and Form

A. SCALE AND MASS

i. Similar height and scale—Design new construction so that its height and overall scale are consistent with nearby historic buildings. In residential districts, the height and scale of new construction should not exceed that of the majority of historic buildings by more than one-story. In commercial districts, building height shall conform to the established pattern. If there is no more than a 50% variation in the scale of buildings on the adjacent block faces, then the height of the new building shall not exceed the tallest building on the adjacent block face by more than 10%.

ii. Transitions—Utilize step-downs in building height , wall-plane offsets, and other variations in building massing to provide a visual transition when the height of new construction exceeds that of adjacent historic buildings by more than one-half story.

iii. Foundation and floor heights—Align foundation and floor-to-floor heights (including porches and balconies) within one foot of floor-to-floor heights on adjacent historic structures.

B. ROOF FORM

i. Similar roof forms—Incorporate roof forms—pitch, overhangs, and orientation—that are consistent with those predominantly found on the block. Roof forms on residential building types are typically sloped, while roof forms on nonresidential
building types are more typically flat and screened by an ornamental parapet wall.

ii. Façade configuration—The primary façade of new commercial buildings should be in keeping with established patterns. Maintaining horizontal elements within adjacent cap, middle, and base precedents will establish a consistent street wall through the alignment of horizontal parts. Avoid blank walls, particularly on elevations visible from the street. No new façade should exceed 40 linear feet without being penetrated by windows, entryways, or other defined bays.

D. LOT COVERAGE

i. Building to lot ratio—New construction should be consistent with adjacent historic buildings in terms of the building to lot ratio. Limit the building footprint for new construction to no more than 50 percent of the total lot area, unless adjacent historic buildings establish a precedent with a greater building to lot ratio.

3. Materials and Textures

A. NEW MATERIALS

i. *Complementary materials*—Use materials that complement the type, color, and texture of materials traditionally found in the district. Materials should not be so dissimilar as to distract from the historic interpretation of the district. For example, corrugated metal siding would not be appropriate for a new structure in a district comprised of homes with wood siding.

ii. Alternative use of traditional materials—Consider using traditional materials, such as wood siding, in a new way to provide visual interest in new construction while still ensuring compatibility.

iii. Roof materials—Select roof materials that are similar in terms of form, color, and texture to traditionally used in the district.

iv. Metal roofs—Construct new metal roofs in a similar fashion as historic metal roofs. Refer to the Guidelines for Alterations and Maintenance section for additional specifications regarding metal roofs.

v. Imitation or synthetic materials—Do not use vinyl siding, plastic, or corrugated metal sheeting. Contemporary materials not traditionally used in the district, such as brick or simulated stone veneer and Hardie Board or other fiberboard siding, may be appropriate for new construction in some locations as long as new materials are visually similar to the traditional material in dimension, finish, and texture. EIFS is not recommended as a substitute for actual stucco.

4. Architectural Details

A. GENERAL

i. Historic context—Design new buildings to reflect their time while respecting the historic context. While new construction should not attempt to mirror or replicate historic features, new structures should not be so dissimilar as to distract from or diminish the historic interpretation of the district.

ii. Architectural details—Incorporate architectural details that are in keeping with the predominant architectural style along the block face or within the district when one exists. Details should be simple in design and should complement, but not visually compete with, the character of the adjacent historic structures or other historic structures within the district. Architectural details that are more ornate or elaborate than those found within the district are inappropriate.

iii. Contemporary interpretations—Consider integrating contemporary interpretations of traditional designs and details for new construction. Use of contemporary window moldings and door surroundings, for example, can provide visual interest while helping to convey the fact that the structure is new. Modern materials should be implemented in a way that does not distract from the historic structure.

5. Garages and Outbuildings

A. DESIGN AND CHARACTER

v. Garage doors—Incorporate garage doors with similar proportions and materials as those traditionally found in the district.

6. Mechanical Equipment and Roof Appurtenances

A. LOCATION AND SITING

i. Visibility—Do not locate utility boxes, air conditioners, rooftop mechanical equipment, skylights, satellite dishes, and other roof appurtenances on primary facades, front-facing roof slopes, in front yards, or in other locations that are clearly visible from the public right-of-way.

ii. Service Areas—Locate service areas towards the rear of the site to minimize visibility from the public right-of-way.

B. SCREENING

i. Building-mounted equipment—Paint devices mounted on secondary facades and other exposed hardware, frames, and piping to match the color scheme of the primary structure or screen them with landscaping.

ii. Freestanding equipment—Screen service areas, air conditioning units, and other mechanical equipment from public view using a fence, hedge, or other enclosure.
iii. Roof-mounted equipment—Screen and set back devices mounted on the roof to avoid view from public right-of-way.
Historic Design Guidelines, Chapter 5, Guidelines for Site Elements

B. NEW FENCES AND WALLS
i. Design—New fences and walls should appear similar to those used historically within the district in terms of their scale, transparency, and character. Design of fence should respond to the design and materials of the house or main structure.
ii. Location—Avoid installing a fence or wall in a location where one did not historically exist, particularly within the front yard. The appropriateness of a front yard fence or wall is dependent on conditions within a specific historic district. New front yard fences or wall should not be introduced within historic districts that have not historically had them.
iii. Height—Limit the height of new fences and walls within the front yard to a maximum of four feet. The appropriateness of a front yard fence is dependent on conditions within a specific historic district. New front yard fences should not be introduced within historic districts that have not historically had them. If a taller fence or wall existed historically, additional height may be considered. The height of a new retaining wall should not exceed the height of the slope it retains.
iv. Prohibited materials—Do not use exposed concrete masonry units (CMU), Keystone or similar interlocking retaining wall systems, concrete block, vinyl fencing, or chain link fencing.
v. Appropriate materials—Construct new fences or walls of materials similar to fence materials historically used in the district. Select materials that are similar in scale, texture, color, and form as those historically used in the district, and that are compatible with the main structure. Screening incompatible uses—Review alternative fence heights and materials for appropriateness where residential properties are adjacent to commercial or other potentially incompatible uses.

3. Landscape Design

A. PLANTINGS
i. Historic Gardens— Maintain front yard gardens when appropriate within a specific historic district.
ii. Historic Lawns—Do not fully remove and replace traditional lawn areas with impervious hardscape. Limit the removal of lawn areas to mulched planting beds or pervious hardscapes in locations where they would historically be found, such as along fences, walkways, or drives. Low-growing plantings should be used in historic lawn areas; invasive or large-scale species should be avoided. Historic lawn areas should never be reduced by more than 50%.
iii. Native xeric plant materials—Select native and/or xeric plants that thrive in local conditions and reduce watering usage. See UDC Appendix E: San Antonio Recommended Plant List—All Suited to Xeriscape Planting Methods, for a list of appropriate materials and planting methods. Select plant materials with a similar character, growth habit, and light requirements as those being replaced.
iv. Plant palettes—If a varied plant palette is used, incorporate species of taller heights, such informal elements should be restrained to small areas of the front yard or to the rear or side yard so as not to obstruct views of or otherwise distract from the historic structure.
v. Maintenance—Maintain existing landscape features. Do not introduce landscape elements that will obscure the historic structure or are located as to retain moisture on walls or foundations (e.g., dense foundation plantings or vines) or as to cause damage.

B. ROCKS OR HARDSCAPE
i. Impervious surfaces —Do not introduce large pavers, asphalt, or other impervious surfaces where they were not historically located.
ii. Pervious and semi-pervious surfaces—New pervious hardscapes should be limited to areas that are not highly visible, and should not be used as wholesale replacement for plantings. If used, small plantings should be incorporated into the design.
iii. Rock mulch and gravel - Do not use rock mulch or gravel as a wholesale replacement for lawn area. If used, plantings should be incorporated into the design.

D. TREES
i. Preservation—Preserve and protect from damage existing mature trees and heritage trees. See UDC Section 35-523 (Tree Preservation) for specific requirements.

ii. New Trees – Select new trees based on site conditions. Avoid planting new trees in locations that could potentially cause damage to a historic structure or other historic elements. Species selection and planting procedure should be done in accordance with guidance from the City Arborist.

5. Sidewalks, Walkways, Driveways, and Curbing

A. SIDEWALKS AND WALKWAYS
i. Maintenance—Repair minor cracking, settling, or jamming along sidewalks to prevent uneven surfaces. Retain and repair historic sidewalk and walkway paving materials—often brick or concrete—in place.
ii. Replacement materials—Replace those portions of sidewalks or walkways that are deteriorated beyond repair. Every effort should be made to match existing sidewalk color and material.
iii. Width and alignment—Follow the historic alignment, configuration, and width of sidewalks and walkways. Alter the historic width or alignment only where absolutely necessary to accommodate the preservation of a significant tree.
iv. Stamped concrete—Preserve stamped street names, business insignias, or other historic elements of sidewalks and walkways when replacement is necessary.
v. ADA compliance—Limit removal of historic sidewalk materials to the immediate intersection when ramps are added to address ADA requirements.

B. DRIVEWAYS
i. Driveway configuration—Retain and repair in place historic driveway configurations, such as ribbon drives. Incorporate a similar driveway configuration—materials, width, and design—to that historically found on the site. Historic driveways are typically no wider than 10 feet. Pervious paving surfaces may be considered where replacement is necessary to increase stormwater infiltration.
ii. Curb cuts and ramps—Maintain the width and configuration of original curb cuts when replacing historic driveways. Avoid introducing new curb cuts where not historically found.

7. Off-Street Parking

A. LOCATION
i. Preferred location—Place parking areas for non-residential and mixed-use structures at the rear of the site, behind primary structures to hide them from the public right-of-way. On corner lots, place parking areas behind the primary structure and set them back as far as possible from the side streets. Parking areas to the side of the primary structure are acceptable when location behind the structure is not feasible. See UDC Section 35-310 for district-specific standards.
ii. Front—Do not add off-street parking areas within the front yard setback as to not disrupt the continuity of the streetscape.
iii. Access—Design off-street parking areas to be accessed from alleys or secondary streets rather than from principal streets whenever possible.

B. DESIGN
i. Screening—Screen off-street parking areas with a landscape buffer, wall, or ornamental fence two to four feet high—or a combination of these methods. Landscape buffers are preferred due to their ability to absorb carbon dioxide. See UDC Section 35-510 for buffer requirements.
ii. Materials—Use permeable parking surfaces when possible to reduce run-off and flooding. See UDC Section 35-526(j) for specific standards.
iii. Parking structures—Design new parking structures to be similar in scale, materials, and rhythm of the surrounding historic district when new parking structures are necessary.

FINDINGS:

General findings:

a. The applicant is requesting a Certificate of Appropriateness for approval to demolish the historic structure at 218 Parkview, located within the Mission Historic District, and construct a 1-story, single family residential structure. City of San Antonio staff from Neighborhood and Housing Services is the applicant.
b. DESIGN REVIEW COMMITTEE – This request was reviewed by the Design Review Committee on May 22, 2019. At that meeting, the committee inspected the condition of the historic structure and voiced concerns regarding the details of the proposed new construction, including foundation heights and window materials.

c. PUBLIC NOTICE – Demolition notice postcards were mailed to properties within a 200 foot radius of the property, as well as to the registered neighborhood association on May 13, 2019, as required by the Unified Development Code. At this time, Office of Historic Preservation staff has not received concerns from the public regarding the demolition of this structure.
d. ARCHEOLOGY –

Findings related to request item #1:

1a. The historic structure at 218 Parkview was constructed circa 1930 and is contributing to the Mission Historic District. The structure features a front facing gabled roof, wood windows, and a tin roof. The structure currently features a rear addition that doubles its size and a non-original front porch canopy. Despite these modifications, staff finds the house to be a contributing resource within the Mission Historic District due to its construction date and architectural style.

1b. The loss of a contributing structure is an irreplaceable loss to the quality and character of San Antonio. Demolition of any contributing buildings should only occur after every attempt has been made, within reason, to successfully reuse the structure. Clear and convincing evidence supporting an unreasonable economic hardship on the applicant if the application for a certificate is disapproved must be presented by the applicant in order for demolition to be considered. The criteria for establishing unreasonable economic hardship are listed in UDC Section 35-614 (b)(3). The applicant must prove by a preponderance of the evidence that:

A. The owner cannot make reasonable beneficial use of or realize a reasonable rate of return on a structure or site, regardless of whether that return represents the most profitable return possible, unless the highly significant endangered, historic and cultural landmark, historic and cultural landmarks district or demolition delay designation, as applicable, is removed or the proposed demolition or relocation is allowed;

[The applicant has provided a detailed estimate of rehabilitative costs for the existing structure, which total $117,597.05. Neither additional bids, nor a third party bid has been no obtained at this time. Per Bexar County Appraisal District records, the improvements value for this structure for 2019 was $41,740.]

B. The structure and property cannot be reasonably adapted for any other feasible use, whether by the current owner or by a purchaser, which would result in a reasonable rate of return;

[While a structural engineer's report has not been submitted, the applicant has noted that complete foundation repair is needed, as well as roof and sub-floor framing. On a site visit, staff observed that much of the existing structure featured inadequate structural elements.]

C. The owner has failed to find a purchaser or tenant for the property during the previous two (2) years, despite having made substantial ongoing efforts during that period to do so. The evidence of unreasonable economic hardship introduced by the owner may, where applicable, include proof that the owner's affirmative obligations to maintain the structure or property make it impossible for the owner to realize a reasonable rate of return on the structure or property.

[The property is not currently listed for sale.]

1c. Staff finds that the applicant has not demonstrated an unreasonable economic hardship in accordance with the UDC due to the lack of active marketing of the property; however, staff finds that a reasonable claim for an economic hardship has been made due to the estimated cost for rehabilitation in comparison to the value of the property. Additionally, staff finds that a loss of structural and architectural integrity may have occurred. When an applicant fails to prove unreasonable economic hardship, the applicant may provide to the Historic and Design Review Commission additional information which may show a loss of significance in regards to the subject of the application in order to receive Historic and Design Review Commission recommendation of approval of the demolition. If, based on the evidence presented, the Historic and Design Review Commission finds that the structure or property is no longer historically, culturally, architecturally or archeologically significant, it may make a recommendation for approval of the demolition. In making this determination, the historic and design review commission must find that the owner has provided sufficient evidence to support a finding by the commission that the structure or property has undergone significant and irreversible changes which have caused it

to lose the historic, cultural, architectural or archeological significance, qualities or features which qualified the structure or property for such designation. Additionally, the Historic and Design Review Commission must find that such changes were not caused either directly or indirectly by the owner, and were not due to intentional or negligent destruction or a lack of maintenance rising to the level of a demolition by neglect.

1d. In general, staff encourages the rehabilitation, and when necessary, reconstruction of historic structures. Such work is eligible for local tax incentives. The financial benefit of the incentives should be taken into account when weighing the costs of rehabilitation against the costs of demolition with new construction.

Findings related to request item #2:

2a. SETBACKS & ORIENTATION – According to the Guidelines for New Construction, the front facades of new buildings are to align with front facades of adjacent buildings where a consistent setback has been established along the street frontage. Additionally, the orientation of new construction should be consistent with the historic example found on the block. Per the application documents, the applicant has proposed to orient the structure toward Parkview, which is consistent with the Guidelines. The applicant has not noted a setback from the street at this time. Staff finds that the setback of the proposed new construction should be greater than those of the neighboring historic structures.

2b. ENTRANCES – According to the Guidelines for New Construction 1.B.i., primary building entrances should be oriented towards the primary street. Per the application documents, the applicant has proposed a primary entrance that faces Parkview. This is consistent with the Guidelines.

2c. SCALE & MASSING – Parkview features one story historic structures that are simple in massing and feature traditional architectural elements. The Guidelines for New Construction 2.A. notes that the height and scale of new construction should not exceed that of the majority of historic buildings by more than one-story. The proposed massing of one story is appropriate and consistent with the Guidelines. Additionally, the proposed footprint is comparable to those found on Parkview.

2d. FOUNDATION & FLOOR HEIGHTS – According to the Guidelines for New Construction 2.A.iii., foundation and floor height should be aligned within one (1) foot of neighboring structure's foundation and floor heights. The applicant is responsible for ensuring that a foundation height of at least one (1) foot is installed.

2e. ROOF FORM – The applicant has proposed for the new construction to feature both a front facing, gabled porch roof and a primary roof form that features a front facing gable and a rear hipped roof. Staff finds that a shed roof on the porch would be more consistent with the historic examples on the block.

2f. ARCHITECTURAL DETAILS – The applicant has proposed an overall form and massing that are comparable to those found on Parkview and predominantly throughout the Mission Historic District. Staff does find that additional fenestration should be added to the east façade to maintain a traditional window pattern.

2g. MATERIALS – The applicant has proposed materials that include fiber cement siding, a composition shingle roof, and vinyl windows with wood trim. Staff finds that the fiber cement siding should feature an exposure of four to five inches and a smooth finish. Staff does not find the use of vinyl windows to be appropriate. Windows should feature meeting rails that are no taller than 1.25" and stiles no wider than 2.25". White manufacturer's color is not allowed, and color selection must be presented to staff. There should be a minimum of two inches in depth between the front face of the window trim and the front face of the top window sash. This must be accomplished by recessing the window sufficiently within the opening or with the installation of additional window trim to add thickness. Window trim must feature traditional dimensions and architecturally appropriate sill detail. Window track components must be painted to match the window trim or concealed by a wood window screen set within the opening.

2h. MECHANICAL EQUIPMENT – Per the Guidelines for New Construction 6., all mechanical equipment should be screened from view at the public right of way. The applicant is responsible for screening all mechanical equipment where it cannot be viewed from the public right of way.

2i. DRIVEWAY – At this time the applicant has not proposed any modifications to the driveway.

2j. SIDEWALK – The applicant is to maintain and repair if necessary, the front sidewalk leading from the front porch to the sidewalk at the public right of way.

RECOMMENDATION:

Staff does not recommend approval of item #1, demolition, based on findings 1a through 1d, as an unreasonable economic hardship has not been fully substantiated per the UDC's requirements; however, staff believes that a loss of significance may exist.

If the HDRC finds that a loss of significance has occurred or finds that the criteria for establishing an unreasonable economic hardship have been met and approved the requested demolition, the staff makes the following recommendations regarding the requested new construction:

Staff recommends approval of item #2, the construction of a 1-story, single family residential structure based on findings 2a through 2j with the following stipulations:

i. That the proposed setback to greater than those of the neighboring historic structures.
ii. That a foundation height of at least one (1) foot be incorporated.
iii. That the proposed siding feature an exposure of four to five inches and a smooth finish.
iv. That the proposed windows feature meeting rails that are no taller than 1.25" and stiles no wider than 2.25". White manufacturer's color is not allowed, and color selection must be presented to staff. There should be a minimum of two inches in depth between the front face of the window trim and the front face of the top window sash. This must be accomplished by recessing the window sufficiently within the opening or with the installation of additional window trim to add thickness. Window trim must feature traditional dimensions and architecturally appropriate sill detail. Window track components must be painted to match the window trim or concealed by a wood window screen set within the opening.
v. That all mechanical equipment be screened from view at the public right of way.
vi. That the existing front yard sidewalk be retained and repaired as needed.

City of San Antonio One Stop

June 12, 2019

User drawn lines

1:1,000

0 0.0075 0.015 0.03 mi

0 0.0125 0.025 0.05 km


218 Parkview Dr
Oakcrest Ave
Parkview Dr
Theo Pkwy

PROTOTYPE 1233-18

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
CITY OF SAN ANTONIO, TEXAS

FOR

CITY OF SAN ANTONIO

1400 S. FLORES STREET
SAN ANTONIO, TEXAS 78204

SQUARE FOOT INFORMATION	
LIVING SPACE	1233 SQ. FT.
FRONT PORCH	80 SQ. FT.
STEP PORCH & W/H	30 SQ. FT.
TOTAL	1343 SQ. FT.

SEC. 6-300. UNIVERSAL DESIGN AND CONSTRUCTION REQUIREMENTS.

IF A PERSON RECEIVES FINANCIAL ASSISTANCE FROM CITY, STATE, OR FEDERAL FUNDS ADMINISTERED BY THE CITY OF SAN ANTONIO FOR THE CONSTRUCTION OF NEW SINGLE FAMILY HOMES, DUPLEXES, OR TRIPLEXES, THAT PERSON SHALL CONSTRUCT THE UNITS IN ACCORDANCE WITH ALL OTHER CITY CODES AND THE FOLLOWING REQUIREMENTS.

(a) AT LEAST ONE ENTRANCE SHALL HAVE A 36-INCH DOOR AND BE ON AN ACCESSIBLE ROUTE. (AN ACCESSIBLE ROUTE IS A CONTINUOUS, UNOBSTRUCTED PATH AT LEAST 36 INCHES WIDE CONNECTING ALL INTERIOR AND EXTERIOR ELEMENTS AND SPACES OF A HOUSE AND SITE INCLUDING CORRIDORS, PARKING, CURB RAMPS, CROSSWALKS AND SIDEWALKS AND SERVED BY A NO-STEP, FLAT ENTRANCE WITH A BEVELED THRESHOLD OF $\frac{1}{2}$ INCH OR LESS).

(b) ALL INTERIOR DOOR SHALL BE NO LESS THAN 32 INCHES WIDE, EXCEPT FOR A DOOR THAT PROVIDES ACCESS TO A CLOSET OF FEWER THAN 15 SQUARE FEET IN AREA.

(c) EACH HALLWAY SHALL HAVE A WIDTH OF AT LEAST 36 INCHES AND SHALL BE LEVEL WITH RAMPED OR BEVELED CHANGES AT EACH DOOR THRESHOLD.

(d) ALL BATHROOMS SHALL HAVE THE WALLS REINFORCED AROUND THE TOILET FOR POTENTIAL INSTALLATION OF GRAB BARS. WALLS AROUND THE SHOWER AND TUB SHALL BE REINFORCED FOR POTENTIAL INSTALLATION OF GRAB BARS OR A PRE-MANUFACTURED TUB AND SHOWER SURROUND MAY BE USED WHICH INCLUDES GRAB BAR(S) CERTIFIED TO MEET THE ADA REQUIREMENT TO BEAR A 250 POUND LOAD. WALL REINFORCEMENTS SHALL COMPLY WITH THE STANDARDS SET FORTH IN REQUIREMENT 6, REINFORCED WALLS FOR GRAB BARS OF THE FAIR HOUSING ACT DESIGN AND CONSTRUCTION GUIDELINES: FEDERAL REGISTER/VOLUME 56 NO. 44/WEDNESDAY, MARCH 6, 1991/RULES AND REGULATIONS, A COPY OF WHICH IS ATTACHED HERETO AN INCORPORTED HEREIN FOR ALL PURPOSED AS ATTACHMENT I.

(e) EACH ELECTRICAL PANEL, LIGHT SWITCH OR THERMOSTAT SHALL BE MOUNTED NO HIGHER THAN 48 INCHES ABOVE THE FLOOR. EACH ELECTRICAL PLUG OR OTHER RECEPTACLE SHALL BE AT LEAST 15 INCHES FROM THE FLOOR.

(f) AN ELECTRICAL PANEL LOCATED OUTSIDE THE DWELLING UNIT MUST BE BETWEEN 18 INCHES AND 42 INCHES ABOVE THE GROUND AND SERVED BY AN ACCESSIBLE ROUTE.

(g) ALL HARDWARE INSTALLED TO OPEN/CLOSE DOORS AND OPERATE PLUMBING FIXTURES SHALL BE LEVER HANDLES.

