

ADDENDUM No. 2

Date: **October 27, 2016**

City of Austin

Project Name: **Onion Creek Fire/ EMS Station**

C.I.P. No. **6025.001** Solicitation No.: **CSP 6100 CLMB326**

This Addendum forms a part of the Contract and corrects or modifies original Bid Documents, dated October 3, 2016. Acknowledge receipt of this addendum in space provided on bid form. Failure to do so may subject bidder to disqualification.

A. Project Manual Revisions:

Item No.1 1. (RE: Specifications Table of Contents) Section 12 90 00 Furnishings and Equipment shall be has been added to the Table of Contents.

Item No.2 (RE: Specifications Section 0 13 52 Sustainable Construction Requirements) Specification has been revised. See attached Specification Section 00 13 52 Sustainable Construction Requirements.

Item No.3 (RE: Specifications Section 0 1352 Sustainable Construction Requirements) Appendix B LEED Checklist has been added to the Specifications. See attached Appendix B LEED Checklist.

Item No.4 (RE: Specifications Section 0 15 10 Construction Indoor Air Quality Management Plan) Specification has been revised. See attached Specification Section 00 15 10 Construction Indoor Air Quality Management Plan.

Item No.5 (RE: Specifications Section 08 35 13 Electric Operated Folding Doors) Part 2, Article 2.04, paragraph E number 5 has been removed from the specifications.

Item No.6 (RE: Specifications Section 12 48 13 Entrance Mats and Frames) Section 12 48 13 Entrance Mats and Frames have been added to the Project Manual.

Item No.7 (RE: Specifications Section 32 31 20 Ornamental Steel Fences and Cantilever Gate) Specification has been revised. See attached Specification Section 32 31 20 Ornamental Steel Fences and Cantilever Gate.

B. Drawing Revisions:

Item No.8 (RE: Sheet G1.1 Index of Drawings) Drawing sheets S3.3 and S5.4 have been removed from the Index of Drawings.

Item No.9 (RE: Sheet G1.1 Index of Drawings) Drawing sheet G1.2 Master Keynote List has been added to the Index of Drawings and to the set.

Item No.10 (RE: Sheet AS1.1) Sheet AS1.1 has been revised. See attached Sheet AS1.1.

Item No.11 (RE: Sheet AS1.2) Sheet AS1.2 has been revised. See attached Sheet AS1.2.

Item No.12 (RE: Sheet AS1.3) Sheet AS1.3 has been revised. See attached Sheet AS1.3.

Item No.13 (RE: Sheet C6.0) Sheet C6.0 has been revised. See attached Sheet C6.0.

Item No.14 (RE: Sheet C6.3) Sheet C6.3 has been revised. See attached Sheet C6.3.

Item No.15 (RE: Sheet IR200) Sheet IR200 has been revised. See attached Sheet IR200.

Item No.16 (RE: Sheet IR201) Sheet IR201 has been revised. See attached Sheet IR201.

Item No.17 (RE: Sheet S2.1) Sheet S2.1 has been revised. See attached Sheet S2.1.

Item No.18 (RE: Sheet S2.2) Sheet S2.2 has been revised. See attached Sheet S2.2.

Item No.19 (RE: Sheet S2.3) Sheet S2.3 has been revised. See attached Sheet S2.3.

Item No.20 (RE: Sheet S4.1) Sheet S4.1 has been revised. See attached Sheet S4.1.

Item No.21 (RE: Sheet S4.2) Sheet S4.2 has been revised. See attached Sheet S4.2.

Item No.22 (RE: Sheet S6.2) Sheet S6.2 has been revised. See attached Sheet S6.2.

Item No.23 (RE: Sheet S6.4) Sheet S6.4 has been revised. See attached Sheet S6.4.

Item No.24 (RE: Sheet A1.1) Sheet A1.1 has been revised. See attached Sheet A1.1.

Item No.25 (RE: Sheet A1.2) Sheet A1.2 has been revised. See attached Sheet A1.2.

Item No.26 (RE: Sheet A1.3) Sheet A1.3 has been revised. See attached Sheet A1.3.

Item No.27 (RE: Sheet A1.4) Sheet A1.4 has been revised. See attached Sheet A1.4.

Item No.28 (RE: Sheet A2.1) Sheet A2.1 has been revised. See attached Sheet A2.1.