A1 # 17-464-0

INDEX OF SHEETS

THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS WHICH WILL AFFECT THE FABRICATION AND CONSTRUCTING OF COMPONENTS FOR THE NEW CONSTRUCTION PRIOR TO THE START OF CONSTRUCTION. UNLESS OTHERWISE INDICATED, THE DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC ALONG WITH THE SAFETY OF THE STRUCTURE DURING CONSTRUCTION. SUCH MEANS SHALL INCLUDE BUT NOT BE LIMITED TO BRACING AND SHORING OF DEAD LOADS, CONSTRUCTION LOADS, AND WIND LOADS. THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE, STRUCTURAL DAMAGE OR OTHER OBJECTIONAL CONDITIONS CAUSED BY HIS OPERATIONS

ISSUED FOR CONSTRUCTION

DPCD

NEW RESIDENTIAL BUILDING
PROTOTYPE 1233-18
CITY OF SAN ANTONIO
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

ISSUE	DATE	REMARKS	BY

A-1 ENGINEERING, LLC F-12583
STATE OF TEXAS
MOISES A. CRUZ
108540
LICENSED
PROFESSIONAL ENGINEER

A-1 ENGINEERING ,LLC
F-12583

THESE PLANS COMPLY WITH THE UNIVERSAL DESIGN CODE AND 2018 IRC

SHEET SIZE: 24" x 36"
ISSUE DATE: 11.24.2018
SHEET:
1 OF 14
COVER

Section 1 – General Requirements

1) The Building Code Requirements for 2018 International Residential Code is the basic code document used in the preparation of these structural documents. Additional codes and references are as noted. All structural work shall be according to all local codes in addition to this basic code document.

2) The structural engineer-of-record prepared specifications for structural related portions of the project and has included these specifications on the structural drawings. Architectural specifications for non-structural portions of the project are included in the project manual.

3) The Contractor shall familiarize himself with the site . Ignorance of conditions is not a basis for a claim for additional compensation. Layout the building by a licensed surveyor.

4) Drawings of specific details on the drawings indicate the intent of the structural design and in most cases, are typical conditions or very similar to other details. Consider typical conditions not necessarily noted as typical as typical for other conditions.

5) Understanding the requirements shown on the construction documents requires cooperation among all parties involved. Communication is necessary. Immediately report discrepancies for our interpretation.
Consider unresolved discrepancies as the more costly interpretation of the discrepancy.

6) Combining all construction documents with the structural documents defines the total project. The structural documents represent the finished structure and do not indicate the means or methods of construction. Verify all field conditions that affect new construction before starting construction. Take all measures necessary to protect the safety of the public along with the safety of the structure during construction. Such measures shall include but not be limited to bracing and shoring of dead loads, construction loads and wind loads. Correct at own expense any subsidence structural damage or other objectionable conditions caused by your operations.

7) Structural design is based on the following:
Floor live loads: 40 psf
Floor live loads shall be posted for each floor or part thereof
Roof live load = 12/20 psf, Tributary area considered, Ponding not considered
Roof uplift = 5 psf
Ground Snow Load = 5 psf, Importance Factor (I) = 1.0
Design Load Combinations (Allowable Stress Design Method)
D
D + L
D + L + (Lr or S or R)
D + (W or 0.7E) + L + (Lr or S or R)
0.6D + W
0.6D + 0.7E

Wind Loads
ASCE 7 Method 2 - Building and Other Structures <= 60'
Basic wind speed (3 sec. gust) = 90 mph, Basic wind press.= 12 psf.
V Ult at Exp. C = 115 mph
Structure Type = Building
Structure Classification Category II, Exposure Category B
Topographic Effects (Kzt) = 1.0, Gust Effect Factor (G) = 0.85, Rigid Structure
Enclosure Classification: Enclosed
Importance Factor: 1.0 Category: II

1.1 General Information
The following general information items are applicable to all residential construction projects.
1) The Contractor shall obtain and display at the job site all permits and permit cards as required by the City.
2) The Contractor shall use the site and its facilities only for the specified construction. The electrical, sanitary waste, water, and gas system shall be used only for construction purposes and during the construction phase only.
3) Contractor shall be responsible to determine the need for adequate sanitary facilities and to provide those accommodations on site. Contractor shall be responsible for the safe operation of equipment at all times.
4) All work shall be done with skilled and licensed craftsman and accomplished with care.
5) All materials used shall be new (unless otherwise specified in the specifications manual) and of a good quality.
6) This document is not intended to take the place of or duplicate the adopted codes by the City of San Antonio. It is intended to clearly define the various methods of construction and the specific materials to be used in the rehabilitation (construction) work outlined in the description of the work to be performed.
7) This document is not a substitute for City of San Antonio building codes, which will typically apply to any substantial new work that is being done on existing structures, and, in some cases, will apply to existing conditions whether addressed in the course of rehabilitation, or not. In all cases, grantees are responsible for determining the applicability of local building codes. In all cases the more rigorous standard will apply.

1.2 Project Submittals
1) Individual project specifications must provide specific scopes of work, locations, measurements, and other specifics, and include the Standard Specifications by reference as performance criteria.
2) Contractor is responsible for assuring that the bid proposal includes all work and costs necessary to satisfy a building code inspection of the work specified and completed. Contractor is responsible for completing all such work whether specified or not and without additional cost to the Program.
3) Repairs needed to correct basic safety, durability, mechanical and efficiency deficiencies, will take precedence over other repairs. The scope of repairs may be limited by budget.
4) A thorough inspection of the property may result in a "walk away" if necessary repairs exceed the program's previously established budget.

1.3 Discovery
Discovery of unforeseen conditions or change in scope of work by the Contractor or by the Owner or by the City acting on the Owner's behalf shall be made known to each of the other two in writing as soon as possible. Where additional work is necessary, the Contractor shall submit to the Owner and the City a written description of the work, cost of such work, and the time necessary for such work. Unless it is determined there exists an immediate health and safety danger, no work shall be authorized until agreed upon in writing by the Contractor and the Owner and approved by the City. Compensation for additional work will be negotiated between the Owner (or the City acting on the Owner's behalf) and the Contractor and must be approved in advance by the City.

1.4 Inspections: Permit
Inspections of work performed must be promptly secured by Contractor, and Contractor shall permit access and inspection required by any governmental agency with jurisdictional interest. Aside from the electrical, plumbing, shower pan, and HVAC inspections and finals, the following are also required:
1) FOUNDATION
a. Slab on Grade - The work requires engineering letter to clear foundation. Letter must specifically indicate that drainage meets the minimum requirements of the City's building codes. If drainage not addressed in letter, an inspection for drainage is required.
b. City inspection of all concrete flat work and concrete porches to ascertain that steel is properly installed.
2) WALLS
a. City inspection of framing. - City insulation inspection or letter from Insulation Company for proper amount and R-factor to City code.
b. City code requires that insulation be installed, if sheathing and/or sheetrock is removed from an exterior wall. Inspection is required before sheathing, sheetrock and/or paneling is re-installed.
3) ROOF
a. City inspection of partial framing, if any rafters, collars and/or additional bracing are required. New sheathing installation and/or repairs can be inspected at this time. Do not leave roof open pending inspection.
4) SHOWER PAN
a. City inspection of shower pan is mandatory before covering shower pan.

5) General – homebuilder shall obtain all required building inspections to include:
City of San Antonio – building (framing, UDS and insulation), HVAC, plumbing, electrical, public works-right of way division and work associated with CPS energy, SAWS and Bexar Met Water District.
Periodic inspections – The work shall be subject to periodic observation by the COSA-HNSD reconstruction program staff in an effort to verify that work conforms to contract requirements. Homebuilder is required to correct all discrepancies identified by homeowner, COSA-HNSD and COSA building inspectors, that are not in accordance with construction documents and any current applicable international, state and city building codes with local amendments and ordinances, common trade standards, manufacturers specifications, or any applicable federal or state of Texas regulations. Presence or absence of COSA-HNSD staff or performance or non-performance of the COSA-HNSD staff shall not relieve the homebuilder of any requirement of the contract.
Final inspection – Once the reconstruction project is completed, COSA-HNSD reconstruction program staff and an independent home inspector, licensed with the Texas real estate commission (TREC) will perform the final inspection in consultation with the homebuilder and homeowner. COSA-HNSD expects all work specified in the construction documents (plans and specifications), to be complete at the final inspection without punch list. The homebuilder shall address and complete the TREC final inspection findings no later than 7 consecutive calendar days after receiving the TREC final inspection report.
NOTE: When a final inspection reveals a major deficiency that is a matter of potential health and/ or safety hazard, the TREC inspector will conduct a follow-up inspection and the homebuilder may be subjected to pay for the follow-up inspection fee.

1.5 Energy efficiency: (energy star/ green build)
The homebuilder and associated sub-contractors shall comply with all standards and policies relating to energy efficiency, which are contained in the 2018 International Energy Conservation Code (IECC). As mentioned above, the energy star and green build strategy requirements shall prevail over other construction specifications that may conflict, with the exception of the building jurisdictions and authorities of the building codes.

1.6 Energy conservation: (energy star/ green build)
1) Incorporated herewith are guidelines and specifications necessary to build an energy star rated and green home, to include the documentation that must be submitted to build San Antonio green reviewer for inspection, testing, and upon approval, receive the designation of energy star rated/ green home.
2) Install natural gas fired equipment where natural gas service is available.
3) All builder-installed equipment and appliances must be energy star labeled.
4) Install an energy star advanced lighting package. Exterior security lights must be activated by a motion detection switch.
5) HVAC system must comply with the ACC manual "J" (version 8.2 or later as required). All required documentation will be submitted to BSAG.
NOTE: These items are recommended but not required by BSAG.
6) Installation of exterior gas fired lamps shall not be more than 2 and must have a timer device that turns lamps off during daylight hours, is piezo activated, and protects against wind and storm extinguishing.
NOTE: This item is not an eligible component expence under COSA reconstruction program.
7) If installed, builder and homeowner must comply with energy star requirements. Homeowner, in consultation with homebuilder will petition and submit application to CPS energy and SAWS regarding rebates or other incentive programs that may be available.

1.7 Water conservation: (energy star/ green build)
1) Install only one energy star qualified shower head per shower.
2) All sink fixtures must be rated at 2.2 gallons per minute or less.
3) Locate water heater within 20 feet of plumbing fixtures or install hot-water-on-demand system.
4) Install a catch pan at water heater or drain to the exterior floors in rooms with water heaters must not be water-sencitive.
5) All exposed hot and cold water supply lines located in non-conditioned space must be insulated with minimum R-2 material designed to insulate water lines. Do not bundle hot with co lines in manifold systems.
6) If installing gutters, downspouts must drain onto previous surface (turf of landscaping) or into a rainwater harvesting cistern.
NOTE: This item is not a program requirement, however, gutters are allowed when the project is located on a zero line development where roof projections are allowed by deed covenant.
7) Landscaping package must be from SAWS approved plan list.

1.8 Health, safety, and accident prevention:
1) In performing this contract, the homebuilder shall ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous to his/ her health and/ or safety as determined under construction safety and health standards promulgated by the secretary of labor.
2) Homebuilder to post proper warning signage, caution tapes, flags or physical barriers when hazard exist. Homebuilder shall comply with all other safety precautions including applicable provisions of the national occupational safety health act (NOSHA) 1970.
3) Contractor will be held liable for damage to property or persons.

1.9 Health: (Green Build)
1) Install required venting through roof top for gas fixtures.
2) Vent kitchen range hood to the exterior.
3) Install merv 8 or higher rated filters for central air conditioners.
4) Builder installed – dehumidification system must be independent of the cooling system.
NOTE: This item is highly discouraged by BSAG and is not COSA program requirements.
5) Isolate garage space from conditioned space using the current energy star/ green build thermal bypass checklist. Builder – installed garage must follow this provision.
NOTE: This item is highly discouraged by BSAG and is not COSA program requirements.
6) If installed, builder and homeowner must comply with energy star/ green build requirements.
7) Fireplaces are allowed only with restrictions.
NOTE: This item is highly discouraged by BSAG and is not COSA program requirements.
8) If installed, builder and homeowner must comply with energy star/ green build requirements.
9) Install one carbon monoxide detector with an American Gas Association (AGA) IAS696 blue star certification seal every 1,000 square feet (near bedrooms) at a minimum of one per floor.
10) Seal HVAC ducts during construction with speedi – boot or other similar method that effectively eliminates duct contamination.
11) Vacuum boots and grills before first use.
12) Fiber glass duct board, if installed, must comply with the fiber duct board requirements as described in the guidelines.
NOTE: This item is highly discouraged by BSAG and is not COSA program requirements.
13) If installed, builder and homeowner must comply with energy star/ green build requirements.
14) Do not use vapor retarding materials on interior surfaces of perimeter walls.
15) Use carpet and rug institute's green label certified carpet in all carpeted areas and carpet adhesives or padding's used must also be designated as green label certified.
16) Interior paints must be selected from the BSAG "ALLOWED INTERIOR PAINT" listings which are those that reduce volatile organic compounds (VOC). Trim for doors, windows, and base boards are exempt if these surfaces are less than 15% of total paintable interior surfaces.

1.10 Project closeout
Cleaning by the Contractor shall include, but is not limited to:
1) Removal and proper disposal of all construction debris from the site.
2) Clean and mop all resilient floors.
3) Clean all paint from other finished surfaces including window glass and mirrors.
4) Contractor shall put all hardware in operating condition. New keys shall be turned over to the City's agent as hardware is installed. The City shall be responsible for providing said keys to the Owner.
5) Further details are included in section 16.

Section 2 – Site Work

2.1 Demolition of Structure
1) The work covered by this section consists of any required demolition, removal and disposal of building, building components, fencing and appurtenances. No building or portion of a building shall be removed intact for any use or purpose. The site should be generally level, well drained, and accessible. Site preparation must meet Texas minimum Construction Specification.
2) Disposition of Materials/Debris: All materials resulting from the demolition activity, except such materials, as may be the property of utility companies providing service to the building, shall be disposed of by one of the following means:
a) Locally recyclable materials that can be reasonably segregated shall be delivered for recycling with the proceeds belonging to the Contractor.
b) Salvageable materials that the Contractor desires to retain shall become the property of the Contractor and shall be transported, stored and /or utilized in compliance with all applicable codes and ordinances.
c) All remaining material and debris not recycled or salvaged shall dispose of in accordance with City ordinance "Chapter 14 – Solid Waste". The landfill fees are the responsibility of the offeror and should not be included in the proposal amount.
d) A log of all loads hauled for each site, whether for recycling, salvage, or disposal, shall be maintained such that a record will be available for each demolition site as to the final disposition of all material and debris removed.
3) The Contractor will be responsible for coordinating with all necessary parties to ensure that all utilities have been disconnected prior to starting demolition work. The Contractor will be responsible for the removal of any old lines requiring removal from the property line forward.
4) Protection of Utilities and Other Site Improvements: The Contractor shall perform all work required for the care, protection and maintenance of public utilities, building, and other site improvements on and around the site.The Contractor shall assume responsibility for any damage that may occur to same. Prior to commencing work, the Contractor shall verify the location of all surrounding utilities, both overhead and underground which may be located in or near the work area, then take precautions to protect these utilities during this work.
5) Site Cleanup: The site shall be totally free of debris resulting from the demolition activity and/or as listed on the individual site worksheet. All disturbed areas not remaining under a concrete slab shall be leveled and graded in such a manner that no water will stand on the site. Should additional fill dirt be required to achieve the above stated requirement for drainage, the cost of said material shall be subsidiary and included in the price proposed for demolition of said structure.
6) Hazardous Material: Should the Contractor encounter what is believed to be a hazardous material during the demolition, the City shall immediately be notified.
7) Permits/Notifications: The Contractor will be required to obtain a demolition permit for each site from the City's Building Inspection Department. The Contractor will be required to provide a payment and performance bond under this contract in the amount of the total contract price.
8) Project Safety, Accident Precaution: With respect to all work performed under this contract, the Contractor shall:
a) Comply with the safety standards provision of applicable laws, building and construction codes. The "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, and the Occupational Safety and Health Act of 1970 (Public Law 91-596.)
b) Exercise every precaution at all times for the prevention of accidents and the protection of persons including employees and property.
c) Maintain at the office or a well-known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or doctor's care of persons, including employees who may be injured on the job site. In no case shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or doctor's office.

2.2 Site Preparation General
1) Site clearing: All trees and undergrowth located only within the perimeter of the house and in areas of driveways, walks, and outbuildings are to be removed.

2.3 Site Preparation For Building Pad
Earthwork Below Building (Building Pad Preparation):
Earthwork below the building shall consist of the construction of a building pad of select compacted fill material over moisture conditioned compacted existing soils. The contractor shall verify the grades adjacent to the foundation and at the site will allow for positive drainage of water away from the foundation. Ensure the finished floor elevation of the foundation is at least 6" above the adjacent soil grade.

Discussion of Pad Preparation: Per IBC 1809.2, Supporting Soils, shallow foundation shall be built on undisturbed soil, compacted fill material or controlled low-strength material. Compacted fill material shall be placed in accordance with Section 1804.5. Deviation from this requirement and recommendation may result in excessive settlement, soil consolidation, or soil shrinkage.

Preparation of the Existing Subgrade Soils:
1) Remove the top 8" of the existing soil to include any roots or organic material.

Preparation of the Select Structural Fill Material (Building Pad):
1) Over the compacted existing soils:

Option 1: Place select structural fill (base material) in 8" loose lifts, moisture condition and compact to at least 6" in thickness. Compaction of the fill material shall be completed with a pnuematic tamper.

Option 2: Over the compact natural soil, bag fill the structural fill (base material) in 8" moisture conditioned and compacted lifts. Fill material shall not be bagged loose. Compact all fill material with a pnuematic tamper. Bag fill option is limited to 2'-0" max thickness. Refer to Option 1 if fill thickness will exceed 2'-0" thick.

2) Select fill below the slab shall meet the following specifications:
Texas Department of Transportation Grade A, Type I or II base material.
At no time shall offsite sand or "borrow" (pit) fill be substituted for select fill.

3) Utility trenches within the building shall be carefully backfilled, moisture conditioned and compacted so that the trench does not become an avenue for moisture to more freely travel under the building.

4) Coordinate building official inspection after excavating for beams and placement of all reinforcing steel, with formwork in place (IBC Chapter 110) The Building Official may accept a review by the structural engineer in place of the Building Official conducting the review.

5) The finish surface grading, final drainage of surface water and landscaping shall be constructed in a manner to ensure positive drainage of water away from the foundation.

6) The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5%) for a minimum distance of 10 feet measured perpendicular to the face of the wall. Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2% away from the foundation.

Section 3 – Concrete

1) Construct formwork to maintain tolerances as outlined in ACI 347. Reuse formwork according to ACI 347. Extend formwork at least six (6) inches below the finish grade elevation on perimeter beams. Cut temporary port openings in order to drain exposed trenches during construction in case of inclement weather.

2) Trench grade beams in order to provide the beam cross section indicated. Beam and slab depths and widths indicated are minimum acceptable sizes. Larger size beams and slabs formed by less accurate trenching may require additional reinforcing not shown which shall be determined by the structural engineer during construction review. All loose dirt from sides and bottoms of trenches shall be removed. Cut haunches on each side of trenches of adequate size to maintain the vertical sides of the trench. Penetrate exterior beam soffits a minimum of 30" below the final exterior grade.

3) Where trees exist within five foot of foundation, deepen beams a minimum of 24" below specified beam depth for a distance of ten feet in each direction of tree (total length of twenty feet). Cut off and treat all roots extending under the foundation to prevent any future root growth under the foundation. Reinforce the deepened beam section with 2-#6 bars continuous and provide 'Z' transition bars at deepened section ends. Lap bottom beam reinforcing.

4) Trench below the slab thickness for placing electrical conduit and plumbing lines. Bury electrical conduit and plumbing lines below the slab thickness and outside of the grade beam trenches. Do not place conduit or plumbing pipes under and parallel to grade beams. Wrap any sewer, storm, water or electrical piping lines crossing grade beams with PVC sleeves for protection from ground movements. Extend sleeves at least 6 inches past the trench width. Isolate concrete-encased grounding electrode from structural reinforcing.

5) Reinforcing steel shall comply with the requirements of ASTM A-615, grade 60. Reinforcing steel shall be continuous with splices lapped at least 40 diameters. Stirrups and ties may be grade 40 for bars #3 and smaller. Tie wire shall be 18 gage annealed type.

6) Fabricate bent bars according to ACI 315. Install reinforcing with clearance for concrete coverage around reinforcing steel according to ACI 318. Submit for review fabrication and placement shop drawings indicating bar sizes, spacings, lengths, laps, locations, and quantities of reinforcing steel, bending and cutting schedules, and supporting and spacing devices.

7) Concrete shall develop a 28-day compressive stress (f'c) of at least 3,000 psi. Mix concrete according to ACI 301. Water cement ratio shall not exceed 0.50 (3,000 psi). Use a maximum aggregate size of 1 1/8" or according to ACI 318. Maximum aggregate size between bars shall also pertain to between the forms and bars.

8) The proportions of materials and use of admixtures influence the concrete strength along with the means and methods of construction. The contractor is responsible to determine that the concrete is suitable for its intended purpose. The engineer recommends the contractor consider the following in determining the concrete for this project: Cement shall be Type 1 (gray). Fly ash shall be Boral Materials, Class C. If fly ash is used, do not exceed 20% of the total fly ash and cement used by weight. Include a polymeric concrete water-reducing admixture that complies with ASTM C494. Do not add an air entrainment additive. Mix shall result in a finished concrete product with moisture contents necessary to properly cure the concrete. Floor sealers, hardeners, finishes and coverings shall be compatible with concrete properties (ie, but not limited to, moisture and alkalinity properties).

9) Before placement of any concrete, submit concrete mix design(s) to be used on the project. Concrete shall be in strict accordance with the mix design.

10) Place and cure concrete according to ACI 302. IR. Do not use concrete that has not been placed in the forms before 1.5 hours after the initial mixing water was added, regardless of temperature or slump - No Exceptions. Finish according to ACI 117 tolerances.

11) Coordinate structural engineer's review and the building official inspection before each concrete placement. The Building Official shall inspect footings and foundations (IBC Section 110). The Building Official may accept a review by the structural engineer in place of the Building Official conducting the review.

3.1 Steps
1) General Specifications for steps shall be in accordance with City of San Antonio building code current at the time of construction.
2) All steps shall have treads a minimum of ten inches (exclusive of nosing) and maximum rise of seven and three-fourths inches. They shall be a minimum of three feet wide or they shall the full width of the door opening whichever is greater. They shall be a minimum of three feet wide at porches.
3) Precast steps shall be standard size with no defects. They shall be set level with concrete bases under each corner. When set, the rise from the top step to the wearing surface shall be the same as the rise for the steps or be in the wearing surface plane.
4) Hollow poured steps shall be formed and poured over 8 inch x 16-inch footer. Wall thickness shall be a minimum of 4 inches. The treads shall be broom finished. Steps shall have 3/8 inch steel rods 12 inches on center in both directions.

3.2 Slab on grade (Foundation)
1) General Specifications for concrete foundations shall be in accordance with City of San Antonio building code current at the time of construction.
2) Grades shall be established from existing concrete or masonry structures, when feasible. Bottom of sill shall maintain a minimum of 6" above existing grade at lowest point. Leveling cannot be exact when any of the following conditions exist:
a) The framing is racked, out of plumb
b) The sill/floor joists are warped and crowned
c) The structure is multi-addition at multi-levels
d) The structure is/was a porch, slanted for drainage
3) All concrete slabs shall be poured monolithically and in accordance with City of San Antonio building code current at the time of construction, unless otherwise specified. Top of slab poured on existing grade shall have ground slope away from wall. Ground slope shall provide for drainage of water away from the house. All slabs shall be termite treated.
4) Before concrete is poured, a slab inspection must be requested from the City's Building Inspection Department and then pass inspection. All slabs and driveways must meet City codes and pass City inspection prior pouring concrete.
5) Soil conditions will determine the length of time the concrete footings shall be allowed to set. When the bearing soil is dry, the concrete footing must set three (3) days before the weight of the house is placed on the foundation. When wet conditions exist, or occur, the soil shall be allowed to dry to accept the bearing load.
6) Entry ramp shall be poured at 1"/foot slope with ¼" x ¼" tooled grooves at 6" O.C.
7) Footings shall comply with the City's Building Code requirements for size and reinforcement. When the surrounding soil is not sufficiently strong enough to hold the concrete until final set, forms shall be constructed instead.

3.3 Concrete porches
1) All porches shall be poured monolithically over select granular fill cushion.
2) Exterior beams must be the same as for the house
3) Pour 1 inch below doorsill or as noted and slope 1/8 inch per foot to provide drain.

3.4 Concrete Walkways
1) Walks shall be poured monolithic to expansion joints. Reinforcing shall be 6" x 6" number 10 welded wire fabric.
2) Width shall be a minimum of 3 feet wide with a broom finish. Control joints shall be spaced the width of the walk. Expansion joints shall be spaced at all radius points, elevation changes, porches, and at back of curb. Expansion joint material shall be ½ inch redwood or other material that complies with the building code.
3) Slab thickness shall be a minimum of 4 inches.
4) Concrete will be deposited when temperature is at 40o F, or above and rising.

3.5 Driveways
1) Driveways shall be monolithic poured slab with a broom finish and a minimum thickness of 4 inches.
2) Reinforcing shall be 6" x 6" number 10 welded wire fabric.
3) The slab will be poured on 8 inch of crushed limestone base (fill).
4) Expansion joints will be spaced a maximum of 10 linear feet. Expansion joints will be used at all radius points, sidewalk intersections and house slab tie-ins.
5) Expansion joint materials shall be ¾ inch redwood or other material that complies with the building code.
6) Concrete will be deposited when temperature is at 40o F, or above and rising.

3.6 Hazardous/Substandard Conditions
1) Hazardous conditions must include any condition that threatens the health and or safety of the occupants. Substandard conditions include any condition that threatens, defeats or will lead to the lack of functional viability of a single feature of a home. These conditions must include but not be limited to:
a) Broken, fire damaged or otherwise compromised beams, joist or sills;
b) Water draining and/or pooling under foundation area;
c) In areas that have more than two annual days with temperatures below 30 degrees, a lack of underpinning, skirting, or other insulating feature to exposed plumbing.
d) Severe slab cracks that create or threaten structural or other systems such as plumbing;
2) Any other condition not mentioned that meets the definition of a hazardous or substandard condition should be repaired and/or rehabilitated to meet industry standards.

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DPCD

NEW RESIDENTIAL BUILDING
PROTOTYPE 1233-18
CITY OF SAN ANTONIO
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

ISSUE	DATE	REMARKS	BY

A-1 ENGINEERING, LLC F-12583
STATE OF TEXAS
MOISES A. CRUZ
108540
LICENSED
PROFESSIONAL ENGINEER
A-1 ENGINEERING ,LLC
F-12583

THESE PLANS COMPLY WITH THE UNIVERSAL DESIGN CODE AND 2018 IRC

SHEET SIZE: 24" x 36"
ISSUE DATE: 11.24.2018
SHEET:
2 OF 14
NOTES

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Section 4 – Framing

4.1 General Specifications

1) General specifications shall be in accordance with City of San Antonio building code current at the time of construction.

4.2 Hazardous/Substandard Conditions

1) Hazardous conditions must include any condition that threatens the health and or safety of the occupants. Substandard conditions include any condition that threatens, defeats or will lead to the lack of functional viability of a single feature of a home. These conditions must include but not be limited to:
   a) Termite or other wood destroying insect damage to structural members;
   b) Water damage or dry rot to structural members;
   c) Broken, fire damaged or otherwise compromised beams, joist or sills;
   d) Unsupported beams, or sills or joints in same that have no support; inadequate support;
   e) Water draining and/or pooling under foundation area;
   f) In areas that have more than two annual days with temperatures below 30 degrees, a lack of underpinning, skirting, or other insulating feature to exposed plumbing.
   g) Existing skirting or underpinning that is cracked, damaged or not properly vented.
   h) Ground contact of untreated wooden structure;
   i) Water incursion through wall structure resulting in drywall damage;
   j) Holes, cracks or gaps in interior or exterior wall structures;
   k) Exposed nails, popped seams or other defects not representative of normal wear and tear;
   l) Cracked, peeling, or chipped paint. Exposed unpainted or untreated wood, drywall or other wall surface;
2) Any other condition not mentioned that meets the definition of a hazardous or substandard condition should be repaired and/or rehabilitated to meet industry standards.

Wood Framing

1) All lumber shall be PS 20, new and undamaged graded lumber in accordance with NFPA Grading Rules. Lumber stresses specified do not include repetitive member use. Framing members shall be S4S unless noted otherwise. All wood bearing on concrete or masonry shall be wolmanized.

   a) Rough framing (2x4 - 2x12) shall consist of #2 southern yellow pine (SYP) with 19 percent maximum moisture content having no less than an allowable bending stress (Fb) of 1,500 psi (2x4), 1,250 psi (2x6), 1,200 psi (2x8), 1,050 psi (2x10) and 975 psi (2x12), a Modulus of Elasticity of 1,600,000 psi, and an allowable shear stress of 90 psi.

   g) Framing designated as VL (Versa-lam), or ML (Micro-lam) or Gang-Lam S beams on the plans shall consist of solid plywood beams manufactured by the Boise-Cascade Trus-Joist Corporation or Louisiana Pacific and shall have no less than an allowable bending stress (Fb) of 2,800 psi, a Modulus of Elasticity of 1,800,000 psi, and an allowable shear stress of 185 psi (or larger), unless indicated otherwise.

2) Nails, spikes, and staples shall be galvanized for exterior locations, high humidity locations, and treated wood; plain finish for other interior locations; size and type to suit application. Typical nailing shall be with common wire nails. Exterior gypsum sheathing shall be nailed with #11 gage, 1 3/4" long, 7/16" head, diamond-point, galvanized cooler nails, or cadmium plated W-bugle head screws 1 1/4" long. Staples shall not be used instead of required nails.

   Bolts, nuts, washers, lags and screws shall be medium carbon steel; size and type to suit application; galvanized for exterior locations, high humidity locations, and treated wood; plain finish for other interior locations.

   Floor Truss Hangers shall be:
   Simpson Strong-Tie light double shear joist hangers Model LUS410, or equal having an allowable load capacity of at least 1875#.

   Plywood sheathing clips shall be Simpson Strong-Tie 18 gage galvanized steel x plywood thickness.

   Unless otherwise indicated, use type LUS joist hangers as manufactured by the Simpson Company for flush type joist connections to supporting beams. Column cap and base connections shall be as manufactured by The Simpson Company, type as recommended by the manufacturer for the size of joist or column and beams being connected.

3) Submit evidence of compliance with specified requirements showing design values for selected species and grades. Indicate sizes and spacing of prefabricated plywood web joists, loads and joist cambers, framed openings, bearing and anchor details, bridging and bracing.

4) Store framing material a minimum of 12" above the ground in a manner to allow for proper drainage, ventilation and protection from the weather.

5) The "Manual of House Framing" by National Lumber Manufacturer's Association shall set the minimum standard of workmanship. Install main framing miscellaneous blocking, furring, nailing strips, framing, and sheathing. Install members true, plumb, and level, install shimming where required to set framing in proper alignment. Secure framing in place. Space miscellaneous framing and furring no more than 24 inches on center. Construct members of continuous pieces of longest possible lengths. Framing member connections shall be nailed with no less than 2-16d nails, or as noted. Provide rough hardware as indicated. Comply with Fair Housing Act provisions. Install fire and draftstops according to code requirements.

   Make proper provisions for the Work of other trades. Refer to the Drawings for wood blocking and plywood required as back-up and framed openings for all other trades and their accessories. All bathrooms on all handicap accessible levels shall receive solid 2x6 wall blocking for grab bars at toilets and tub/shower surrounds.

6) At headers built-up with multiple SYP #1/#2 2x members, nail together with at least 16d nails at 16" on center along each edge and with at least 1-16d nail per 6" nominal depth of header. Provide plywood spacers between 2x members to widen header to the width of the stud wall.

7) Framing members shall be installed within 1/4" from true position. Square end cuts shall be within 1/16" per foot of depth and width. End surfaces shall be cut to provide contact over substantially the entire surface. Lengths of framing members shall be 1/16" + up to 20 feet in length, and 1/16" per 20 feet of specified length for members over 20 feet in length.

8) Maintain sheathing surface flatness of maximum 1/8 inch in 10 feet or more.

9) Install building paper on all exterior walls. Install horizontally and weather lap a minimum of 2" for horizontal joints and 6" for vertical joints. Stagger vertical joints. Staple securely with roof tin caps.

10) Coordinate structural engineer's review, and the building official inspection.
The Building Official shall inspect the primary structural framing. The Building Official may accept a review by a licensed professional engineer in place of the Building Official conducting his inspection. (IBC Chapter 109.3.4)

TABLE #1

NAILING SCHEDULE

CONNECTION	NAILING
JOIST OR TRUSS BEARING ON SILL OR GIRDER, TOENAIL	(3) 8d
BRIDGING TO JOIST, TOENAIL EACH END	(2) 8d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d AT 16"o.c.
TOP PLATE TO STUD, END NAIL TO EACH STUD	(2) 16d
STUD TO SOLE PLATE	(4) 8d TOENAIL OR (2) 16d END NAIL
DOUBLE STUDS, FACE NAIL	16d AT 24"o.c.
DOUBLE TOP PLATES, FACE NAIL	16d AT 16"o.c.
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2 - 16d
CONTINUOUS HEADER, TWO PIECES	16d AT 16"o.c. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	(3) 8d
CONTINUOUS HEADER TO STUD, TOENAIL	(4) 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	(3) 16d
RAFTER OR TRUSS TO PLATE, TOE NAIL	(3) 8d
BUILT-UP CORNER STUDS	16d AT 24"o.c.

NOTES:
1. MINIMUM NAILING SPECIFIED HEREIN SHALL BE PROVIDED UNLESS OTHERWISE NOTED ON DETAILS OR STRUCTURAL NOTES.
2. COMMON OR BOX NAILS MAY BE USED. 16d NAILS MAY BE EITHER COMMON OR SINKER.

TABLE #2

STRUCTURAL SHEATHING / DECKING

STRUCTURAL SYSTEM	SHEATHING TYPE	EXPOSURE CATEGORY	THICKNESS (MIN.)	SPAN RATING	NAILING PATTERN	
					EDGE SUPPORT	INTERIOR SUPPORT
FLOOR DECKING	APA RATED STURD I-FLOOR	EXP. 1	3/4" / 1 1/8"	24 oc / 48 oc	10d @ 6" O.C.	10d @ 12" O.C.
WALL SHEATHING	APA RATED SHEATHING	EXP. 1	7/16"	24/16	10d @ 6" O.C.	10d @ 12" O.C.
ROOF DECKING	APA RATED SHEATHING	EXP. 1	7/16"	24/16	8d @ 6" O.C.	8d @ 12" O.C.

NOTES:

1. STRUCTURAL PANELS SHALL BE LABELED / STAMPED WITH APA APPROVED MARKINGS AND LABELS SHOWING CONFORMANCE WITH SPECIFICATIONS.
2. ALL PANELS SHALL BE LAID OUT / ORIENTATED TO BE PERPENDICULAR TO SUPPORTS.
3. STAPLES MAY NOT BE SUBSTITUTED FOR NAILS.
4. BLOCK EDGES OF ALL WALL, ROOF, AND FLOOR SHEATHING PANELS.

TABLE #3

ROOF FRAMING SCHEDULE

MEMBER	SIZE	GRADE
COMMON RAFTER	2 X 6 AT 2'-0" O.C.	SYP #2
HIP RIDGE	2 X 10	SYP #2
GABLE RIDGE	2 X 10	SYP #2
OUTRIGGERS	2 X 4 AT 2'-0" O.C.	SYP #2

TABLE #4

HEADER SCHEDULE

SPAN	HEADER	SPECIES	JACK STUDS
3'-0" - 5'-0"	(2) 2 X 6	SYP #2	(1) SPF #2
6'-0" - 8'-0"	(2) 2 X 8	SYP #2	(1) SPF #2
9'-0" - 11'-0"	(2) 2 X 12	SYP #2	(1) SPF #2

TABLE #5

WALL FRAMING SCHEDULE

1st FLOOR WALLS	2 X 4 AT 2'-0"O.C.	SPF #2
1st FLOOR BOTTOM PLATE	2 X 4 TREATED	SPF #2
1st FLOOR TOP PLATE	(2) 2 X 4	SPF #2
2nd FLOOR WALLS	2 X 4 AT 2'-0"O.C.	SPF #2
2nd FLOOR BOTTOM PLATE	2 X 4	SPF #2
2nd FLOOR TOP PLATE	(2) 2 X 4	SPF #2

TABLE #6

FLOOR JOIST SCHEDULE

2nd FLOOR	2 X 12 AT 2'-0"O.C.	SPF #2

Section 5 – Roofing

5.1 General specifications
1) General specifications shall meet City of San Antonio building code current at the time of construction.
2) There shall not be any voids or obstructions in the sheathing, and knotholes shall be covered with sheet metal.
3) Sufficient bracing shall be installed to strengthen the roof and to bring the framing to code.
4) All roofing shall be done in accordance with the manufacturer's recommendations, and installed in such a manner to prevent any leaks.
5) Galvanized or aluminum attic vents shall be installed, minimum of two. One square foot of ventilation should be provided for every 300 square feet of attic area.
6) Eaves shall have galvanized drip edge.

5.2 Composition roofing
1) Install with simplex felt nails #30 felt paper-overlapping rows 4 inches.
2) Install minimum 220-pound equivalent fiberglass seal tab Class A fiberglass composition shingles (25 year warranty) according to manufacturer's directions.
3) Architectural shingles (25 year warranty) may be used in lieu of composition shingles.

5.3 New built-up roof
1) shall be installed as follows:
   a. Nail one (1) ply of 30# felt; mop two (2) plys of 15# felt.
   b. Apply hot mopped tar and gravel, properly spaced to create a uniform and durable roof.
   c. Aggregate shall be 1/4" crushed limestone.

5.4 Stoop roofs
1) To be constructed of such material as to conform to existing roof, and shall have all necessary structural members required to form a structurally sound unit.

5.5 Flashing
1) All flashing and valley material shall be 26 gauge galvanized iron.
2) Valley tin shall be a minimum of 20" wide, 10" each side centered.
3) Shingles shall be laced over flashing.
4) All flashing shall be installed only after all felt paper is in place.
5) All pipes projecting through the roof shall have metal stack flashing or neoprene rings.

Section 6 – Doors & Glazing

6.1 Windows
1) For historic properties, the city recommends identifying, retaining, and preserving windows--and their functional and decorative features--that are important in defining the overall historic character of the building. Such features can include frames, sash, muntins, glazing, sills, heads, hoodmolds, paneled or decorated jambs and moldings, and interior and exterior shutters and blinds. For more detailed information see: http://www.nps.gov/hps/tps/standguide/rehab/rehab_windows.htm
2) General specifications shall be as follows:
   a) ¾" insulated glass
   b) All interior and exterior gaps, joints, or mating surfaces shall be caulked to prevent air infiltration. Windows shall have air infiltration rates not exceeding 0.37 cubic feet per minute per foot of operable sash crack.
3) Windows shall be installed plumb and level to ensure proper operation with no "sticking".
4) All windows shall be low "E" glass.

6.2 Doors
1) For historic properties, the city recommends identifying, retaining, and preserving doors--and their functional and decorative features--that are important in defining the overall historic character of the building. Such features can include frames, sills, heads, hoodmolds, paneled or decorated jambs and moldings, and interior and exterior shutters and blinds. For more detailed information see:
   a) http://www.nps.gov/hps/tps/standguide/rehab/rehab_spaceatfinish.htm
   b) http://www.nps.gov/hps/tps/standguide/rehab/rehab_entrances.htm
2) General specifications for doors shall be as follows:
   a) All doors shall fit and work properly.
   b) All exterior doors shall be one and three-quarter inch, solid core, units. They shall be drilled for a lockset and deadbolt. Exterior doors shall have one and one-half pair of door butts, weather-strip threshold (made of rolled vinyl with aluminum channel backing). Doors shall have air infiltration rates not exceeding 0.5 cubic feet per minute per square foot of door area.
   c) All interior doors shall be hollow core six panel mahogany or pressboard with a minimum thickness of one and three-eighths inches and shall be bored for a lockset.
   d) Pre-hung units shall have a frame made of three-quarter inch material with a properly plowed jamb to receive one and three-quarter inch or one and three-eighth inch doors. A pre-hung unit shall be equipped with the door panel, jamb, and all trim. Pre-hung doors shall be installed plumb and level. Door panel shall not be trimmed or manipulated in any fashion and shall swing free and easy.
   e) All doors which come into contact with interior wall surfaces when opened are to have base board mounted, rubber tipped door stops installed.

6.3 Mirrors
1) Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the finish floor or ground.
2) Mirror Specifications:
   a) ASTM C 1036, Type 1, Class 3, Quality Q3; with pyrolytic coating.
   b) Nominal Glass Thickness: 1/4 inch (6 mm).
   c) Performance Characteristics; coated surface to subject side:
   d) Visible Light Transmittance: 12 percent.
   e) Visible Light Reflectance: 60 percent.
3) Mirror Installation:
   a) Coordinate with other trades to ensure that surfaces to receive mirrors are not painted, coated, or otherwise treated in a manner detrimental to mirror adhesion.
   b) Ensure walls are rigid, plumb, smooth, clean, dry, and free of foreign materials.
   c) Apply one coat moisture-resistant paint to back of mirror and allow to completely dry.
   d) Set mirrors with mechanical fasteners and adhesive applied in accordance with manufacturer's instructions.
   e) Apply adhesive to mirror back with 25 percent coverage. Set mirror in place and hold firmly until adhesive sets.
   f) Support bottom of mirror with L-shaped bar mechanically fastened to wall blocking.
   g) Provide 2 clips minimum at top and each side of mirror. Mirrors greater than 6 square feet shall have 3 clips minimum at top.
   h) Place plumb and level without visible distortion.

Section 7 – Interior Finishes

7.1 Walls & Ceilings
General specifications for ceiling and walls shall be as follows:
1) Gypsum board must conform to "ASTM C1396 / C1396M - 11 Standard Specification for Gypsum Board". It shall be tapered joint gypsum board with a thickness of one-half inch on walls and 5/8" grade "X" on ceilings.
2) Moisture resistant gypsum board must conform to ASTM D-3273 and ASTM C-473. Standard "green board" does not meet these requirements and is not acceptable.
3) Paneling shall be smooth without blemish, one-fourth inch thick, and finished according to individual specifications.
4) Perforated tape mix installation shall comply with the recommendations of the manufacturer. Temperature shall be 55 degrees Fahrenheit or above in the area it is being applied until the cement is completely dry.

7.2 Gypsum board for ceiling
1) Fasteners shall be spaced in accordance with City of San Antonio building code current at the time of construction.
2) Nails shall be driven with their heads perpendicular to the face of the board and seated below the surface of the board without breaking the paper (screws shall comply with the same above).
3) The board shall be cut to fit with tapered sides butting and ends butting. Where possible joints shall be staggered. The board shall be a minimum of one-half inch off finished floor.

7.3 Gypsum board for wall
1) Fasteners shall be spaced in accordance with City of San Antonio building code current at the time of construction. Nails shall be driven with their shanks perpendicular to the face of the board and seated below the surface of the board without breaking the paper.
2) The board shall be cut to fit with tapered edges butting and ends butting. Where possible joints shall be staggered. The board shall be a minimum of one-half inch off finished floor.

7.4 Tape and float
1) Over joints, the tape shall be embedded in cement and covered with a thin layer of cement. A second and third coat shall be applied with each coat feathered and extended beyond the previous coat by two inches. The finish coat shall be sanded lightly and any imperfections filled prior to any painting or decorating.
2) Cover nails with three (3) applications of cement allowing time to dry between each coat. The final coat shall be sanded lightly before application of paint or other decoration.
3) Inside corners shall be reinforced with tape embedded in cement, finished as specified "over joints".
4) Outside corners shall be protected by wood molding, metal molding, or metal corner reinforcement. Metal corner reinforcement shall be finished as specified "over joints" with two coats of cement.
5) Texturing ceilings and walls shall be medium orange peel splatter.

Section 8 – Millwork and Trim

8.1 General specifications
1) For existing millwork and trim install material that is a replacement in kind--or a compatible substitute material.
2) For historic properties, the City recommends identifying, retaining, and preserving interior features and finishes that are important in defining the overall historic character of the building, including columns, cornices, baseboards, fireplaces and mantels, paneling, light fixtures, hardware, and flooring; and wallpaper, plaster, paint, and finishes such as stenciling, marbling, and graining; and other decorative materials that accent interior features and provide color, texture, and patterning to walls, floors, and ceilings. For more detailed information see: http://www.nps.gov/hps/tps/standguide/rehab/rehab_masonry.htm
3) New trim materials shall be of select grade of white pine or equivalent. Cabinet plywood shall be of A grade or equivalent (paint or stain grade as per specifications. Pine or fir plywood not permitted for cabinets. MDF is not permitted in millwork.
4) Finger jointed material shall not be allowed on surfaces to be varnished but are allowed on surfaces to be painted.
5) Finish work shall be finished smooth, free from machine or tool marks, abrasions, raised grain, etc., on exposed surfaces, and shall be machine sanded and hand dressed to a smooth finish.
6) All molded members and trim shall be mitered or coped at corners.
7) All measurements and dimensions shall be verified by the Contractor at the job.
8) Nails shall be countersunk.

8.2 Cabinets (Kitchen)
1) Cabinets shall be set level.
2) Cabinet face frames shall be made of ¾ inch grade birch plywood. End panels and bottoms shall be ½" plywood. Cabinet backs and tops shall be 3/8" medium density particleboard with filled bull nosed edge.
3) Doors shall be ¾" birch plywood, "A" grade, trimmed with lip mold.
4) Drawer fronts shall be the same as doors. Sides, panels, and bottoms of 3/8" plywood.
5) All joints shall have countersunk nailing and glue.

8.3 Countertops
Countertops shall be laminated counter top with matching backsplash, approved by the Grants Management and Administration Department.

8.4 Interior trim
1) Door trim shall be H-trim with mitered corners and installed with a 1/8" inch reveal, or specified trim.
2) Window stools shall have a mitered, bull nosed front end. Window trim may also be gypsum board.
3) Ceiling trim, where needed, shall be 1 ¼" cove mold with mitered joints and corners.
4) Baseboards shall be a base mold of at least 2 ¼".
5) Shoe mold shall be required in all rooms without carpet.

8.5 Shelves
1) Kitchen shelves shall be a minimum 11 ½" deep by 1" lumber. Bedroom closet, bathroom closet, and garage shelves shall be a minimum of 12" deep by 1" thick lumber or other dimension as specified on the plans. They shall be adequately supported with wall brackets.

Section 9 – Flooring

9.1 General specifications
1) General specifications shall meet Texas Minimum Construction Standards, and City of San Antonio building code current at the time of construction.
2) All sub-floors should be solid and continuous, without liberal movement or bounce, free from rot and deterioration.
3) All flooring must be free from tripping hazards with a minimum of seams spaced at logical locations such as doorways and matched to the existing floor.
4) All flooring must be sealed and/or tight at the edges.
5) If concrete slab on grade is used, plywood underlayment is not required.
6) Underlayment for pier and beam construction:
   a) Bathroom underlayment must be 5/8" CDX exterior grade plywood over a 30 pound felt paper vapor barrier.
   b) All other floors must have 5/8", plywood installed with vapor barrier as in bathroom; floors must be smooth and even throughout structures.
   c) If hardwood flooring is to be installed, sub-flooring must be 5/8" CDX plywood.
7) Vinyl composition tile (VCT) must be 12"x12" square and 1/8" thickness homogenous type as approved by the Contract Administrator.
8) Sheet vinyl must be 12 mm. Floors at bath and kitchen must have waterproofed cover.
9) Carpeting must be durable quality nylon fabric with jute backing and meet or exceed FHA specifications. Must be a 24-28 oz. face weight carpet with continuous nylon filament.
10) Installation must be done with manufacturer's suggested adhesive.
11) The VCT must be fitted with no gaps showing at walls, door openings, or trim. Full cover must be achieved. At doors or other areas of joining, metal strips must be installed to protect floor covering.
12) Shoe mold is required.