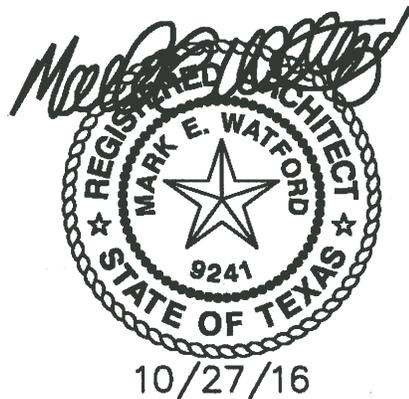
Item No.29 (RE: Sheet A2.2) Sheet A2.2 has been revised. See attached Sheet A2.2.

- Item No.30 (RE: Sheet A2.4) Sheet A2.4 has been revised. See attached Sheet A2.4.
- Item No.31 (RE: Sheet A2.5) Sheet A2.5 has been revised. See attached Sheet A2.5.
- Item No.32 (RE: Sheet 2.8) Sheet 2.8 has been added to the set.
- Item No.33 (RE: Sheet A3.1) Sheet A3.1 has been revised. See attached Sheet A3.1.
- Item No.34 (RE: Sheet A3.5) Sheet A3.3 has been revised. See attached Sheet A3.3.
- Item No.35 (RE: Sheet 4.1) Sheet A4.1 has been revised. See attached Sheet A4.1.
- Item No.36 (RE: Sheet 4.2) Sheet A4.2 has been revised. See attached Sheet A4.2.
- Item No.37 (RE: Sheet MEPO) Sheet MEPO has been revised. See attached Sheet MEPO.
- Item No.38 (RE: Sheet P1.1) Sheet P1.1 has been revised. See attached Sheet P1.1.
- Item No.39 (RE: Sheet P1.2) Sheet P1.2 has been revised. See attached Sheet P1.2.
- Item No.40 (RE: Sheet P2.1) Sheet P2.1 has been revised. See attached Sheet P2.1.
- Item No.41 (RE: Sheet E1.0) Sheet E1.0 has been revised. See attached Sheet E1.0.
- Item No.42 (RE: Sheet E1.2) Sheet E1.2 has been revised. See attached Sheet E1.2.
- Item No.43 (RE: Sheet E2.1) Sheet E2.1 has been revised. See attached Sheet E2.1.
- Item No.44 (RE: Sheet E3.1) Sheet E3.1 has been revised. See attached Sheet E3.1.
- Item No.45 (RE: Sheet E6.2) sheet E6.2 has been revised. See attached Sheet E6.2.

This addendum consists of 36 pages and 37 sheets.


Approved by OWNER


Approved by ARCHITECT



END

Division 1 General Requirements
SUSTAINABLE CONSTRUCTION REQUIREMENTS
Section 01352

SECTION 01352

Building Project – LEED® Certification Being Pursued

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section. The requirements may or may not include reference to sustainability/LEED. Language in each section provides detailed guidelines to inform the Contractor of appropriate performance requirements for specific materials and products. All LEED/sustainable design materials, products, and methods must meet the specifications as written unless otherwise approved by the Architect.

Related sections include the following:

1. Section 01300 Submittals.
2. Section 01505 Construction and Demolition Waste Management and Disposal.
3. Section 01510 Construction Indoor Air Quality Management.
4. Section 01650 Facility Start up/ Commissioning.
5. Section 01730 Operation and Maintenance Data.

1.2 SUMMARY

- A.** This Section includes general requirements and procedures for compliance with certain Sustainable Construction requirements, namely U.S. Green Building Council's LEED® prerequisites and credits needed for the project to achieve to obtain LEED Silver Certification under **LEED BD+C: New Construction | version 3 – LEED 2009**.
1. Some Sustainability/LEED requirements are dependent on material selections and may not be specifically identified as sustainability/LEED requirements. Compliance with requirements may be used as one criterion to evaluate substitution requests.
 2. Additional Sustainability/LEED Construction requirements are dependent on Architect's design and other aspects of the Project that are not part of the Work of the Contract.
 3. A copy of the LEED Project Score Card is attached at the end of this section as Appendix B, for information only.