Section 10 – Exterior Treatment

10.1 Brick
1) For existing masonry install masonry that is a replacement in kind--or a compatible substitute material.
2) For historic properties, the City recommends identifying, retaining, and preserving masonry features that are important in defining the overall historic character of the building such as walls, brackets, railings, cornices, window architraves, door pediments, steps, and columns; and details such as tooling and bonding patterns, coatings, and color. For more detailed information see: http://www.nps.gov/hps/tps/standguide/rehab/rehab_masonry.htm
3) New building face brick must be of gas fired solid clay shale units. Structural clay tile, concrete masonry units, and stone must comply with FHA specifications, Section 703.
4) Do not install cracked, broken, or chipped masonry units.
5) Lay masonry units plumb, true to line and with level courses accurately spaced within allowable tolerances.
6) Adjust masonry units into final position while mortar is soft and plastic.
7) Lay masonry units with full mortar coverage on horizontal and vertical joints.
8) Provide weep holes in head joints in first course and immediately above all flashing. Maximum spacing 33 inches.
9) Attach masonry veneer to backing with metal veneer ties. Use at least one tie per 3.25 square feet of veneer.
10) Dry brush masonry surface after each day's work. Scrub with acceptable cleaning agent.

10.2 Exterior Trim
1) For existing exterior trim install material that is a replacement in kind--or a compatible substitute material.
   For historic properties, the City recommends identifying, retaining, and preserving wood features that are important in defining the overall historic character of the building such as siding, cornices, brackets, window architraves, and doorway pediments; and their paints, finishes, and colors. For more detailed information see: http://www.nps.gov/hps/tps/standguide/rehab/rehab_wood.htm
2) New fascia shall be Hardi Plank. Fascia shall be installed on wood band nailed to rafter tails and shall be ½ inch wider than the cut of the rafter and soffit.
3) New soffit shall be Hardi Vented soffit installed to rafter (when specified).
4) New posts and handrails:
   a) Columns shall be a turned post column and be pressure treated lumber or fiberglass equivalent designed for exterior use.
   b) Handrails shall be pressure treated lumber.
6) New exterior door and window trim shall be Hardi Trim. Gaps shall be only large enough so that caulking will be sufficient to fill.
7) All fasteners and fittings shall be non-corrosive materials.

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10.3 Siding

1) For existing siding install siding that is a replacement in kind--or a compatible substitute material.
For historic properties, the City recommends identifying, retaining, and preserving wood features that are important in defining the overall historic character of the building such as siding, cornices, brackets, window architraves, and doorway pediments; and their paints, finishes, and colors. For more detailed information see: http://www.nps.gov/hps/tps/standguide/rehab/rehab_wood.htm
2) New exterior siding shall be Hardi-Plank.
3) All joints and panels must fall on center of framing members.
For lap siding start application by fastening a starter strip (3/8" x 3/8") along bottom edge of the Sill. Level and install first piece of siding so that bottom edge is at least 1/8", below the starter strip.
4) Fasteners must be ¾", up from the drip edge of the siding.
5) Minimum overlap of courses must be 1". NO siding may be placed closer than 6" to the exposed earth.

Section 11 – Painting

11.1 General specifications

1) All work shall be done by skilled mechanics and shall be uniform in appearance, of approved color, smooth and free from runs, sags, skips, and defective brushing.
2) Paint shall be well ground, not settled, badly caked, or thickened in container. It shall be readily broken up with a paddle to a smooth consistency and have easy brushing properties.
3) Paint shall be readily mixed.
4) Installation rate shall be no higher than the rate of coverage suggested by the manufacturer. All paint materials shall be delivered in original unopened containers, with labels and tag intact.
5) Paint shall be allowed to dry hard between coats, as per manufacturer's recommendation. Full coverage is required.
6) When color, wood grain, stain, or undercoat show through the final coat of paint, the work shall be covered by additional coat or coats until the paint is uniform in color and appearance and coverage is complete.
7) Edges of paint adjoining other materials or colors shall be sharp and clean without overlapping.
8) All cracks and joints shall be completely sealed with caulking compound (both interior and exterior). Caulking compound shall be delivered to the job in manufacturer's unopened containers. Caulk to be minimum 20-year warranty acrylic latex.
9) At completion of all construction, all damaged surfaces shall be touched up and left in a high quality condition.
10) Lead based paint shall not be used.

11.2 Exterior painting

1) Paint must carry a quality of no less than a 15-year warranty.
2) Exterior painting shall be performed when weather conditions are acceptable as recommended by the manufacturer.
3) Back prime unpainted wood using one coat of primer paint with mildew retardant.
4) Nail holes, splits or scratches shall be puttied, caulked or spackled smooth after prime coat. Knots and pitch streaks shall be spot primed with a quality stain killer.
5) Wood surfaces shall have smooth finish surface when painted.

11.3 Interior painting

1) Gypsum board paint finish shall be Eggshell or Satin. Flat finish is not allowed.
2) Paint for walls, ceiling and trim must carry a quality of at least a 10-year warranty.
3) At no time will latex paint be used to cover oil-based paint. All trim and wood shall receive two coats of semi-gloss oil base or latex enamel paint.

Section 12 – Plumbing

12.1 General specifications

1) General specifications shall meet Texas Minimum Construction Standards, and City of San Antonio building code current at the time of construction..
2) For Historic properties, the City recommends identifying, retaining, and preserving visible features of early mechanical systems that are important in defining the overall historic character of the building, such as radiators, and plumbing fixtures,. For more detailed information see: http://www.nps.gov/hps/tps/standguide/rehab/rehab_mechsystems.htm
3) All lines shall be located in wall cavities, ceiling/attic cavities and under foundation. Include roof jacks and flashing where necessary.
4) Gas piping shall be black steel pipe. Provide standard U.S. made gas stops where required.
5) Provide standard U.S. made gas stops where required.
6) Potable water supply piping, water discharge outlets, back-flow prevention devices or similar equipment must be in serviceable condition free from deterioration, corrosion and blockage and must not be so located as to make possible their submergence in any contaminated or polluted liquid or substance.
7) New sanitary waste and drainage piping shall be PVC, Schedule 40.
8) Water piping shall be type "L" copper tubing with wrought copper solder joint fittings, PEX water lines or galvanized iron with galvanized fittings.
9) Unions shall be provided to permit removal of equipment without cutting piping where legal.
10) Water stop valves shall be standard U.S. made with ends similar to fittings. Valves shall be provided at each piece of equipment to permit removal without shutting off service.

12.2 Water Supply and Wastewater Systems

1) Every dwelling unit must be connected to a sanitary water supply and functioning sanitary waste/water disposal system.
2) Every dwelling unit must contain a room which is equipped with a functioning toilet and a properly installed lavatory. Said lavatory must be properly connected to both hot and cold running water, under pressure, and must be properly maintained in working order. Faucets should be free from leaks or drips and should shut off completely
3) Every dwelling unit must contain a bathtub and/or shower. Bathtub and/or shower may be in the same room as the f lush water closet and lavatory, or said bathtub and/or shower may be in a separate room. These facilities must be properly connected to both hot and cold running water lines, under pressure, and must be maintained in working order. Faucets shall be free from leaks or drips and shall shut off completely.
4) Toilets and bathrooms must have doors with a privacy type lock and such doors, lock and hardware must be operable and maintained in working order.
5) Every dwelling must have supplied water-heating facilities which are properly installed; are maintained in working condition and free of leaks; are properly connected to any required hot water lines; and, are capable of heating water to be drawn for every bath as well as general usage
6) Every kitchen sink, toilet, lavatory basin and bathtub/shower, must be maintained in working condition and be properly connected to an approved water and sewer or septic system.
7) The following shut off valves will be installed:
a) One owner's shut off at the meter or supply source,
b) One shut off at each toilet,
c) One shut off each for hot and cold water at each sink/lavatory.
d) One supply side shut off at each water heater.
e) At least one exterior faucet must be installed and all faucets must be freeze protected.

12.3 Fixtures

1) Existing Plumbing Fixtures which are to remain shall be placed in good working order. All missing or damaged trim shall be replaced with new trim of same design or the entire set shall be replaced.
2) Water Closet: Only standard US made brand is acceptable and shall include a two (2) piece close coupled white, vitreous china, water saving commode (gallons per flush to current code). Includes pressed wood toilet seat, supply line, shut-off valve and one (1) bowl wax ring.
3) Kitchen sink shall be a new stainless steel seven (7) inches deep medium-grade double compartment, 33x22 inch self-rimming unit installed in kitchen complete with new ADA Compliant single handled mixer faucet, with vegetable sprayer, American Standard Colony Soft Kitchen Faucet w/ separate spray (Model #: 4175.501 or written approved equivalent washer-less), basket strainers, new continuous waste, P-trap assembly, DWV, etc. to code.
4) Lavatory: Unit shall include a 18" or 24" vanity (if space allows) complete with wood cabinet or equal, with cultured marble top, supply risers, shut-off valves and all necessary hardware.
5) Lavatory faucets to be ADA Compliant American Standard Colony Soft Single Control Faucet w/ pop-up drain or written approved equivalent. Model #: 2175.503
6) Tub shall be a 5' white enameled steel/fiberglass tub complete with a lever operated pop-up drain and overflow, PVC waste, a single lever shower diverter and a water saver showerhead.
7) Tub/shower faucets to be ADA Compliant American Standard products utilizing ceramic disc valves from the Colony Series or written approved equivalent.
8) Shower pan shall be installed as per manufacturer's instructions and have a City inspection.
9) Dryer venting shall be ducted to the exterior of the structure. All openings shall be rodent and weatherproof.
10) Washer connections shall be recessed mount box in wall with DWV and water faucets.
11) Hose bibs shall be installed at locations on the plans. Exterior hose bibs shall be the frost proof type with built in vacuum breaker. Backflow preventers are required.

12.4 Water Heaters

1) All water heaters must and carry a 5 year tank warranty, and be properly vented and sealed.
2) All water heaters will have at least thirty gallons storage capacity. Will be able to supply a continuous flow of hot water of at least 102 degrees F, and will be properly installed with gas and or electric shut-off valves as well as cold water supply shut-off valves.
3) Each unit shall be equipped with a functioning pressure release valve (TPL) which must release pressure at 150 P.S.I. and/or 210 degrees F. Water released must be exhausted to the exterior of the building.
4) Each water heater must be enclosed (except where otherwise permitted by the SBCCI) in a sealed closet designed for this purpose with combustion air drawn from outside the living area. Any gas water heater installed in garage areas will be located at least 18" above the floor in order to prevent combustion of fuel vapors.
5) Energy Efficiency Requirements
a) Electric water heaters must meet the minimum energy efficiency requirements outlined in the following chart when acquiring residential electric resistance water heaters of the types and sizes described below.
Energy Efficiency Requirements for Federal Purchases

Storage Volume	Energy Factor	Annual Energy Use
55 gallons or less	0.93 or greater	4,721 kWh or less
56 gallons or more	0.92 or greater	4,773 kWh or less

b) Where specified, residential electric resistance water heaters that meet or exceed the energy efficiency requirements outlined above are required.
c) Water heater pipe insulation must have a minimum thickness of 3/4". All hot and cold vertical lengths of pipe shall be insulated, plus the initial length of horizontal hot and cold water pipe until wall penetration.

12.5 Hazardous/Substandard Conditions

1) Hazardous conditions must include any condition that threatens the health and or safety of the occupants. Substandard conditions include any condition that threatens, defeats or will lead to the lack of functional viability of a single feature of a home. These conditions must include but not be limited to:
a) Lack of a continuous sanitary water supply. Where ground wells are used, this source should be approved for drinking or a secondary source of drinking water should be available;
b) Lack of a continuously functioning sanitary waste water disposal system;
c) Missing, dysfunctional or non-existent sanitary facilities including a functioning toilet in a separate room designed for such purposes. The lack of at least one sink and or lavatory for hygiene and at least one sink for kitchen purposes, each providing a continuous flow of both hot and cold water. The lack of at least one functional bathing facility;
d) Deteriorated, rotted, broken or otherwise worn water supply or waste water pipes;
e) Evident leaks either continuous or intermittent of either waste water or water supply lines.
f) This includes evidence of pooling underground of water mains, sewer feeds or septic drain fields;
g) Missing or blocked vent pipes;
h) Gas water heaters are prohibited in bathrooms, sleeping rooms, and closets;
i) Missing gas shut off valve for water heater;
j) Water heater combustion air taken from living area except when adequate air exchange meets SBCCI standards;
k) Missing or dysfunctional water heater TPL valve. TPL drain should flow at an angle not exceeding horizontal and exhaust flow to exterior of building;
l) Inadequate water heater exhaust pipe, combustion exhaust should be double walled and skirted at all penetrations;
m) Water Heater storage tanks less than thirty gallons;
n) Water Heater storage tanks that have calcified;
o) Water heater pipes, nipples or tanks elements that are rusted or corroded.
p) Missing or dysfunctional shut off valves one of which should be located at the following locations:
i. One shut off at the meter or supply source,
ii. One shut off at each toilet,
iii. One shut off each for hot and cold water at each sink/lavatory,
iv. One supply side shut off at each water heater.
v. The lack of fully functioning faucets at each sink/lavatory, bathtub/shower, at and at least one exterior hose bib
2) Any other condition not mentioned which meets the definition of a hazardous or substandard condition should be repaired and/or rehabilitated to meet industry standards.

Section 13 – Electrical

13.1 General specifications

1) General specifications shall meet City of San Antonio building code current at the time of construction.
2) All habitable rooms and other appropriate spaces requiring electrical services shall be provided with a system of wiring, wiring devices, and equipment to safely supply electrical energy for proper illumination, appliances, resident security, and other electrical equipment.
3) All electrical work must be performed by a licensed electrician, and a copy of the permit issued by the City Building Inspection Department must be PROPERLY DISPLAYED prior to commencement of work on the electrical system. All electrical work must be inspected by the City Building Inspection Department.
4) For Historic properties, the City recommends identifying, retaining, and preserving visible features of early mechanical systems that are important in defining the overall historic character of the building, such as fans, grilles, and switch plates, and lights. For more detailed information see: http://www.nps.gov/hps/tps/standguide/rehab/rehab_mechsystems.htm
5) All wiring must utilize copper conductors; aluminum conductors are disallowed.
6) All wiring must be fished in wall cavities. Any surface mounted wiring must be in smooth EMT conduit or wire mold securely mounted.
7) All electrical components, installations and modifications shall comply with NEC, and amended Codes and Ordinances of the City of San Antonio, Texas.
8) In case of any conflict between the plans and the National Electrical Code, the National Electrical Code will prevail and all work must be performed in accordance with said code. In case of any conflict between the plans and the Codes and Ordinances of the City, the Codes and Ordinances of the City will prevail and all work must be performed in accordance with said codes and ordinances.
9) GFCI's will be installed according to State of Texas property code, City of San Antonio building code current at the time of construction. and manufacturer's recommendation; such devices will be properly grounded and tested for proper function.

13.2 Service

1) New Service Entrance must be a minimum 200 amp, 120/240v service as per the plans.
2) New Service shall include capacity for 200 amps, grounding and lightning arrester.
3) Service and panel box shall include, capacity of service as indicated, box with number of circuits as indicated, lightning arrester and ground. Distribute all circuits to avoid overload of service.

13.3 Fixtures

1) Materials shall be new and shall be UL Approved and/or National Electrical Code rated. New light fixtures shall be metal and not plastic.
2) All existing or new 220v appliances/equipment shall be retrofitted with new cord to be compatible with receptacle required by the State of Texas property code and City of San Antonio Building Code.
3) Bathroom ceiling heater must be forced fan unit. Install as per the plans and the manufacturer's recommendations.
4) Bath exhaust fan must be U.L. approved and installed to meet City of San Antonio building code current at the time of construction..
5) Newly installed Range Hood must be U.L. listed and vented through the roof.

13.4 Smoke and CO Detector

1) For all new construction, 110 volt U.L. listed smoke alarm units shall be installed according to State of Texas property code, City of San Antonio building code current at the time of construction, and manufacturer's recommendation at location(s) specified on project specifications. Also at least one carbon monoxide detector must be installed if natural gas or other combustible is used as fuel source.
2) For all rehabilitation projects, U.L. listed smoke alarm units shall be installed according to State of Texas property code, City of San Antonio building code current at the time of construction and manufacturer's recommendation. Also at least one carbon monoxide detector must be installed if natural gas or other combustible is used as fuel source.

13.5 Hazardous/Substandard Conditions

1) Hazardous conditions must include any condition that threatens the health and or safety of the occupants. Substandard conditions include any condition that threatens, defeats or will lead to the lack of functional viability of a single feature of a home. These conditions must include but not be limited to:
a) Equipment or wiring which is missing, broken, disconnected, loosely connected, burnt, unsupported, corroded, cracked, split, has evidence of overheating, physical damage, or misuse;
b) Device or equipment is dirty, full of debris, infested etc.;
c) Frayed wiring is present;
d) Unshielded, knob and tube wiring is present;
e) Circuit breaker, switch, receptacle, fixed equipment, wiring or cable is not compatible with the phase, voltage, amperage, or other characteristics of the electricity in use;
f) Intermittent operation of fixed equipment, switches, outlets or other devices;
g) Flexible cord is used as a permanent wiring method;
h) Interior wiring is surface mounted and not conduit. This excludes crawl spaces and other allowable installations where access to wiring is limited;
i) Exterior wiring which is exposed to damp conditions, sunlight or potential damage is not conduit;
j) Bathroom receptacle, kitchen receptacle located within six feet of a water source garage receptacle or other outdoor receptacle are not protected by a ground fault interrupting device;
k) Polarity is reversed in connections or receptacles;
l) Branch circuits, feeder lines, cable size, device rating, circuit breakers, sub-panels or service panels are inadequate for the load as calculated by the current NEC standard Section 110-14. CABO sections 4100-4500 or the SBCCI sections;
m) Unlabeled circuit breakers;
n) Circuits that have been expanded past their original design limits;
o) Missing or dysfunctional overhead or other switch operated lighting in each interior room;
p) Missing or dysfunctional lighting at each exterior door operated by an interior switch that is within reach of the door;
2) Any other condition not mentioned which meets the definition of a hazardous or substandard condition should be repaired and/or rehabilitated to meet industry standards.

Section 14 – Mechanical Systems

14.1 General Specifications

1) General specifications shall meet City of San Antonio building code current at the time of construction.
2) For Historic properties, the City recommends identifying, retaining, and preserving visible features of early mechanical systems that are important in defining the overall historic character of the building, such as radiators, vents, fans, and grilles. For more detailed information see: http://www.nps.gov/hps/tps/standguide/rehab/rehab_mechsystems.htm
3) Central heat and air unit shall be U.L. listed. The unit shall be and shall comply with the Energy Conservation Code. It shall include all connections, piping, and fittings. BTU output and number of units shall be determined in the individual specifications. Unit must be installed by a licensed HVAC contractor in accordance City of San Antonio building code current at the time of construction. The thermostat must be capable of being set by adjustment or selection of sensors from at least 55o to 85o Fahrenheit and shall be capable of operating the system heating and cooling in sequence.

14.2 Minimum Mechanical Systems Standards

1) Each dwelling and/or dwelling unit must be supplied with its own heating system.
2) All heating facilities must be properly installed, be maintained in working condition and be capable of adequately heating all habitable rooms, bathrooms, and toilet rooms contained therein, or intended for use by the occupants thereof, to a temperature of at least 70 degrees F. (21 -degrees C.) at a distance 3 feet above the floor when the outside temperature is at or below minus 10 degrees F.
3) Ambient heat must be supplied from an adequate heat source in an adjoining room or hallway;
4) Every supplied central heating system must comply with all of the following requirements:
a) The central heating unit must be safe and in good working condition.
b) Every heat duct, steam pipe, and hot water pipe must be free of leaks and must function so that an adequate amount of heat is delivered where intended;
c) Every seal between any of the sections of a hot air furnace must be air-tight so noxious gases and fumes will not escape into the heat ducts; liner must be installed. The liner must meet or exceed the requirements of the City of San Antonio building code current at the time of construction, and must be installed according to same.
d) Whenever an existing structure has as its source of central heat the old octopus type conversion furnace, the unit must be inspected by a qualified furnace inspector to determine if the unit is still safe, free from carbon-monoxide leakage and capable of supplying heat as required above.
5) Every supplied space heater must comply with all of the following requirements:
a) No space heater burning solid, liquid, or gaseous fuels must be of a portable type;
b) Every space heater burning solid, liquid, or gaseous fuels must be properly vented to a chimney or duct leading to outdoor space and must be so installed as to provide proper draft (except when a functioning ODS system and a CO testing device is installed).
c) Every fuel burning space heater must have a fire-resistant panel between it and the floor or floor covering; whenever a space heater is located within 2 feet of a wall, said wall must be protected with insulation sufficient to prevent overheating of the wall.
d) Every space heater smoke pipe must be of a double walled variety and must be equipped with approved type thimbles or guards, properly constructed of non-flammable material. At the point where the pipe goes through any wall, ceiling, or partition the pipe must be surrounded by a protective collar or escutcheon.
e) Whenever feasible, un-vented free standing space heaters shall be removed and replaced with vented types. In rare situations, when vented type units are not feasible, un-vented ODS equipped units may be installed if approved by the City. In cases where ODS equipped heater are used a Carbon Monoxide testing device will be permanently installed.
6) All Texas, "T" valves should be replaced with approved shut off valves.
7) All mechanical work must be inspected and approved by the City's building inspection department .

14.3 Heat Pumps Installation & Efficiency Standard

1) Equipment shall be properly sized to dwelling based on ASHRAE or ACCA Manual J standards.
2) Manufacturer data sheets on installed air conditioning equipment or ARI equivalent combined compressor and coil HSPF must be provided to the utility in the Implementation Report.
3) Heat pumps shall have a minimum SEER of 14.00 and an HSPF of 8.2.

Central Heat and Air Conditioner Installation & Efficiency Standard

1) Air conditioning equipment shall be properly sized to dwelling based on ASHRAE or ACCA Manual J standards.
2) Manufacturer data sheets on installed air conditioning equipment or ARI reference numbers must be provided.
3) The central air conditioning equipment must meet the following standards:
a) Minimum ARI-listed SEER rating of 14.00
b) Minimum ARI-listed EER of 11.5
c) Heat pumps must have a minimum ARI-listed HSPF rating of 8.2

14.5 Hazardous/Substandard Conditions

1) Hazardous conditions must include any condition that threatens the health and or safety of the occupants. Substandard conditions include any condition that threatens, defeats or will lead to the lack of functional viability of a single feature of a home. These conditions must include but not be limited to:
a) The lack of a steady and dependable source of heat which will supply heat to all living areas either directly or indirectly and be able to maintain this heat at least 70 degrees. F. in all conditions;
b) Open flame gas or propane heaters which exhaust fumes to the interior of the living area and are not equipped with an Oxygen Depletion System (ODS). If an open flame type heater equipped with ODS is used a carbon monoxide detector must be installed;
i. Leaking, damaged or inadequate heat exchange units or venting systems which create the danger of CO build up;
ii. Leaking, corroded or damaged gas supply lines;
iii. Texas-T type shut valves;
iv. The lack of a functioning supply shut off valve for each gas or propane device;
v. The lack of a functional pilot or electric start for each gas or propane device;
vi. Ambient heat which is not supplied from an adjoining room;
vii. Free standing electric heaters used for sole source of heat.

Section 15 – Miscellaneous

15.1 Attic Access

1) Must be located as per the plans. Dimensions must be listed on the plans.
2) Unless otherwise specified on the plans, scuttle hole cover must be 5/8", plywood with a smooth finish. Trim must be H trim with mitered joints.
3) Paint to match other trim in house.
4) Cover must have insulation batt cut to fit on top of it.

15.2 Gravel Walks and drives

1) Gravel Walks and drives must be made of washed gravel 3/8", diameter minimum.
2) Gravel must be 4" thick minimum over a well graded and compacted soil.
3) Gravel must be contained by 2" x 12" treated lumber (note: distance from ground level to top of board not less than 2").

15.3 Insulation

1) General specifications shall meet Texas Minimum Construction Standards, and City of San Antonio building code current at the time of construction.
2) Exterior wall insulation: provide foil or paper faced glass fiber batts having a thermal resistance "R" value of at least R-13.
3) Ceiling insulation: provide foil or paper faced glass fiber batts having a thermal resistance "R" value of at least R-30.
4) Floor Insulation: provide foil or paper faced glass fiber batts having a thermal resistance "R" value of at least R-11.
5) Install all insulation according to manufacturer's instructions unless otherwise specified.
6) Blown insulation is acceptable but should have proper fire retardance and be placed above and below fire blocking.

15.4 Hardware

1) All exterior deadbolt locks are to be ASNI rated Security Grade 1.
2) All entrance locksets must be keyed alike with deadbolts.
3) Schlage Accent Universal Residential Keyed Entry Door Lever shall be installed on all exterior entry doors. Any alternate brands must be approved by the Contract Administrator.
4) Schlage Residential Single-Cylinder Deadbolts (Security Grade 1) shall be installed on all exterior entry doors. Any alternate brands must be approved by the Contract Administrator.
5) Keyed Entry sets and Deadbolt locks for new construction are to be finished in satin nickel/chrome unless otherwise specified.
6) Keyed Entry sets and Deadbolt locks for rehabilitation projects are to match existing hardware as close as possible.
7) Interior Doors on new construction - All bathroom and bedroom doors shall have Schlage Privacy Accent Push-Button Lock Residential Privacy Door Lever.
8) All other interior doors on new construction shall have Schlage Accent Residential Passage Door Lever.
9) All door hardware on rehab projects shall match existing hardware as closely as possible.
10) All doors must have a wall mounted door stop, strike-plate, and lockset, with 1 ½ pair of appropriate hinges.
11) Bathroom hardware must include the following unless otherwise specified:
a) Two chrome towel bars 18", long
b) Chrome toilet tissue holder.
c) Chrome toothbrush and tumbler holder.
d) Shower/tub panel kit must be ABS plastic unit sealed with matching color silicone caulk. Master bath unit must be ADA compliant.
e) Chrome shower curtain rod.

15.6 Landscaping

1) Upon final cleanup and removal of all materials and debris, yard must be hydro- mulched, or sodded with a turf grass appropriate to the local climate, or as specified in individual work write-up.
2) Replacement landscaping will be of native/adaptive and drought resistant species.
3) Utilize low-water requirement turf. Long, narrow strips of turf should be eliminated.
4) Low-water use, drought-tolerant, native and adaptive plants shall be utilized.
5) Group plants according to water usage.
6) Choose plants suitable to the South Central Texas climate. http://www.saws.org/conservation/outdoor/plants/index.cfm

Section 16 – Project Close-Out

16.1 Cleaning

1) Remove all construction debris from the site.
2) Clean and mop all resilient floors.
3) Clean all paint from other finished surfaces including window glass and mirrors.

16.2 Operating Items

1) Start all systems and leave all newly installed items in operating condition.
2) The Contractor shall be responsible for determining that all plumbing and electrical fixtures, switches and receptacles, which were part of the Scope of Work, are in proper working order upon completion of the rehabilitation.

16.3 Preparation of Structure

1) Prepare structure for Owner's occupancy.

16.4 Hardware

1) All hardware to be put in operating condition.
2) New keys must be turned over to Grants Administrator upon final completion.

THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS WHICH WILL AFFECT THE FABRICATION AND CONSTRUCTING OF COMPONENTS FOR THE NEW CONSTRUCTION PRIOR TO THE START OF CONSTRUCTION. UNLESS OTHERWISE INDICATED, THE DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC ALONG WITH THE SAFETY OF THE STRUCTURE DURING CONSTRUCTION. SUCH MEANS SHALL INCLUDE BUT NOT BE LIMITED TO BRACING AND SHORING OF DEAD LOADS, CONSTRUCTION LOADS, AND WIND LOADS. THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE, STRUCTURAL DAMAGE OR OTHER OBJECTIONAL CONDITIONS CAUSED BY HIS OPERATIONS

ISSUED FOR CONSTRUCTION

DPCD

NEW RESIDENTIAL BUILDING
PROTOTYPE 1233-18
CITY OF SAN ANTONIO
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

ISSUE	DATE	REMARKS	BY

A-1 ENGINEERING, LLC F-12583
STATE OF TEXAS
MOISES A. CRUZ
108540
LICENSED
PROFESSIONAL ENGINEER

A-1 ENGINEERING ,LLC
F-12583

THESE PLANS COMPLY WITH THE UNIVERSAL DESIGN CODE AND 2018 IRC

SHEET SIZE: 24" x 36"

ISSUE DATE: 11.24.2018

SHEET:

4 OF 14

NOTES

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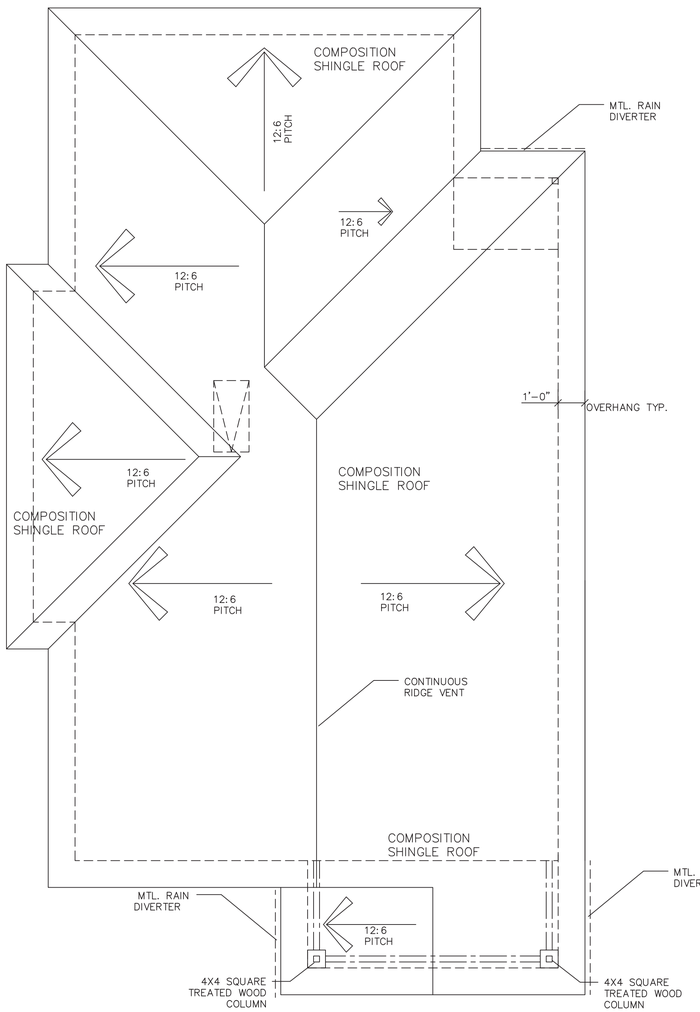

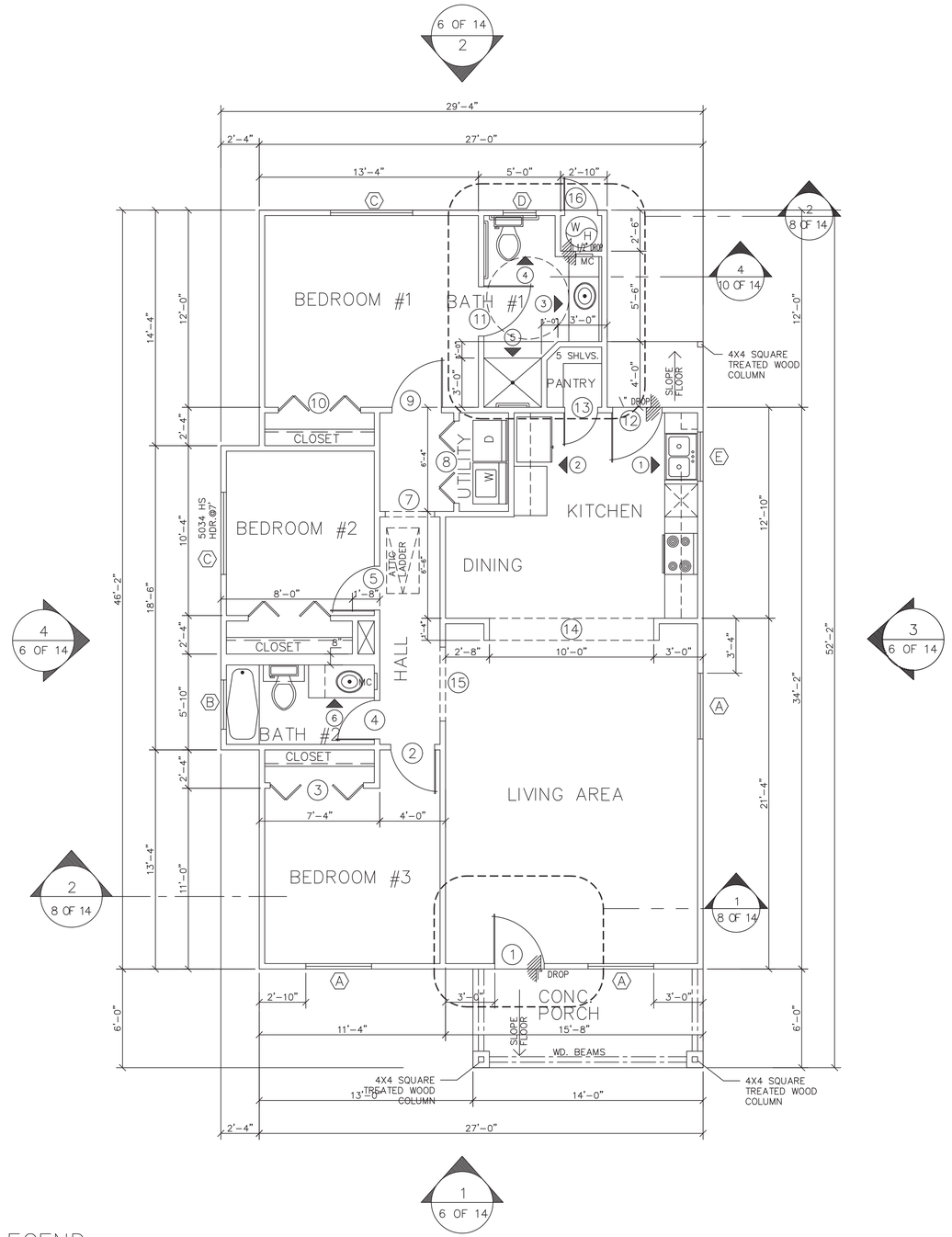

LEGEND

(B.O.)	BY OWNER
(SIZE) HS	HORIZONTAL SLIDER
(SIZE) SH	SINGLE HUNG (SLIDES UP)
PTD	PAINTED

2 / 5 OF 14 — ROOF PLAN
SCALE: 1/4" =1'-0"

1 / 5 OF 14 — FLOOR PLAN
SCALE: 1/4" =1'-0"

THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS WHICH WILL AFFECT THE FABRICATION AND CONSTRUCTING OF COMPONENTS FOR THE NEW CONSTRUCTION PRIOR TO THE START OF CONSTRUCTION. UNLESS OTHERWISE INDICATED, THE DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC ALONG WITH THE SAFETY OF THE STRUCTURE DURING CONSTRUCTION. SUCH MEANS SHALL INCLUDE BUT NOT BE LIMITED TO BRACING AND SHORING OF DEAD LOADS, CONSTRUCTION LOADS, AND WIND LOADS. THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE, STRUCTURAL DAMAGE OR OTHER OBJECTIONAL CONDITIONS CAUSED BY HIS OPERATIONS

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SHEET SIZE: 24" x 36"
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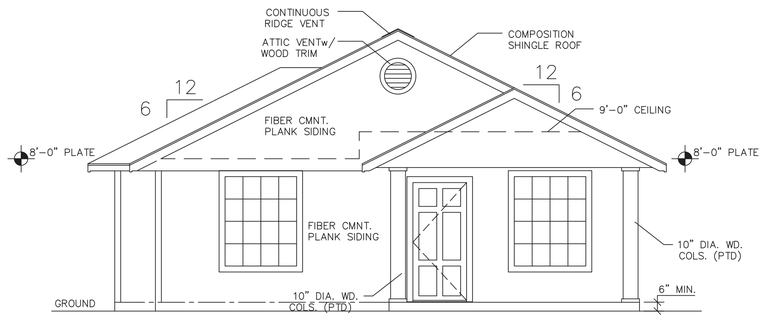
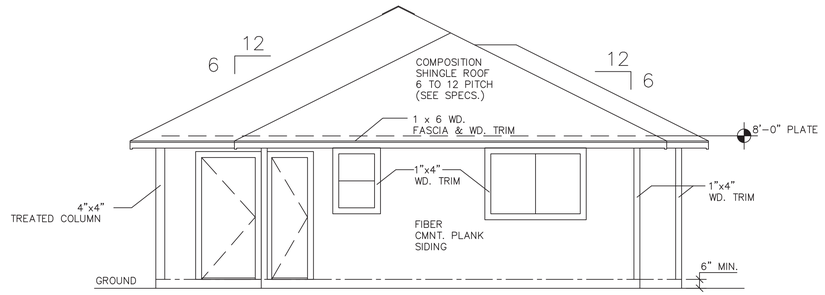
SHEET:
5 OF 14
FLOOR PLAN



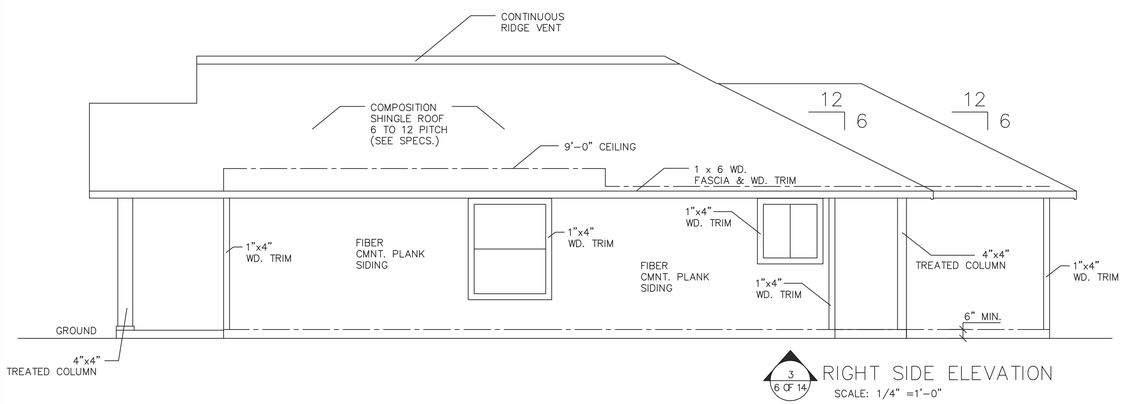
1 6 OF 14 FRONT ELEVATION

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



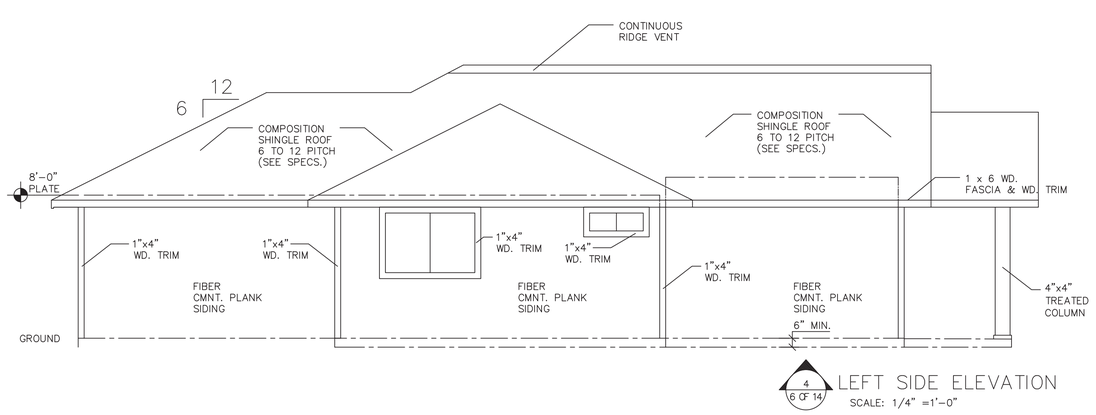
2 6 OF 14 REAR ELEVATION

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



3 6 OF 14 RIGHT SIDE ELEVATION

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



4 6 OF 14 LEFT SIDE ELEVATION

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

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DPCD

NEW RESIDENTIAL BUILDING
PROTOTYPE 1233-18
CITY OF SAN ANTONIO
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

ISSUE	DATE	REMARKS	BY

A-1 ENGINEERING, LLC F-12583
STATE OF TEXAS
MOISES A. CRUZ
108540
LICENSED
PROFESSIONAL ENGINEER

A-1 ENGINEERING ,LLC
F-12583

THESE PLANS COMPLY WITH THE UNIVERSAL DESIGN CODE AND 2018 IRC

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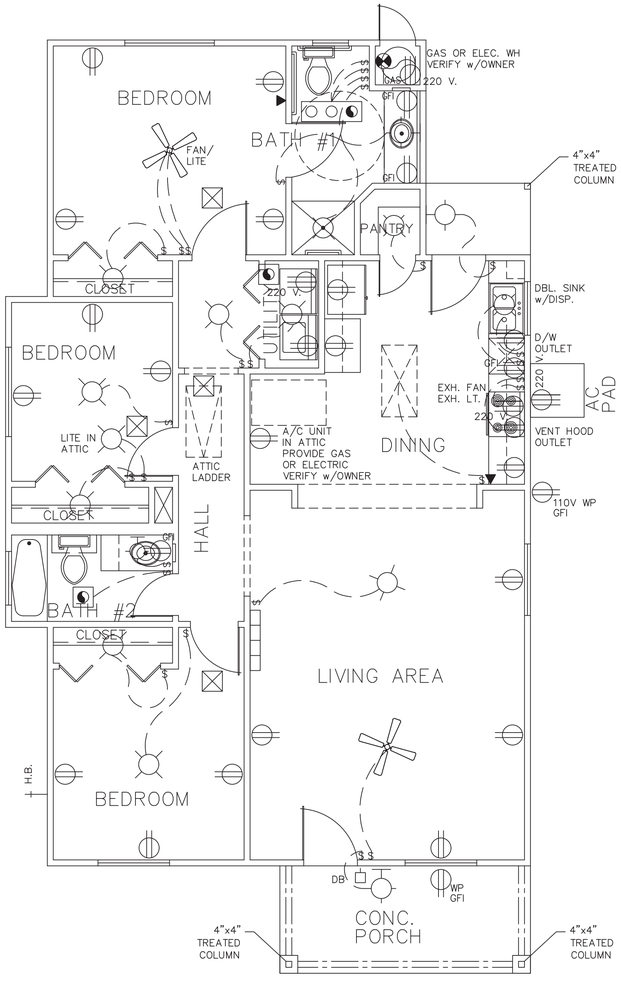
SHEET:

6 OF 14

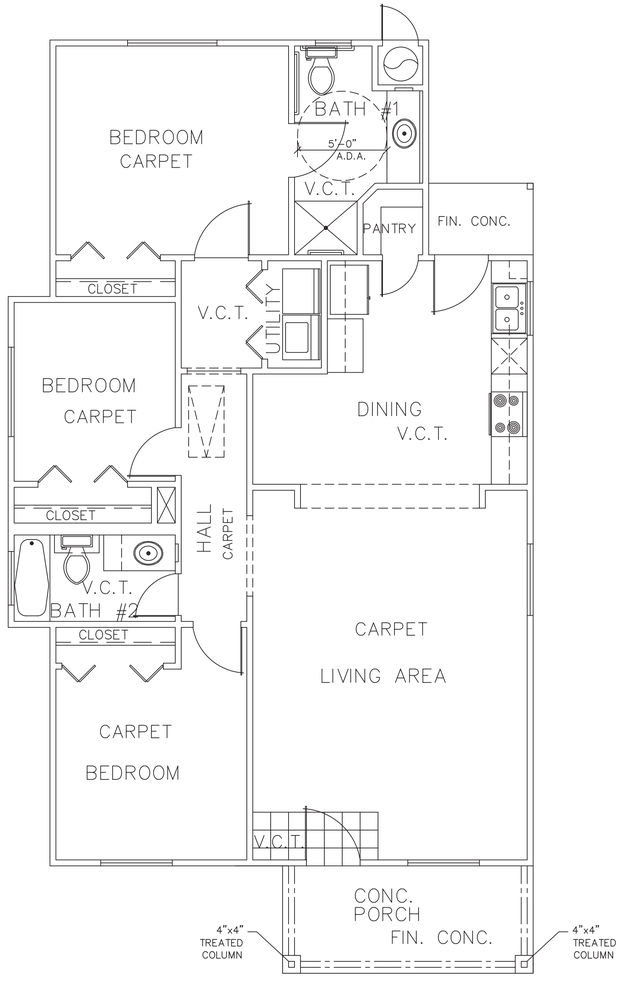
ELEVATIONS



2
7 OF 14

ELECTRICAL PLAN

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



1
7 OF 14

FLOORING PLAN

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

LEGEND

SD	SMOKE DETECTOR
$	SINGLE POLE LIGHT SWITCH
	WALL MOUNTED LIGHT FIXTURE
	CEILING MOUNTED LIGHT FIXTURE
	DUPLEX ELECTRICAL OUTLET
GFI	G.F.I. OUTLET
	D/W OUTLET
220 V.	220 V. OUTLET
	INTERNET DATA LINE
	VENT
H.V.L.	HEATER/LIGHT/VENT
H.B.	HOSE BIB
	CEILING FAN w/LIGHT FIXTURE
(B.O.)	BY OWNER
	TELEPHONE JACK OUTLET
TV	CABLE CONNECTION
GAS	GAS CONNECTION
	CHIMES
(SIZE) HS	HORIZONTAL SLIDER
(SIZE) SH	SINGLE HUNG (SLIDES UP)
	2'x4' LED FIXTURE
VCT	VINYL COMPOSITION TILE
DB	DOOR BELL

GENERAL NOTES:

1. SMOKE ALARMS SHALL BE HARDWIRED IN SERIES WITH BATTERY BACKUP POWER AS PER (sec. R317).

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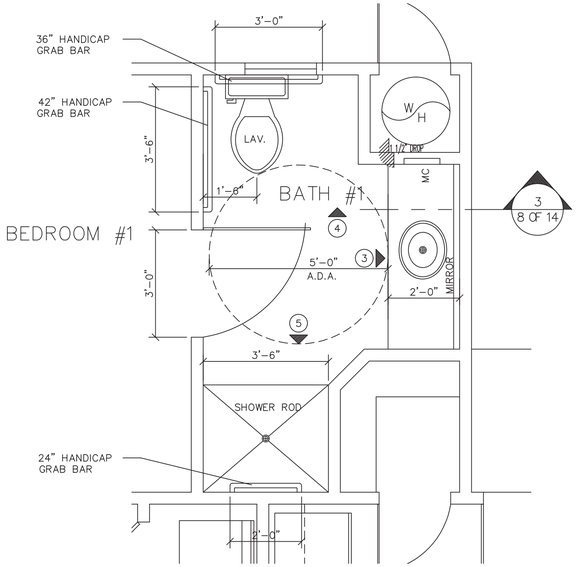
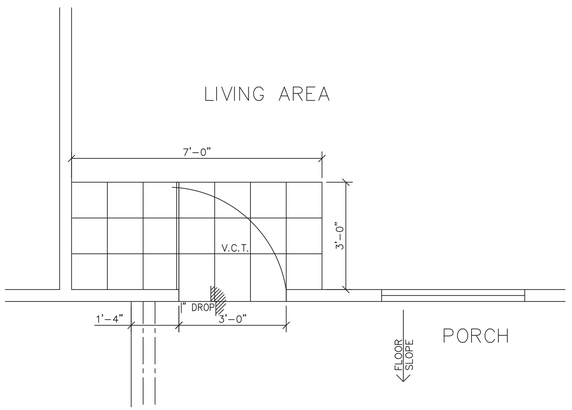
ELECTRICAL



2
8 OF 14

ENLARGED BATH #1 FLOOR PLAN

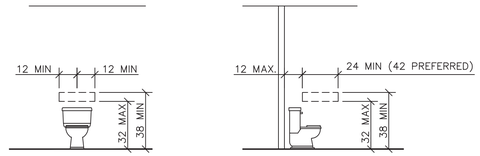
SCALE: 1/2" =1'-0"



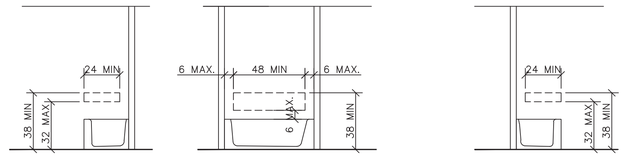
1
8 OF 14

ENLARGED ENTRY FLOOR PLAN

SCALE: 1/2" =1'-0"



LOCATION OF GRAB BAR REINFORCEMENTS FOR ADAPTABLE BATHROOMS
NOTE: THE AREAS OUTLINED IN DASHED LINES REPRESENT LOCATIONS FOR FUTURE INSTALLATION OF GRAB BARS FOR TYPICAL FIXTURE CONFIGURATIONS.