1.3 DEFINITIONS

- A. Certificates of Chain-of-Custody:** Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria." Certificates shall include evidence that mill is certified for chain-of-custody by an FSC-accredited certification body.
- B. LEED®:** Leadership in Energy & Environmental Design.
- C. Rapidly Renewable Materials:** Materials made from agricultural products that are typically harvested within a ten-year or shorter cycle. Rapidly renewable materials include

products made from bamboo, cotton, flax, jute, straw, sunflower seed hulls, vegetable oils, or wool.

- D. Regionally Manufactured Materials:** Materials that are manufactured within a radius of 500 miles (800 km) from the Project location. Manufacturing refers to the final assembly of components into the building product that is installed at the Project site.
- E. Regionally Extracted, Harvested, or Recovered Materials:** Materials that are extracted, harvested or recovered and manufactured within a radius of 500 miles (800 km) from the Project site.
- F. Recycled Content:** The percentage by weight of constituents that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer).
 1. Spills and scraps from the original manufacturing process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product are not recycled materials.
 2. Discarded materials from one manufacturing process that are used as constituents in another manufacturing process are pre-consumer recycled materials.
- G. Albedo:** The ratio of the amount of light reflected from a material to the amount of light shone on the material ranging from 0 (black) to 1 (white). As defined by the USGBC, a high albedo material has a reflectance of at least .3. Albedo is also known as solar reflectance or reflectivity.
- H. Composite agrifiber product:** A board or sheet product that uses an agricultural waste product (such as straw from wheat, oats, rice, and rye) as its fiber source instead of wood.
- I. Embodied energy:** The total energy that a product may be said to "contain," including all energy used in growing, extracting, and manufacturing it and the energy used to transport it to the point of use. The embodied energy of a structure or system includes the embodied energy of its components plus the energy used in construction. In some cases, a material designed for energy conservation may have more energy invested in making it than it can save throughout most of its lifetime.
- J. Formaldehyde:** A colorless, pungent smelling gas used as an adhesive component in many glues (especially those used to make composite and laminated wood products), and as an additive in paint and other products. As a monomer, formaldehyde can cause respiratory problems, cancer, or chemical sensitivity even at very low exposure levels (National Institute for Occupational Safety and Health (NIOSH) exposure threshold level is one part per million (ppm). See urea formaldehyde below.
- K. Heat island effect:** When warmer temperatures (from 6 - 10°F) are experienced in urban landscapes as a result of solar energy retention on constructed surfaces. Principle surfaces that contribute to heat island effect include streets, sidewalks, parking lots, and buildings. Also called "Urban Heat Island Effect."
- L. Impervious surfaces:** Surfaces that promote runoff of precipitation volumes instead of infiltration into the subsurface. The imperviousness or degree of runoff potential can be estimated for different surface materials.
- M. In-factory VOC Flushout:** Curing and ventilating materials after manufacture in order to reduce overall VOC levels before shipping to project site.
- N. Indoor Air Quality:** The character of air inside a building that affects the health and well being of building occupants. According to the U.S. Environmental Protection Agency and National Institute of Occupational Safety and Health, the definition of good indoor air quality includes (1) introduction and distribution of adequate ventilation air; (2) control of airborne contaminants; and (3) maintenance of acceptable temperature and relative

humidity. According to ASHRAE Standard 62-1999, acceptable indoor air quality is defined as "air in which there are no known contaminants at harmful concentrations as determined by cognizant authorities and with which a substantial majority (80 percent or more) of the people exposed do not express dissatisfaction."