LOCATION OF GRAB BAR REINFORCEMENTS FOR ADAPTABLE SHOWERS
NOTE: THE AREAS OUTLINED IN DASHED LINES REPRESENT LOCATIONS FOR FUTURE INSTALLATION OF GRAB BARS FOR TYPICAL FIXTURE CONFIGURATIONS.

GRAB BAR SCHEMATIC

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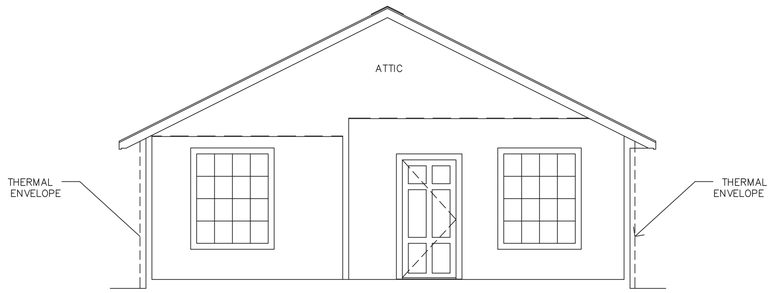
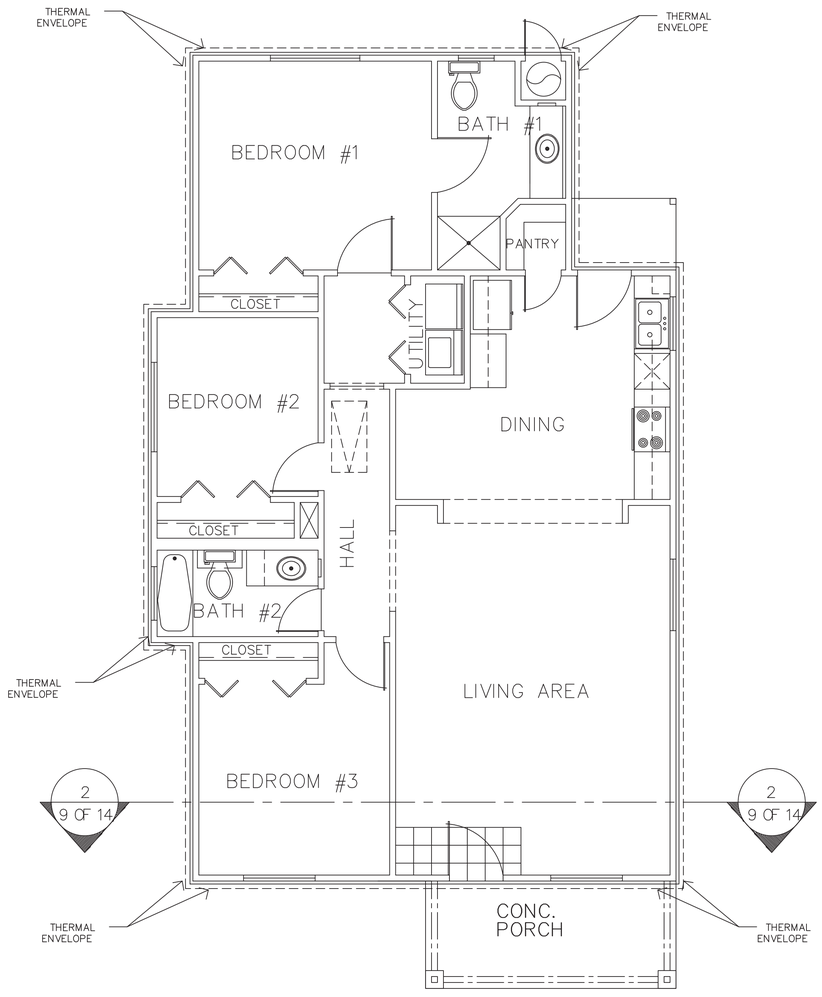
BATHROOM





2
9 OF 14

THERMAL ENVELOPE BUILDING SECTION

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

1
9 OF 14

THERMAL ENVELOPE FLOOR PLAN

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

NOTE:
WRAP THE ENTIRE EXTERIOR OF BUILDING WITH TYVEK THERMA WRAP R5.0, AS MANUFACTURED BY DUPONT. REFER TO MANUFACTURER FOR HANDLING, STORAGE, AND INSTALLATION TO ACHIEVE MAXIMUM PERFORMANCE.

TABLE #7

AIR BARRIER

COMPONENT	*AIR BARRIER CRITERIA*
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.
Ceiling/Attic	The air barrier in any dropped ceiling/ soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed.
Walls	The junction of the foundation and seal plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.
Windows, skylights and doors	The space between window/ door jambs and framing, and skylights and framing shall be sealed.
Rim joists	Rim joists shall include the air barrier.
Floors (including above garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.
Crawl space	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.
Narrow cavities	
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.
Plumbing and wiring	
Shower / tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubes shall separate them from the showers and tubes.
Electrical/ phone box on exterior wall	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the subfloor or drywall.
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.

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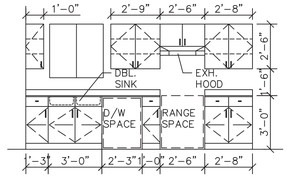
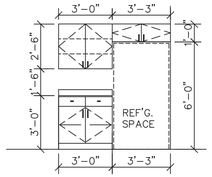
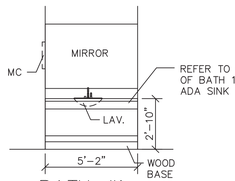
THERMAL



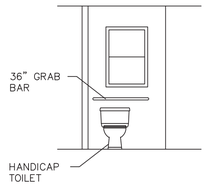
1 KITCHEN



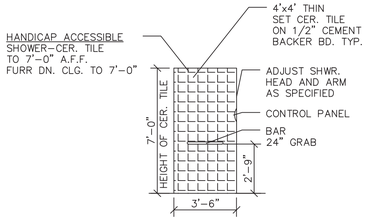
2 KITCHEN



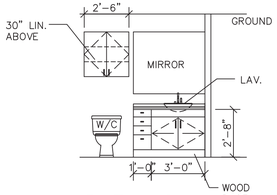
3 BATH #1



4 BATH #1



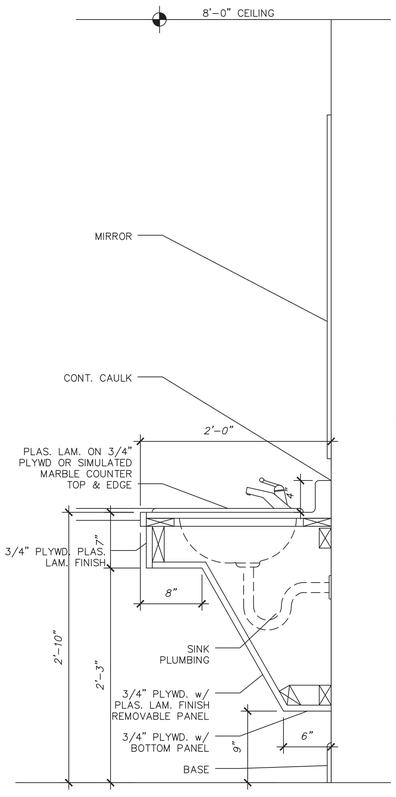
5 BATH #1

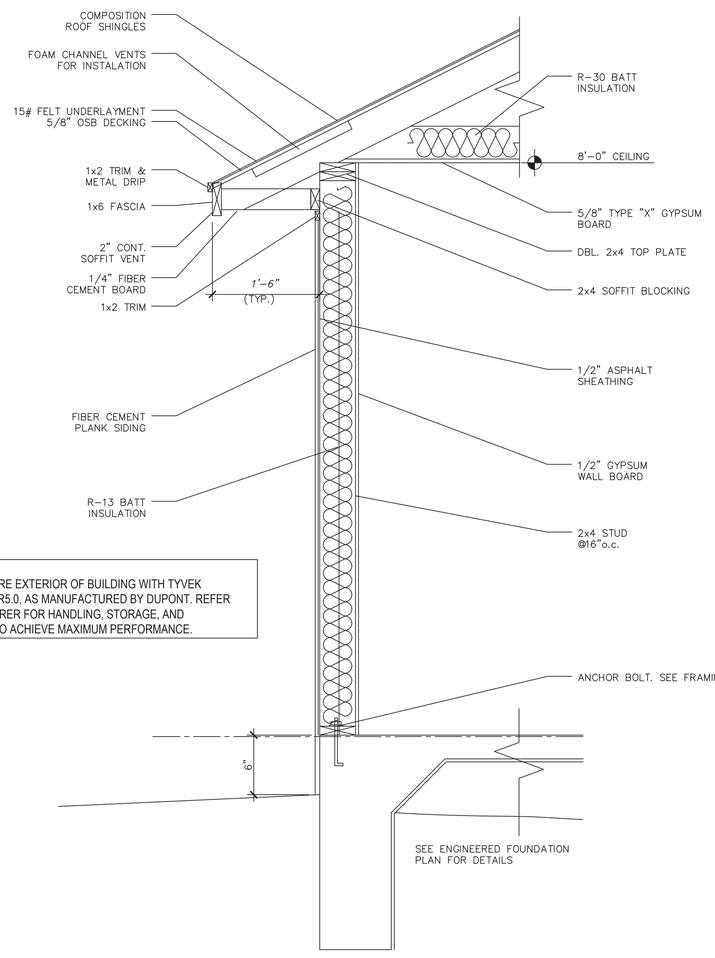


6 BATH #2

CABINET ELEVATIONS

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





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DOOR SCHEDULE

	DR. NM.	DOOR SIZE								DOOR MATERIAL				FRAME MATERIAL			REMARKS
		3'-0"x6'8"	2'-8"x6'8"	5'-0"x6'8"	2'-4"x6'8"	3'-0"x7'0"	2'-0"x6'8"	10'-0"x8'0"	4'-0"x7'0"	WOOD	METAL	GLASS		WOOD	METAL	FIBERGLASS	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1		X									X				X		
2			X							X				X			
3				X						X				X			BI-FOLD
4					X					X				X			
5			X							X				X			
6				X						X				X			BI-FOLD
7						X											GWB OPENING
8				X						X				X			BI-FOLD
9		X								X				X			
10				X						X				X			BI-FOLD
11		X								X				X			
12		X									X				X		
13							X			X				X			
14								X									GWB OPENING
15									X								GWB OPENING
16							X				X				X		

1. All Final Selections will be made by owners.
2. . . .

WINDOW SCHEDULE

	WIN. LET.	WINDOW SIZE						WIN. TYPE		FRAME MATERIAL				REMARKS
		40" W x 50" H	30" W x 10" H	50" W x 34" H	20" W x 30" H	30" W x 30" H		SINGLE HUNG	SLIDER		WOOD			
		1	2	3	4	5	6	7	8	9	10	11	12	
A		X						X			X			SINGLE HUNG (SLIDES UP)
B			X						X		X			HORIZONTAL SLIDER
C				X					X		X			
D					X			X			X			
E						X			X		X			HORIZONTAL SLIDER

1. All windows 7'-0" HEADER.

2 10 OF 14
ADA SINK CABINET SECTION
Scale: 1"= 1' – 0"

1 10 OF 14
TYPICAL SIDING WALL SECTION
Scale: 1"= 1' – 0"

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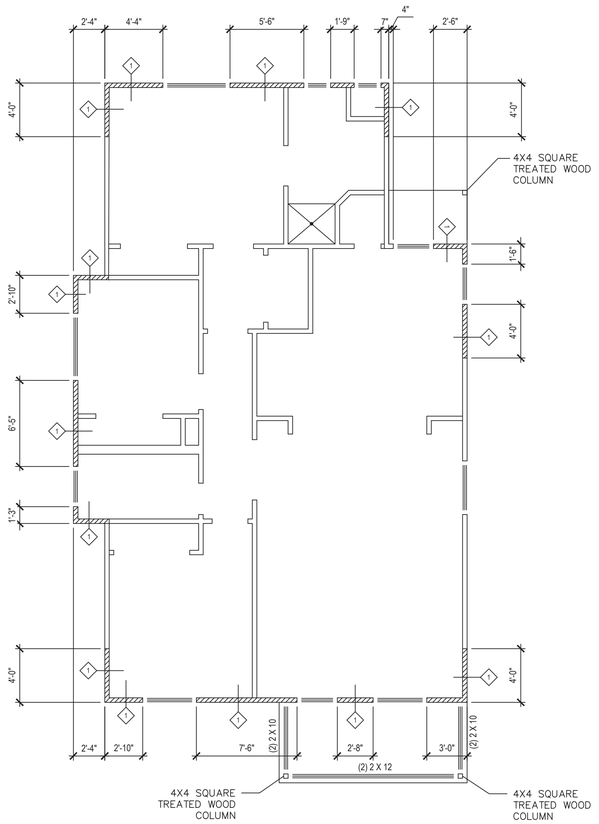

BRACE WALL TYPES

EXTERIOR — CONTINUOUS SHEATHED WALL. 7/16" THICK PLYWOOD SHEATHING FASTENED TO FRAMING WITH 10d NAILS AT 6" O.C. EDGE SPACING AND 12" O.C. FIELD SPACING. REFERENCE SHEATHING SCHEDULE ON S1.4. SEE SHEETS S3.1 TO S3.5 FOR BRACE WALL DETAILS.

DENOTES BRACED WALL PANELS

- EXTERIOR WALLS THAT ARE NOT BRACED WALLS SHALL HAVE 1/2" THICK FIBER BOARD OR INSULATION BOARD.

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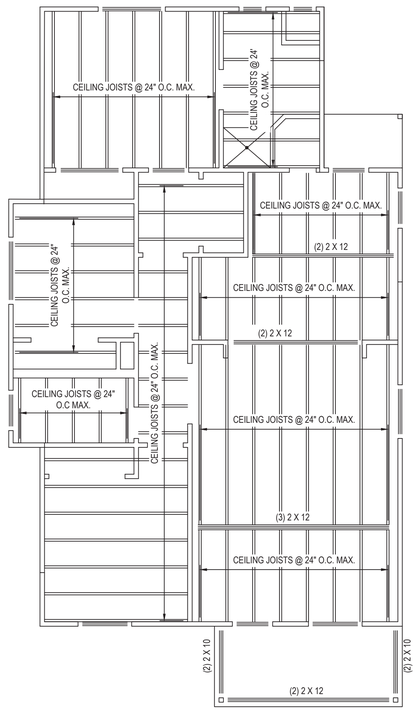
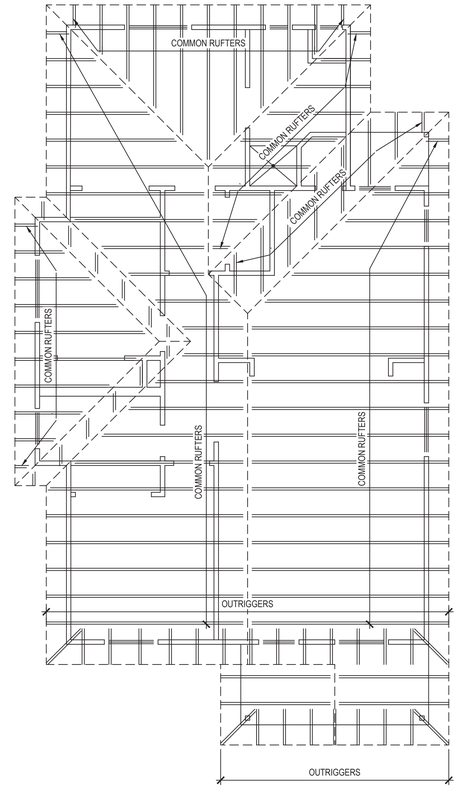
Braced Wall Plan

0' 4'-0" 8'-0"



Ceiling framing Plan

0' 4'-0" 8'-0"



Roof Framing Plan

0' 4'-0" 8'-0"

TABLE 1

NAILING SCHEDULE

CONNECTION	NAILING
JOIST OR TRUSS BEARING ON SILL OR GIRDER, TOENAIL	(3) 8d
BRIDGING TO JOIST, TOENAIL EACH END	(2) 8d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d AT 16"o.c.
TOP PLATE TO STUD, END NAIL TO EACH STUD	(2) 16d
STUD TO SOLE PLATE	(4) 8d TOENAIL OR (2) 16d END NAIL
DOUBLE STUDS, FACE NAIL	16d AT 24"o.c.
DOUBLE TOP PLATES, FACE NAIL	16d AT 16"o.c.
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2 - 16d
CONTINUOUS HEADER, TWO PIECES	16d AT 16"o.c. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	(3) 8d
CONTINUOUS HEADER TO STUD, TOENAIL	(4) 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	(3) 16d
RAFTER OR TRUSS TO PLATE, TOE NAIL	(3) 8d
BUILT-UP CORNER STUDS	16d AT 24"o.c.

NOTES:

1. MINIMUM NAILING SPECIFIED HEREIN SHALL BE PROVIDED UNLESS OTHERWISE NOTED ON DETAILS OR STRUCTURAL NOTES.
2. COMMON OR BOX NAILS MAY BE USED. 16d NAILS MAY BE EITHER COMMON OR SINKER.

TABLE 2

STRUCTURAL SHEATHING / DECKING

STRUCTURAL SYSTEM	SHEATHING TYPE	EXPOSURE CATEGORY	THICKNESS (MIN.)	SPAN RATING	NAILING PATTERN	
					EDGE SUPPORT	INTERIOR SUPPORT
FLOOR DECKING	APA RATED STURD I-FLOOR	EXP. 1	3/4" / 1 1/8"	24 oc / 48 oc	10d @ 6" O.C.	10d @ 12" O.C.
WALL SHEATHING	APA RATED SHEATHING	EXP. 1	7/16"	24/16	10d @ 6" O.C.	10d @ 12" O.C.
ROOF DECKING	APA RATED SHEATHING	EXP. 1	7/16"	24/16	8d @ 6" O.C.	8d @ 12" O.C.

NOTES:

1. STRUCTURAL PANELS SHALL BE LABELED / STAMPED WITH APA APPROVED MARKINGS AND LABELS SHOWING CONFORMANCE WITH SPECIFICATIONS.
2. ALL PANELS SHALL BE LAID OUT / ORIENTATED TO BE PERPENDICULAR TO SUPPORTS.
3. STAPLES MAY NOT BE SUBSTITUTED FOR NAILS.
4. BLOCK EDGES OF ALL WALL, ROOF, AND FLOOR SHEATHING PANELS.

TABLE #3

ROOF FRAMING SCHEDULE

MEMBER	SIZE	GRADE
COMMON RAFTER	2 X 6 AT 2'-0" O.C.	SYP #2
HIP RIDGE	2 X 10	SYP #2
GABLE RIDGE	2 X 10	SYP #2
OUTRIGGERS	2 X 4 AT 2'-0" O.C.	SYP #2
CEILING	2 X 6 AT 2'-0" O.C.	SYP #2

TABLE #4

HEADER SCHEDULE

SPAN	HEADER	SPECIES	JACK STUDS
3'-0" - 5'-0"	(2) 2 X 6	SYP #2	(1) SPF #2
6'-0" - 8'-0"	(2) 2 X 8	SYP #2	(1) SPF #2
9'-0" - 11'-0"	(2) 2 X 12	SYP #2	(1) SPF #2

TABLE #5

WALL FRAMING SCHEDULE

1st FLOOR WALLS	2 X 4 AT 2'-0"O.C.	SPF #2
1st FLOOR BOTTOM PLATE	2 X 4 TREATED	SPF #2
1st FLOOR TOP PLATE	(2) 2 X 4	SPF #2
2nd FLOOR WALLS	2 X 4 AT 2'-0"O.C.	SPF #2
2nd FLOOR BOTTOM PLATE	2 X 4	SPF #2
2nd FLOOR TOP PLATE	(2) 2 X 4	SPF #2

THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS WHICH WILL AFFECT THE FABRICATION AND CONSTRUCTING OF COMPONENTS FOR THE NEW CONSTRUCTION PRIOR TO THE START OF CONSTRUCTION. UNLESS OTHERWISE INDICATED, THE DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC ALONG WITH THE SAFETY OF THE STRUCTURE DURING CONSTRUCTION. SUCH MEANS SHALL INCLUDE BUT NOT BE LIMITED TO BRACING AND SHORING OF DEAD LOADS, CONSTRUCTION LOADS, AND WIND LOADS. THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE, STRUCTURAL DAMAGE OR OTHER OBJECTIONAL CONDITIONS CAUSED BY HIS OPERATIONS

ISSUED FOR CONSTRUCTION

DPCD

NEW RESIDENTIAL BUILDING
PROTOTYPE 1233-18
CITY OF SAN ANTONIO
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

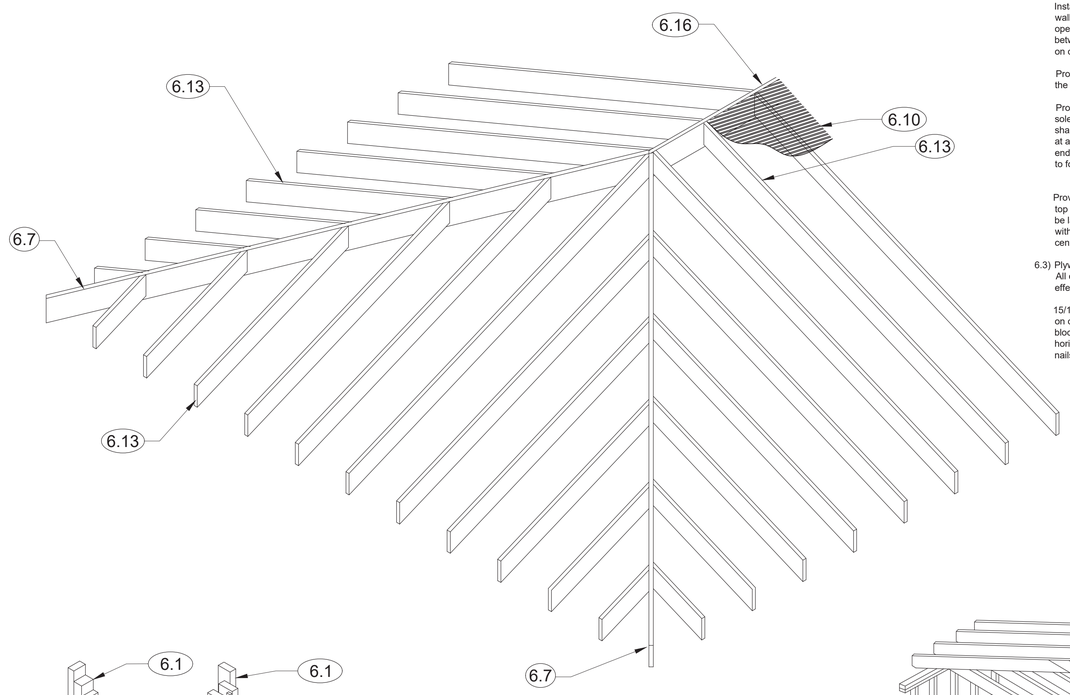
ISSUE	DATE	REMARKS	BY

A-1 ENGINEERING, LLC F-12583
STATE OF TEXAS
MOISES A. CRUZ
108540
LICENSED
PROFESSIONAL ENGINEER

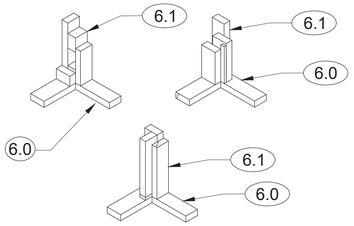
A-1 ENGINEERING ,LLC
F-12583

THESE PLANS COMPLY WITH THE UNIVERSAL DESIGN CODE AND 2018 IRC

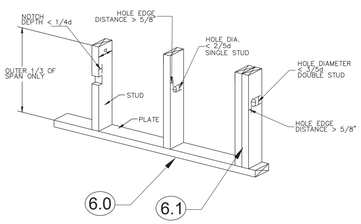
SHEET SIZE: 24" x 36"
ISSUE DATE: 11.24.2018
SHEET:
11 OF 14
FRAMING



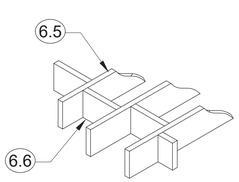
Detail R1 - Typical Hip Roof Framing



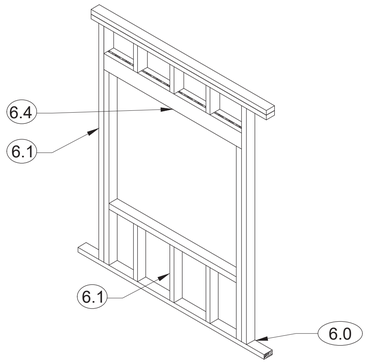
Detail R2 - Typical Wall Corners



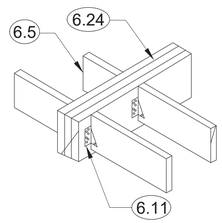
Detail R3 - Allowable Stud Notches



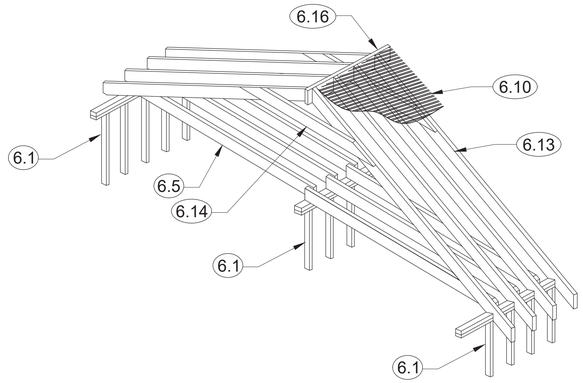
Detail R4 - Typical Joist Blocking



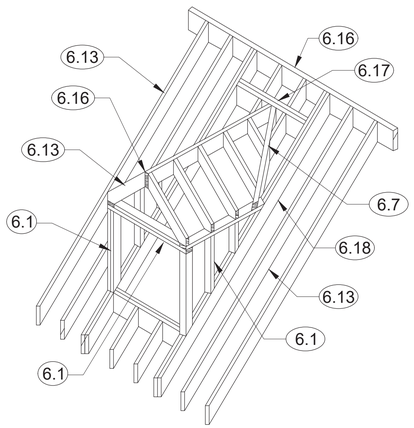
Detail R5 - Typical Header Framing at Opening



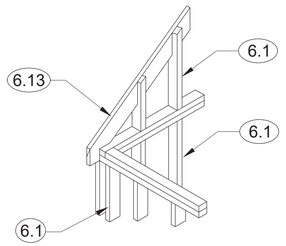
Detail R6 - Typical Joist to Beam



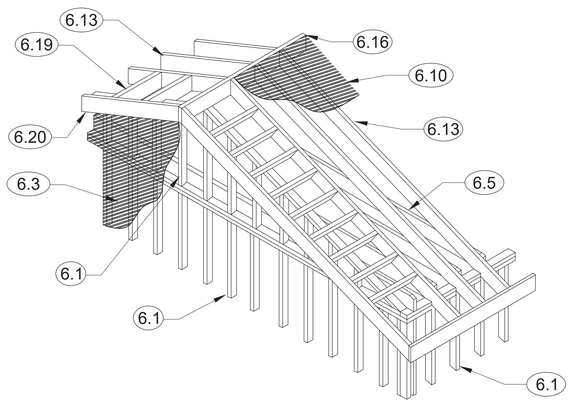
Detail R7 - Typical Gable Roof Framing



Detail R8 - Typical Gable Dormer Roof Framing



Detail R9 - Typical Gable End Framing



Detail R10 - Typical Gable Roof Framing at End

KEYNOTES

6.0) 2x wolmanized sill plate

6.1) Wood stud walls. 2X see table

Install double and/or triple studs at all beam bearing points and at the ends of all walls. In addition, studs shall be doubled at all angles, corners, and around all openings. Not less than 3 studs shall be installed at each wall corner. Block between corner studs and nail along full height of stud with 16d nails at least at 24" on center.

Provide 2x solid blocking at mid-height of all wood stud bearing walls located on the first floor of buildings three floors in height.

Provide a continuous sole plate at the bottom of all stud walls. Load bearing wall sole plates adjacent to masonry/concrete and those walls identified as shear walls shall be wolmanized and shall be bolted to the foundation as noted. Place anchors at a maximum of 32" on center spacing unless otherwise noted and within 12" from ends of discontinuous plates. Interior non-load bearing walls can be bolted or shot to foundation.

Provide a continuous double plate at the top of all wall studs. End joints in double top plates shall be offset at least 48 inches. Corner joints in double top plates shall be lapped and face nailed with at least 2- 16d nails. End nail top plate to each stud with at least 2- 16d nails. Face nail top plates with 16d nails at least at 16" on center.

6.3) Plywood wall sheathing refer to Table 2

All exterior walls and main cross stud partitions indicated on the drawings shall be effectively and thoroughly sheathed.

15/16" plywood sheathing. Attachment shall be with 10d nails spaced at 6 inches on center at edges and 6 inches on center at intermediate supports. Provide solid blocking at all joints. Plywood sheathing shall be placed at building corners for a horizontal distance of at least 48 inches. Staples shall not be used in place of nails.

6.4) Header refer to Table 4 on 12 of 15.

Headers made up of 2 members shall be nailed to each other with 2 rows of 12d nails at 12" on center. Headers made up of 3 members shall be nailed to each other with 3 rows of 12d nails at each side at 12" on center.

At headers less than 4 feet wide, provide a single cripple stud below each end of header nailed to a single full height stud. Toenail header at each end on each side to studs with 1- 16d nail per 2" nominal depth of header.

At headers 4 feet wide and wider, provide double cripple studs below each end of header nailed to double full height studs. Toenail header at each end on each side to studs with 1- 16d nail per 2" nominal depth of header.

6.5) 2x wood joist - see table

Joists shall be installed upright (crowns up) and held in a straight line. Joists shall be full bearing over entire plate width. Toenail joist to each support with at least 3- 8d nails. Provide solid full depth blocking in all conventionally framed spans over 8'-0". Maximum distance between blocking and bearing shall be 8'-0". Provide solid blocking at all supports.

Bored holes required in joists shall be limited to 1/5 the joist depth and shall be no closer than 2" from the top or bottom of the joist or no closer than 24" from a support.

Provide metal joist hangers at 4x2 trusses framed into wood beams. Nail as per manufacturers recommendations.

6.6) Provide 2x full depth solid blocking between framing members. End nail blocking to each truss and rafter with at least 2- 8d nails and toenail to top plate with at least 4- 8d nails.

6.7) Conventional framing forming roof valleys. See table

Rafters shall be framed directly opposite each other at the ridge. End nail each rafter to ridge with at least 2- 16d nails.

6.8) Plywood Roof Deck refer to Table 2 on 12 of 15.

Place plywood roof sheathing with required joint spaces between sheets and with end joints staggered. Plywood grain shall be perpendicular to framing. Secure sheets over firm bearing. Provide solid blocking at all plywood edges. Provide plywood sheathing clips (referred to as H clips or PSC clips) at unsupported plywood roof edges, spaced one between each support. Provide edge blocking at all roof openings. Nail to framing members at plywood edges at 6" on center and at intermediate supports at 6" on center. Nail with at least 8d common nails.

6.9) Joist hangers. Simpson Strong Tie
- 2x4 to Intersecting Beam: LUS24
- 2x6 to Intersecting Beam: LUS26
- 2x8 to Intersecting Beam: LUS28
- 2x10 to Intersecting Beam: LUS210
- 2x12 to Intersecting Beam: LUS212
- LVL to LVL:

6.10) 2x rafter. Refer to Table 3Add 2x8 purlin at mid-span of rafter. Support purlin line with 2x4 stud at 4-ft on center along centerline of purlin.

6.11) 2x4 collar tie at 4'-0" on center. Position collar tie no closer than 3-ft from bottom of the ridge board.

6.12) 2x ridge board. Add 2x stud at each ridge board splice and at the ends of the ridge board.

6.13) Double 2x cross blocking

6.14) Double rafters at opening.

6.15) 2x outriggers at 2'-0" on center. Span outrigger 2'-0" across the top plate into the intersecting cross rafter.

6.16) 2x facia.

6.17) Wood beam. Refer to framing plan

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SHEET:

12 OF 14

DETAILS

P:\Project Files\Austin & San Antonio\17-000\17-464-0.4 COSA Residential Bldgs San Antonio Texas\Structural\Drawings\COSA Plan 1233\Prototype-COSA-Plan 1233.dwg, 11/26/2018 11:33:31 AM, DWG to PDF.pc3

KEY NOTES

6.1) SOLE (BOTTOM) PLATE: 2x SYP # 2 OR BETTER. ANCHOR SOLE PLATE TO CONCRETE WITH 1/2" Ø A307 "J" BOLTS AT 32" O.C. MAX. ENSURE BOLT IS EMBEDDED 7" INTO CONCRETE.

6.2) WOOD STUD WALLS SHALL BE FRAMED PER THE BRACED WALL PLAN.

INSTALL DOUBLE AND/OR TRIPLE STUDS AT ALL BEAM BEARING POINTS AND AT THE ENDS OF ALL DIAGONAL LET-IN BRACING. IN ADDITION, STUDS SHALL BE DOUBLED AT ALL ANGLES, CORNERS, AND AROUND ALL OPENINGS. NOT LESS THAN 3 STUDS SHALL BE INSTALLED AT EACH WALL CORNER. BLOCK BETWEEN CORNER STUDS AND NAIL ALONG FULL HEIGHT OF STUD WITH 16d NAILS AT LEAST AT 24" O.C.

PROVIDE A CONTINUOUS SOLE PLATE AT THE BOTTOM OF ALL STUD WALLS. LOAD BEARING WALL SOLE PLATES ADJACENT TO MASONRY AND THOSE WALLS IDENTIFIED AS SHEAR WALLS SHALL BE WOLMANIZED AND SHALL BE BOLTED TO THE FOUNDATION AS NOTED. PLACE ANCHORS AT A MAX. OF 32" O.C. SPACING UNLESS OTHERWISE NOTED AND WITHIN 12" FROM ENDS OF DISCONTINUOUS PLATES. INTERIOR NON-LOAD BEARING WALLS CAN BE BOLTED OR SHOT TO FOUNDATION. TOENAIL EACH STUD TO SOLE PLATE WITH AT LEAST (4) 8d NAILS OR END NAIL WITH AT LEAST (2) 6d NAILS. FACE NAIL SOLE PLATES IN UPPER LEVEL WALLS WITH 16d NAILS AT LEAST AT 16" O.C.

AT FRAMING AROUND OPENINGS, TRIMMER AND HEADER JOISTS SHALL BE DOUBLE FOR SPANS GREATER THAN 4'-0", UNLESS NOTED OTHERWISE.

PROVIDE A CONTINUOUS DOUBLE PLATE AT THE TOP OF ALL WALL STUDS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 48". CORNER JOINTS IN DOUBLE TOP PLATES SHALL BE LAPPED AND FACE NAILED WITH AT LEAST (2) 16d NAILS. END NAIL TOP PLATE TO EACH STUD WITH AT LEAST (2) 16d NAILS. FACE NAIL TOP PLATES WITH 16d NAILS AT LEAST AT 16" O.C.

6.3) PLYWOOD WALL SHEATHING SEE TABLE

ALL EXTERIOR WALLS AND MAIN CROSS STUD PARTITIONS INDICATED ON THE DRAWINGS SHALL BE EFFECTIVELY AND THOROUGHLY SHEATHED.

BLOCK ALL EDGES. STAPLES SHALL NOT BE USED IN PLACE OF NAILS.

6.5) 2X ROOF JOIST - REFER TO ROOF FRAMING PLAN.

LUMBER TO BE SYP # 2 OR BETTER.

JOISTS SHALL BE INSTALLED UPRIGHT (CROWNS UP) AND HELD IN A STRAIGHT LINE. JOISTS SHALL BE FULL BEARING OVER ENTIRE PLATE WIDTH. TOENAIL JOIST TO EACH SUPPORT WITH AT LEAST (3) 8D NAILS.

PROVIDE SOLID FULL DEPTH BLOCKING IN ALL CONVENTIONALLY FRAMED SPANS OVER 8'-0". MAXIMUM DISTANCE BETWEEN BLOCKING AND BEARING SHALL BE 8'-0". PROVIDE SOLID BLOCKING AT ALL SUPPORTS.

BORED HOLES REQUIRED IN JOISTS SHALL BE LIMITED TO 1/5 THE JOIST DEPTH AND SHALL BE NO CLOSER THAN 2" FROM THE TOP OR BOTTOM OF THE JOIST OR NO CLOSER THAN 24" FROM A SUPPORT.

6.10) PLYWOOD FLOORING; SEE SEE TABLE

6.11) PLYWOOD ROOF DECK SEE TABLE

PLACE PLYWOOD ROOF SHEATHING WITH REQUIRED JOINT SPACES BETWEEN SHEETS AND WITH END JOINTS STAGGERED. PLYWOOD GRAIN SHALL BE PERPENDICULAR TO FRAMING. SECURE SHEETS OVER FIRM BEARING. PROVIDE SOLID BLOCKING AT ALL PLYWOOD EDGES. PROVIDE PLYWOOD SHEATHING CLIPS (REFERRED TO AS H CLIPS OR PSC CLIPS) AT UNSUPPORTED PLYWOOD ROOF EDGES, SPACED ONE BETWEEN EACH SUPPORT. PROVIDE EDGE BLOCKING AT ALL ROOF OPENINGS. NAIL TO FRAMING MEMBERS AT PLYWOOD EDGES AT 6" O.C. AND AT INTERMEDIATE SUPPORTS AT 6" O.C. NAIL WITH AT LEAST 8d COMMON NAILS.

6.12) 2X BLOCKING BETWEEN TRUSSES NAILED TO TRUSSES AND TO TOP PLATE.

6.13) 2x CEILING JOISTS ALIGNED WITH RAFTERS TO FACE NAIL CEILING JOIST TO RAFTERS WITH (3) 10d NAILS.

6.15) PREFABRICATE 4X FLOOR FRAMING - REFER TO FLOOR FRAMING PLAN.

6.20) CONTINUOUS 1X FASCIA BOARD.

6.23) GABLE END WALL. STUD SIZE AND SPACING TO MATCH BELOW.

6.30) 2x4 CONTINUOUS RIBBON BLOCKING FACE NAILED TO EACH TRUSS AND WITH AT LEAST (2) 16d NAILS.

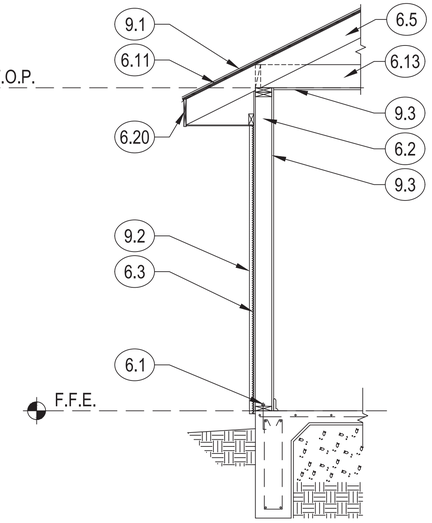
6.34) 2X BLOCKING.

6.35) 2 X 8 LEDGER FASTENED TO FRAMING WITH 3 #10 SCREWS AT 16" O.C.

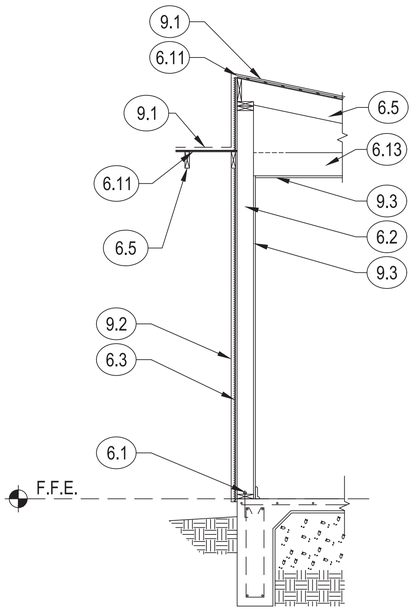
9.1) ROOFING MATERIAL - REFER TO DESIGNER/OWNER.

9.2) EXTERIOR FINISH - REFER TO DESIGNER/OWNER.

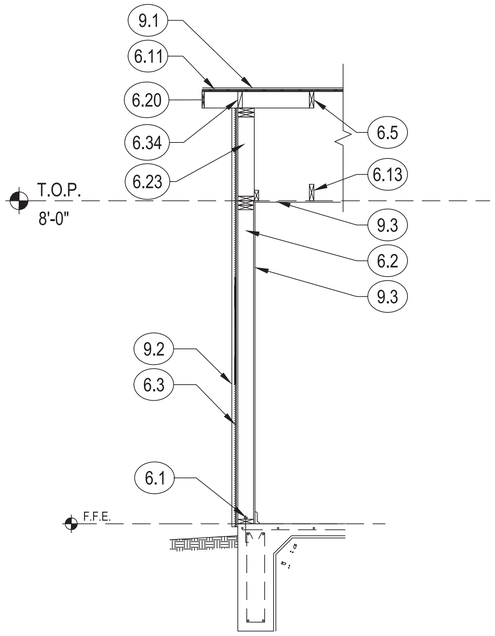
9.3) INTERIOR FINISH - REFER TO DESIGNER/OWNER.



1 TYPICAL EXTERIOR BRACED WALL



2 TYPICAL EXTERIOR BRACED WALL



3 TYPICAL EXTERIOR BRACED WALL

TABLE 1

NAILING SCHEDULE	
CONNECTION	NAILING
JOIST OR TRUSS BEARING ON SILL OR GIRDER, TOENAIL	(3) 8d
BRIDGING TO JOIST, TOENAIL EACH END	(2) 8d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d AT 16"o.c.
TOP PLATE TO STUD, END NAIL TO EACH STUD	(2) 16d
STUD TO SOLE PLATE	(4) 8d TOENAIL OR (2) 16d END NAIL
DOUBLE STUDS, FACE NAIL	16d AT 24"o.c.
DOUBLE TOP PLATES, FACE NAIL	16d AT 16"o.c.
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2 - 16d
CONTINUOUS HEADER, TWO PIECES	16d AT 16"o.c. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	(3) 8d
CONTINUOUS HEADER TO STUD, TOENAIL	(4) 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	(3) 16d
RAFTER OR TRUSS TO PLATE, TOE NAIL	(3) 8d
BUILT-UP CORNER STUDS	16d AT 24"o.c.

NOTES:

1. MINIMUM NAILING SPECIFIED HEREIN SHALL BE PROVIDED UNLESS OTHERWISE NOTED ON DETAILS OR STRUCTURAL NOTES.
2. COMMON OR BOX NAILS MAY BE USED. 16d NAILS MAY BE EITHER COMMON OR SINKER.

TABLE 2

STRUCTURAL SHEATHING / DECKING						
STRUCTURAL SYSTEM	SHEATHING TYPE	EXPOSURE CATEGORY	THICKNESS (MIN.)	SPAN RATING	NAILING PATTERN	
					EDGE SUPPORT	INTERIOR SUPPORT
FLOOR DECKING	APA RATED STURD I-FLOOR	EXP. 1	3/4" / 1 1/8"	24 oc / 48 oc	10d @ 6" O.C.	10d @ 12" O.C.
WALL SHEATHING	APA RATED SHEATHING	EXP. 1	7/16"	24/16	10d @ 6" O.C.	10d @ 12" O.C.
ROOF DECKING	APA RATED SHEATHING	EXP. 1	7/16"	24/16	8d @ 6" O.C.	8d @ 12" O.C.

NOTES:

1. STRUCTURAL PANELS SHALL BE LABELED / STAMPED WITH APA APPROVED MARKINGS AND LABELS SHOWING CONFORMANCE WITH SPECIFICATIONS.
2. ALL PANELS SHALL BE LAID OUT / ORIENTATED TO BE PERPENDICULAR TO SUPPORTS.
3. STAPLES MAY NOT BE SUBSTITUTED FOR NAILS.
4. BLOCK EDGES OF ALL WALL, ROOF, AND FLOOR SHEATHING PANELS.

TABLE #3

ROOF FRAMING SCHEDULE		
MEMBER	SIZE	GRADE
COMMON RAFTER	2 X 6 AT 2'-0" O.C.	SYP #2
HIP RIDGE	2 X 10	SYP #2
GABLE RIDGE	2 X 10	SYP #2
OUTRIGGERS	2 X 4 AT 2'-0" O.C.	SYP #2

TABLE #4

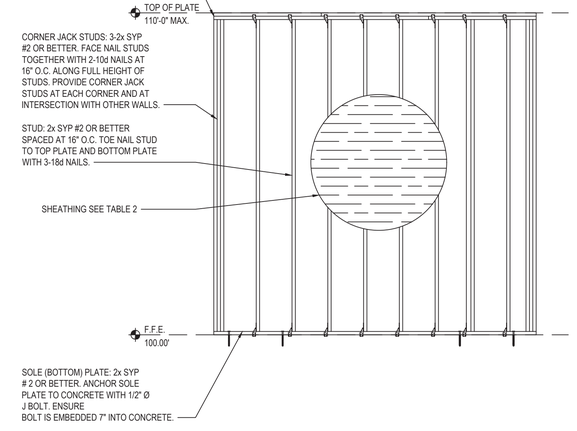
HEADER SCHEDULE			
SPAN	HEADER	SPECIES	JACK STUDS
3'-0" - 5'-0"	(2) 2 X 6	SYP #2	(1) SPF #2
6'-0" - 8'-0"	(2) 2 X 8	SYP #2	(1) SPF #2
9'-0" - 11'-0"	(2) 2 X 12	SYP #2	(1) SPF #2

TABLE #5

WALL FRAMING SCHEDULE		
1st FLOOR WALLS	2 X 4 AT 2'-0"O.C.	SPF #2
1st FLOOR BOTTOM PLATE	2 X 4 TREATED	SPF #2
1st FLOOR TOP PLATE	(2) 2 X 4	SPF #2
2nd FLOOR WALLS	2 X 4 AT 2'-0"O.C.	SPF #2
2nd FLOOR BOTTOM PLATE	2 X 4	SPF #2
2nd FLOOR TOP PLATE	(2) 2 X 4	SPF #2

TOP PLATE: 2- 2x SYP #2 OR BETTER. OVERLAP TOP PLATES AT CORNERS AND INTERSECTIONS WITH OTHER WALLS. END JOINTS IN TOP PLATE SHALL BE OFFSET AT LEAST 24". JOINTS IN PLATES NEED NOT OCCUR OVER STUDS.

FASTEN TOP PLATES TOGETHER WITH 2-10d COMMON WIRE NAILS (FACE NAIL) AT 18" O.C. ALONG LENGTH OF PLATE.