- O. Indoor Environmental Quality:** The overall character of the indoor environment that affects the health and well being of building occupants and is achieved through prevention, planning, and control of systems.
- P. Life cycle:** The consecutive, interlinked stages of a product, beginning with raw materials acquisition and manufacture and continuing with its fabrication, manufacture, construction, and use, and concluding with any of a variety of recovery, recycling, or waste management options.
- Q. Life cycle cost (LCC) of material:** The costs accruing throughout the service life of a material. Life-cycle costs address the capital costs involved in production, maintenance, and disposal, and can also include other environmentally related capital costs and societal costs.
- R. Local /regional materials:** Materials that are extracted, harvested or recovered, as well as manufactured within a 500-mile radius of the project site. See definition for manufactured below.
- S. Manufactured:** Refers to the final assembly of components into the building product before it is furnished and installed by tradesman (Reference: LEEDTM Materials & Resources credits 5.1 and 5.2)
- T. Material Safety Data Sheets (MSDS):** Occupational Safety and Health Administration (OSHA) required documents supplied by manufacturers of potentially hazardous products. MSDS contain information regarding potentially significant air-borne contaminants, precautions, steps for inspection, health effects, odor description, volatility, expected contaminants from combustion, reactivity, and procedures for cleanup.
- U. MERV:** The Minimum Efficiency Reporting Value for filtration media as determined by the ANSI/ASHRAE 52.2-1999.
- V. Off-gas/out-gas:** A process of evaporation or chemical decomposition through which vapors are released from materials. Carpeting, furniture, building materials, and wet-applied products (like paints, adhesives, and caulks) typically off-gas chemical compounds that are unpleasant to breathe and may be hazardous to installer and occupant health.
- W. Post-consumer recycled content:** The percentage (by weight) of a reclaimed waste material contained in a product. A reclaimed waste material (e.g., newspaper, magazines, beverage containers, etc.) has already served a purpose to a consumer and has been diverted or separated from waste stream for recycling.
- X. Pre-Consumer Recycled Content:** Previously referred to as Post-industrial recycled content. The percentage (by weight) of a waste material obtained from industrial processes, which are contained in a product.
- Y. Recycled material:** A material that would otherwise be destined for landfill disposal but is diverted or separated from the waste stream, reintroduced as material feedstock, and processed into marketed end products.
- Z. Reused Material:** Any item that is salvaged or reused without significant reprocessing as in a recycling process.
- AA. Source reduction:** Minimization of waste at the start of a process or activity so that there is a reduced amount of waste to recycle or dispose. Also called pre-cycling.

- BB. Sustainable:** The condition of being able to "meet the needs of present generations without compromising those needs for future generations". Achieving a balance among extraction and renewal and environmental inputs and outputs, so as to cause no overall net environmental burden or deficit. To be truly sustainable, a human community must not decrease biodiversity, must not consume resources faster than they are renewed, must recycle and reuse virtually all materials, and must rely primarily on resources of its own region.
- CC. Urea formaldehyde:** An adhesive resin polymer produced by reacting urea with formaldehyde (a VOC and a potential carcinogen). It is the least stable formaldehyde resin, emitting formaldehyde monomers for months or even years after manufacture. Generally used as a binder for interior composite wood products. See also formaldehyde and VOC.
- DD. Visible Transmittance (Tvis):** The ratio of total transmitted light to total incident light. In other words, the amount of light passing through a glazing surface divided by the amount of light striking the glazing surface. A higher Tvis value indicates that a greater percentage of incident light is passing through the glazing.
- EE. Volatile Organic Compound (VOC):** A large family of chemicals based on carbon and hydrogen structures that vaporize at room temperature. VOCs are one type of indoor air contaminant. They are found in many indoor sources including common building products and materials. Although thousands have been identified in indoor air, only a few are well understood and regulated. VOCs are considered unhealthful to humans - some individual VOCs are known or suspected human carcinogens or irritants to the eyes, nose, and mucous membranes. When released, VOCs can contribute to the formation of ground level ozone and smog. Formaldehyde and toluene are two examples of VOCs commonly found in building materials.
- FF. Xeriscape:** Quality landscaping that conserves water and protects the environment through its employment of seven principles: planning and design; soil analysis; appropriate plant selection; practical turf areas; efficient irrigation; use of mulches; and appropriate maintenance.

1.4 SUSTAINABILITY/LEED OBJECTIVES/GOALS

The City of Austin is committed to sustainability and expects the Project to reflect this commitment. The specific Sustainable (Design & Construction) goals for this project include:

1. Protection of the environment.
2. Limiting construction site area and disturbance of natural habitat and protection of trees and vegetation.
3. Reduction of waste created by construction activity.
4. Increasing the use of materials and products with recycled content.
5. Reliable systems.
6. Energy-efficient systems.
7. Chemically safe building materials and pest management.
8. Building materials that use less energy and create less pollution in manufacture, delivery, installation, renovation, and demolition.
9. Occupant health through good indoor air quality, thermal comfort, daylighting, views, access to the outdoors, and ergonomic work areas.

1.5 SUBMITTALS

- A. General:** Submit additional Sustainability submittal requirements included in other sections of the Specifications. Provide completed Sustainable/LEED Construction Submittal Form with all submittals. See Appendix A.