A - TYPICAL SCHEMATIC OF ENGINEERED BRACED WALL PANEL.

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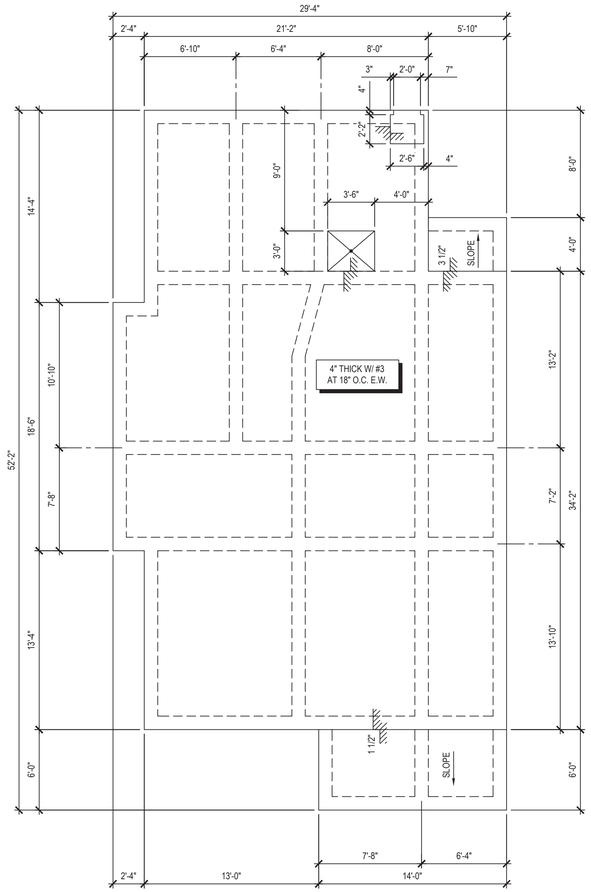
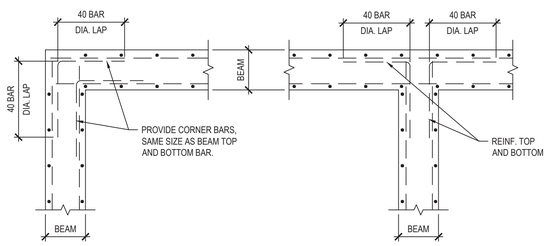


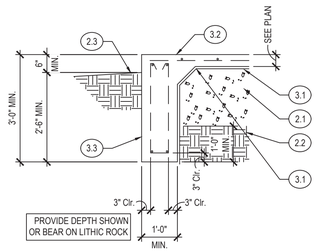
Foundation Plan

0' 4'-0" 8'-0"

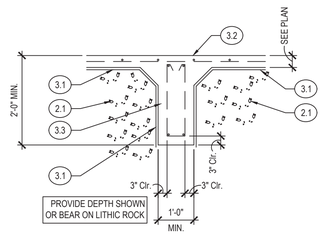
NOT FOR CONSTRUCTION



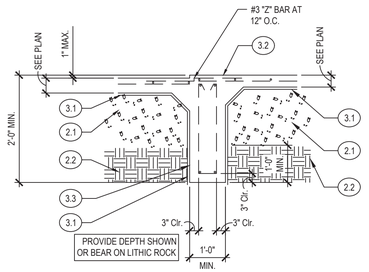
A - TYPICAL CORNER REINFORCING AT GRADE BEAM INTERSECTIONS



B - EXTERIOR GRADE BEAM



C - INTERIOR GRADE BEAM



D - DROP AT INTERIOR BEAM

KEY NOTES

2.1) SELECT STRUCTURAL COMPACTED FILL.

2.2) EXISTING SOIL

2.3) FINAL GRADE ALONG THE PERIMETER OF THE BUILDING SHALL BE AT LEAST 5% SLOPE FOR A DISTANCE OF 10-FT OUTWARD FROM THE EDGE OF THE BUILDING. ADD SOD ALONG THE FULL PERIMETER OR 5'-0" WIDE CONTINUOUS CONCRETE APRON (SIDEWALK).

3.1) 6 MIL THICK PLASTIC VAPOR RETARDER, TYPE RECOMMENDED TO BE IN CONTACT WITH THE SOIL OR FILL UNDER A CONCRETE SLAB, LISTED IN ASTM 1745 CLASS A WITH A PERMEANCE LESS THAN 0.036 AS DETERMINED BY ASTM E96. POLYETHYLENE IS NOT ACCEPTABLE. INSTALL VAPOR RETARDER SOLIDLY WITHIN AND BELOW SLAB SURFACE WITH JOINTS LAPPED AT LEAST 6 INCHES AND TAPED CONTINUOUSLY WITH RECOMMENDED PRESSURE-SENSITIVE TAPE. EXTEND VAPOR RETARDER DOWN THE SIDES OF THE BEAM TRENCHES AND TERMINATE SO THAT IT DOES NOT EXTEND ACROSS THE TRENCH BOTTOM. CONTRACTOR AND ARCHITECT (NOT STRUCTURAL ENGINEER) SHALL VERIFY THAT VAPOR RETARDER SELECTED IS COMPATIBLE WITH PROPOSED FLOOR FINISHES.

3.2) SLAB: #3 AT 18" O.C. EACH WAY CENTERED IN CONCRETE SLAB THICKNESS. EXTEND SLAB REINFORCING TO TOP OUTSIDE PERIMETER BEAM BAR. START SLAB STEEL SPACING NOT MORE THAN 6" FROM THE EDGE OF THE SLAB.

3.3) GRADE BEAM: 2- #6 CONTINUOUS BEAM REINFORCING BARS TOP AND BOTTOM WITH #3 STIRRUPS AT 18" O.C.. START STIRRUP SPACING AT ENDS OF HORIZONTAL BEAM BARS. LAP #6 "Z" BARS TO HORIZONTAL BARS WHERE BEAM STEPS DOWN GREATER THAN 3". LAP 2- #6 CORNER BARS TOP AND 2- #6 CORNER BARS BOTTOM TO HORIZONTAL BEAM BARS AT ALL BEAM CORNERS AND DEAD END BEAM INTERSECTIONS. FOR BEAMS WITH DEPTH EXCEEDING 3'-0", ADD #4 CONTINUOUS MID-HEIGHT HORIZONTAL BARS AT EACH BEAM FACE AT 12" O.C.

NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS WHICH WILL AFFECT THE FABRICATION AND CONSTRUCTING OF COMPONENTS FOR THE NEW CONSTRUCTION PRIOR TO THE START OF CONSTRUCTION. UNLESS OTHERWISE INDICATED, THE DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC ALONG WITH THE SAFETY OF THE STRUCTURE DURING CONSTRUCTION. SUCH MEANS SHALL INCLUDE BUT NOT BE LIMITED TO BRACING AND SHORING OF DEAD LOADS, CONSTRUCTION LOADS, AND WIND LOADS. THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE, STRUCTURAL DAMAGE OR OTHER OBJECTIONAL CONDITIONS CAUSED BY HIS OPERATIONS

ISSUED FOR PRICING ONLY

DPCD

NEW RESIDENTIAL BUILDING
PROTOTYPE 1233-18
CITY OF SAN ANTONIO
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

ISSUE	DATE	REMARKS	BY

A-1 ENGINEERING, LLC F-12583
STATE OF TEXAS
MOISES A. CRUIZ
108540
LICENSED
PROFESSIONAL ENGINEER

A-1 ENGINEERING ,LLC
F-12583

THESE PLANS COMPLY WITH THE UNIVERSAL DESIGN CODE AND 2018 IRC

SHEET SIZE: 24" x 36"

ISSUE DATE: 11.24.2018

SHEET:

14 OF 14

FOUNDATION

P:\Project Files\Austin & San Antonio\17-000\17-4b4-0.4 COSA Residential Bldgs San Antonio Texas\Structural\Drawings\COSA Plan 1233\Prototype-COSA-Plan 1233.dwg, 11/26/2018 11:33:32 AM, DWG to PDF.pc3


218


JPZ-1542

Cost Estimate Report

Rebecca Minica

Date: 04/19/2019

218 Parkview

San Antonio, TX, 78210

218 Parkview

Prepared By: ABRAHAM DIAZ CITY OF SAN ANTONIO

Unit Detail Report

Year 2019

Unit Line Number	Description	Quantity	Unit	Total Incl. O&P	Ext. Total Incl. O&P
Division 00					
000000000001	Roof demolition	26.00	Sq.	$75.00	$1,950.00
000000000002	Subfloor Demolition	1,068.00	S.F.	$1.23	$1,313.64
000000000003	Kitchen Sink; 7" deep, 33" x 22" stainless steal medium grade double bowl.	1.00	Total	$600.18	$600.18
000000000004	HVAC System; Gas heat, Electric A/C Est. 3.0 Tons, SEER Rating per City Code & IECC	1.00	Total	$8,125.00	$8,125.00
000000000005	Security Light	1.00	Total	$150.00	$150.00
000000000006	Porch Light: Exterior	2.00	Ea.	$131.25	$262.50
000000000007	Plumbing	1.00	Total	$7,500.00	$7,500.00
000000000008	Reflective roof underlayment	1.00	Total	$1,071.50	$1,071.50
000000000009	Roof Sheathing: 5/8" OSB	1,157.00	S.F.	$1.34	$1,550.38
000000000010	Vinyl Plank Flooring	1,068.00	S.F.	$3.31	$3,535.08
000000000013	Water Heater Exterior Enclosure	1.00	Total	$437.50	$437.50
000000000016	Foundation Repair	1.00	Total	$18,400.00	$18,400.00
000000000018	Demolition: Kitchen & bathroom	1.00	Total	$437.50	$437.50
000000000019	Above-Appliance Cabinet	2.00	Total	$387.50	$775.00
000000000020	Paint: Interior, Semi-Gloss Latex Paint, 1 Coat Primer, 2 Coats Paint	3,417.00	S.F.	$1.66	$5,672.22
000000000021	Smoke & Carbon Monoxide Alarm	1.00	Ea.	$95.13	$95.13
000000000112	Shower stall- tile-Handicap 3' x 5' ceramic Shower stall.	1.00	Ea.	$1,760.00	$1,760.00

000000000120	Foundation Skirting; Cement Board, Incls vents & metal flashing	338.00	S.F.	$5.00	$1,690.00
000000000127	One Time Inspection and Treatment	500.00	S.F.	$0.88	$440.00
000000000129	Paints & Coatings: Exterior, Semi-Gloss Latex, 1 coat primer, 2 coats paint	1,690.00	S.F.	$3.25	$5,492.50
000000000131	Storage Unit: Steel; 10' H X 10' W X 20' L (Cost is for 90 days)	2.00	Month	$660.00	$1,320.00
Division 00 Subtotal					**$62,578.13**
Division 02 Existing Conditions					
022203107310	Selective demolition, cutout, wood frame, roofs, sheathing, to 1" thick, openings to 5 S.F., excludes re-framing, roofing, loading and disposal	14.00	Ea.	$56.57	$791.98
024119190725	Selective demolition, rubbish handling, dumpster, 20 C.Y., 5 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost	4.00	Week	$565.00	$2,260.00
Division 02 Existing Conditions Subtotal					**$3,051.98**
Division 06 Wood, Plastics, and Composites					
060505105682	Selective demolition, wood framing, rafters, 6/12 - 8/12 pitch, 2" x 4", 16" OC	1,157.00	S.F.	$0.44	$509.08
061623100207	Subfloors, plywood, CDX, 3/4" thick, pneumatic nailed	1,068.00	SF Flr.	$1.54	$1,644.72
062213155155	Moldings, base, modern profile, 5/8" x 3-1/2", poplar	340.00	L.F.	$2.11	$717.40
062213400760	Exterior trim and moldings, corner board, pine, #2, 1" x 4"	128.00	L.F.	$1.80	$230.40
062213402570	Exterior trim and moldings, door and window casing, pine, #2, 1" x 4"	228.00	L.F.	$1.56	$355.68
062213406220	Exterior trim and moldings, fascia, pine, #2, 1" x 6"	169.00	L.F.	$1.84	$310.96
Division 06 Wood, Plastics, and Composites Subtotal					**$3,768.24**
Division 07 Thermal and Moisture Protection					
070505105120	Selective demolition, thermal and moisture protection, siding, tempered hardboard sheet	1,690.00	S.F.	$0.85	$1,436.50
072113100600	Wall insulation, rigid, fiberglass, foil faced, 3" thick, R13, 3#/CF	1,521.00	S.F.	$2.42	$3,680.82
072126100100	Blown-in insulation, ceilings, with open access, cellulose, 8-11/16" thick, R30	1,068.00	S.F.	$0.99	$1,057.32
072510100480	Weather barriers, building paper, housewrap, exterior, spun bonded polypropylene, large roll	1,690.00	S.F.	$0.21	$354.90
073113100155	Asphalt shingles, standard strip, inorganic, class A, 25 year, pneumatic nailed	26.00	Sq.	$114.57	$2,978.82
074646100040	Fiber cement siding, lap siding, smooth texture, 5/16" thick x 8" wide, 6-3/4" exposure	1,690.00	S.F.	$2.70	$4,563.00

077143100020	Aluminum drip edge, mill finish, .016" thick, 5" wide	169.00	L.F.	$1.35	$228.15
077226100430	Ridge vents, molded polyethylene, excl. shingles	25.00	L.F.	$4.53	$113.25
Division 07 Thermal and Moisture Protection Subtotal					**$14,412.76**
Division 08 Openings					
080505100210	Door demolition, exterior door, single, 1-3/4" thick, 3'-0" x 8'-0", remove	2.00	Ea.	$18.46	$36.92
080505100500	Door demolition, interior door, single, 3' x 7' high, 1-3/8" thick, remove	6.00	Ea.	$9.23	$55.38
080505200240	Window demolition, aluminum, to 25 S.F.	13.00	Ea.	$16.90	$219.70
081163230440	Doors, storm, aluminum, residential, combination storm and screen, clear anodic coating, 6'-8" x 3'-0" wide, incl. frame	2.00	Ea.	$248.88	$497.76
081313200240	Doors, residential, steel, prehung, insulated, exterior, embossed, half glass, 3'-0" x 6'-8"	2.00	Ea.	$403.09	$806.18
081416090202	Door, wood, architectural, flush, interior, hollow core, 7 ply, birch face, 2'-0" x 6'-8" x 1-3/4" thick	6.00	Ea.	$92.86	$557.16
081723104600	Doors, prehung, interior, passage, luan, flush, hollow core, 4-5/8" solid jamb, 1-3/8" x 6'-8" x 2'-6" wide	6.00	Ea.	$181.35	$1,088.10
083213100450	Doors, glass, sliding, aluminum, economy, 5/8" tempered insulated glass, 6'-0" x 6'-8"	1.00	Ea.	$1,095.60	$1,095.60
085113201040	Windows, aluminum, commercial grade, stock units, casement, insulating glass, 3'-1" x 3'-2" opening, incl. frame and glazing	2.00	Ea.	$640.88	$1,281.76
085113203100	Windows, aluminum, commercial grade, stock units, single-hung, insulating glass, 2'-0" x 3'-0" opening, incl. frame and glazing	1.00	Ea.	$346.74	$346.74
085113204400	Windows, aluminum, commercial grade, stock units, sliding, insulating glass, 5'-0" x 3'-0" opening, incl. frame and glazing	10.00	Ea.	$503.76	$5,037.60
Division 08 Openings Subtotal					**$11,022.90**
Division 09 Finishes					
090505100200	Ceiling demolition, gypsum wall board, furred and nailed, remove	1,068.00	S.F.	$0.50	$534.00
090505301000	Walls and partitions demolition, gypsum wallboard, per s.f., nailed or screwed	2,720.00	S.F.	$0.20	$544.00
092910300390	Gypsum wallboard, on walls, standard, w/compound skim coat (level 5 finish), 1/2" thick	2,349.00	S.F.	$1.15	$2,701.35
092910300590	Gypsum wallboard, on walls, water resistant, w/compound skim coat (level 5 finish), 1/2" thick	50.00	S.F.	$1.24	$62.00
092910301090	Gypsum wallboard, on ceilings, w/compound skim coat (level 5 finish), 1/2" thick	1,068.00	S.F.	$1.32	$1,409.76
092910301290	Gypsum wallboard, on ceilings, water resistant, w/compound skim coat (level 5 finish), 1/2" thick	25.00	S.F.	$1.41	$35.25
092910305270	Gypsum wallboard, for textured spray, add	3,417.00	S.F.	$0.34	$1,161.78

092910305350	Gypsum wallboard, for finishing corners, inside, add	150.00	L.F.	$0.64	$96.00
092910305355	Gypsum wallboard, for finishing outer corners, add	150.00	L.F.	$0.66	$99.00
Division 09 Finishes Subtotal					**$6,643.14**
Division 10 Specialties					
102813130800	Toilet accessories, grab bars, straight, stainless steel, 1-1/4" diameter x 18" long	1.00	Ea.	$50.79	$50.79
102813131100	Toilet accessories, grab bars, straight, stainless steel, 36" long	1.00	Ea.	$59.60	$59.60
102816200100	Medicine cabinets, with mirror, wood frame	1.00	Ea.	$186.25	$186.25
Division 10 Specialties Subtotal					**$296.64**
Division 11 Equipment					
113013183300	Garbage disposal, residential appliances, sink type, minimum	1.00	Ea.	$176.49	$176.49
113013194150	Range hood, residential appliances, vented, min, 2 speed, 30" wide, minimum	1.00	Ea.	$206.12	$206.12
Division 11 Equipment Subtotal					**$382.61**
Division 12 Furnishings					
123223100880	Custom cabinets, kitchen base cabinets, hardwood, prefinished, 1 top drawer, 1 door below, 24" deep, 35" high, 24" wide, excl. countertops	1.00	Ea.	$517.37	$517.37
123223101220	Custom cabinets, kitchen base cabinets, hardwood, prefinished, 2 top drawers, 2 doors below, 24" deep, 35" high, 30" wide, excl. countertops	3.00	Ea.	$604.03	$1,812.09
123223101540	Custom cabinets, kitchen base cabinets, hardwood, prefinished, range or sink base, 2 doors below, 24" deep, 35" high, 36" wide, excl. countertops	1.00	Ea.	$568.85	$568.85
123223105060	Custom cabinets, kitchen wall cabinets, hardwood, prefinished, 1 door, 12" deep, 30" high, 24" wide	1.00	Ea.	$446.61	$446.61
123223105320	Custom cabinets, kitchen wall cabinets, hardwood, prefinished, 2 doors, 12" deep, 30" high, 30" wide	3.00	Ea.	$517.33	$1,551.99
123223107000	Custom cabinets, kitchen wall cabinets, hardwood, prefinished, broom cabinet, 84" high x 24" deep x 18" wide	1.00	Ea.	$947.18	$947.18
123623130020	Countertops, stock, plastic laminate, 24" wide, includes backsplash, minimum	20.00	L.F.	$32.78	$655.60
Division 12 Furnishings Subtotal					**$6,499.69**
Division 22 Plumbing					

224113131140	Water closet, tank type, vitreous china, floor mounted, close coupled, ADA, two piece, 1.28 gpf, includes seat, supply pipe with stop	1.00	Ea.	$515.14	$515.14
224116130600	Lavatory, vanity top, porcelain enamel on cast iron, white, 20" x 18", includes trim	1.00	Ea.	$483.99	$483.99
Division 22 Plumbing Subtotal					**$999.13**
Division 23 Heating, Ventilating, and Air Conditioning (HVAC)					
233423106660	Fans, residential, bath exhaust, grille, back draft damper, 50 CFM	1.00	Ea.	$87.26	$87.26
Division 23 Heating, Ventilating, and Air Conditioning (HVAC) Subtot					**$87.26**
Division 26 Electrical					
260505100370	Non metallic sheathed cable, (Romex), #14, 3 wire, electrical demolition, remove	330.00	L.F.	$0.50	$165.00
260505101230	Panelboards, 3 wire, 120/240 V, 100 amp, to 20 circuits, electrical demolition, remove, including removal of all breakers, conduit terminations & wire connections	1.00	Ea.	$127.46	$127.46
260505101760	Switch boxes, electrical demolition, remove, including removal of supports and terminations	23.00	Ea.	$3.10	$71.30
260505101780	Receptacle & switch plates, electrical demolition, remove	40.00	Ea.	$1.29	$51.60
260505102480	Incandescent fixtures, interior, metal cylinder type, 75 watt, electrical demolition, remove, surface, ceiling, or wall mount, to 12' high	9.00	Ea.	$10.70	$96.30
260505102620	Incandescent fixtures, exterior, 100 Watt, electrical demolition, remove, wall mount	2.00	Ea.	$13.25	$26.50
260519550301	Non-metallic sheathed cable, copper with ground wire, 600 V, 3 wire, #12, (Romex)	250.00	L.F.	$2.11	$527.50
260519550801	Service entrance cable, aluminum, 3 RHW and 1 bare neutral, 600 V, 3 #1/0 & 1 #2, type SER	40.00	L.F.	$5.74	$229.60
260590101200	Service & panel, residential, w/18 branch breakers, 200 amp, incl 24' SE-AL cable, service eye, meter socket	1.00	Ea.	$1,487.84	$1,487.84
260590102110	Switch devices, residential, single pole, ivory, type NM (Romex) cable, 20', 15 amp, incl box & cover plate	23.00	Ea.	$36.59	$841.57
260590104050	Receptacle devices, residential, duplex outlet, ivory, w/#12/2, type NM cable, 20', 15 amp, incl box & cover plate	32.00	Ea.	$37.45	$1,198.40
260590104300	Receptacle devices, residential, decorator style, GFI, type NM cable, 15 amp, incl box & cover plate	9.00	Ea.	$50.21	$451.89
260590104570	Air conditioner outlet, residential, 30' of #12/2, 2 pole circuit breaker, type NM cable, 20 amp, 240 V, incl box & exterior cover plate	1.00	Ea.	$98.22	$98.22
260590106310	Light fixtures, residential, kitchen fixture (fluorescent), economy grade	1.00	Ea.	$91.39	$91.39

260590107050	Smoke detectors, residential, box, #14/3, type NM cable, 20'	4.00	Ea.	$60.35	$241.40
260590108362	Paddle fan, residential, variable speed (w/lights), economy model (AC motor)	7.00	Ea.	$199.92	$1,399.44
262416100600	Load centers, 1 phase, 3 wire, main lugs, indoor, 120/240 V, 200 amp, 16 circuits, incl 20 A 1 pole plug-in breakers	1.00	Ea.	$560.10	$560.10
262726202490	Receptacle, dryer, 30 Amp	1.00	Ea.	$27.05	$27.05
262773101020	Doorbell system, door chime, 2 note, with ambient light	1.00	Ea.	$162.01	$162.01
Division 26 Electrical Subtotal					**$7,854.57**

Subtotal		**$117,597.05**
General Contractor's Markup on Subs	**0.00%**	**$0.00**
Subtotal		**$117,597.05**
General Conditions	**0.00%**	**$0.00**
Subtotal		**$117,597.05**
General Contractor's Overhead and Profit	**0.00%**	**$0.00**
Unit Cost Total		**$117,597.05**

Assembly Detail Report

Year 2019

Assembly Number	Description	Quantity	Unit	Total Incl. O&P	Ext. Total Incl.O&P
03	**Concrete**				
0308026	Exterior wall framing systems, 2" x 4", 16" OC	1,108.00	S.F.	$3.74	$4,143.92
0312034	Gable end roof framing systems, 2" x 6" rafters, 16" OC, 4/12 pitch	1,157.00	S.F.	$6.09	$7,046.13
0348026	Partition framing systems, 2" x 4", 16" OC	600.00	S.F.	$1.61	$966.00
03	**Concrete Subtotal**				**$12,156.05**
Subtotal					**$12,156.05**
General Contractor's Markup on Subs			**0.00%**		**$0.00**
Subtotal					**$12,156.05**
General Conditions			**0.00%**		**$0.00**
Subtotal					**$12,156.05**
General Contractor's Overhead and Profit			**0.00%**		**$0.00**
Assembly Cost Total					**$12,156.05**
Grand Total					**$129,753.10**