- B. Sustainability/LEED submittals** are in addition to other submittals. If submitted item is identical to that submitted to comply with other requirements, submit duplicate copies as a separate submittal to verify compliance with indicated requirements.
- C. Project Materials Cost Data:** Provide statement indicating total cost for building materials used for Project. Include statement indicating total cost of mechanical and electrical components. Include breakout of costs for Divisions 2 -10 including overhead transport and taxes and for the following categories of items:
1. Wood-based construction materials
- D. Sustainable/LEED Construction Action Plans:** Provide preliminary submittals within 14 calendar days of date established for the Notice to Proceed indicating how the following requirements will be met.
1. Credit MR 2.1 and 2.2: Construction & Demolition Waste Management Plan complying with Division 1 Section 01505 "Construction Waste Management."
 2. Credit MR 4.1 and 4.2: List of proposed materials with recycled content. Indicate cost, post consumer recycled content, and pre-consumer recycled content for each product having recycled content.
 3. Credit MR 5.1 and 5.2: List of proposed regionally manufactured materials and regionally extracted, harvested, or recovered materials.
 - a. Identify each regionally manufactured material, its source, and cost.
 - b. Identify each regionally extracted, harvested or recovered material, its source, and cost.
 4. Credit MR 7.0: List of proposed certified wood products.
 - a. Indicate each product containing certified wood, its source, and cost.
 - b. Include statement indicating total cost for permanently installed wood-based materials used for Project and non-rented temporary construction.
 5. Credit EQ 3 and 3.1: Construction Indoor Air Quality (IAQ) Management plan complying with Division 1 Section "Construction 01510 IAQ Management."
- E. Sustainable/LEED Construction Progress Reports:** Concurrent with each Application for Payment, submit reports comparing actual construction and purchasing activities with LEED action plans for the following:
1. Credit MR 2.1 and 2.2: Waste reduction progress reports complying with Division 1 Section "Construction & Demolition Waste Management and Disposal."
 2. Credit MR 4.1 and 4.2: Recycled content.
 3. Credit MR 5.1 and 5.2: Regionally manufactured materials and regionally extracted, harvested, or recovered materials.
 4. Credit MR 6 and MR 7: Certified Wood Products.

F. LEED™ Documentation Submittals:

Contractor shall complete the following website based LEED on-line construction phase templates at the appropriate time and provide required information documents for:

- a. MR Credit 2 Construction Waste Management
- b. MR Credit 4 Recycled Content
- c. MR Credit 5 Regional Materials
- d. MR Credit 7 Certified Wood
- e. EQ Credit 3.1 Construction IAQ Management Plan during Construction.
- f. EQ Credit 3.2 Construction IAQ Management Plan before Occupancy.
- g. EQ Credit 4.1 Low Emitting Materials: Adhesives and Sealants
- h. EQ Credit 4.2 Low Emitting Materials: Paints and Coatings
- i. EQ Credit 4.3 Low Emitting Materials: Carpet Systems
- j. EQ Credit 4.4 Low Emitting Materials: Composite and Agrifiber products

Contractor shall provide the following information for others to complete credits of LEED application:

1. Credit SS 7.2: Product Data for roofing materials indicating Solar Reflective Index (SRI) and Energy Star compliance.
2. Credit SS 8.0: Product Data for interior and exterior lighting fixtures that stop direct beam illumination from leaving the building site.
3. Credit WE 2.0, 3.1 and 3.2: Product Data for plumbing fixtures indicating water consumption.
4. Prerequisite EA 3.0: Product Data for new HVAC equipment indicating absence of CFC refrigerants. Phase-out plan to replace CFC refrigerants in HVAC/R systems with CFC free refrigerants within the Construction Period.
5. Credit MR 2.1 and 2.2: Comply with Division 1 Section 01505 "Construction Waste Management."
6. Credit MR 4.1 and 4.2: Product Data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.
7. Credit MR 5.1 and 5.2: Product Data indicating location of material manufacturer for regionally manufactured materials.
 - a. Include statement indicating cost and distance from manufacturer to Project for each regionally manufactured material.
 - b. Include statement indicating cost and distance from point of extraction, harvest, or recovery to Project for each raw material used in regionally manufactured materials.
8. Credit MR 7.0: Documentation of wood veneer and lumber product/material qualifications:
 - a. Forest Stewardship Council chain-of-custody certificates documenting source of wood building components and each point of purchase from forest from which the material was harvested to incorporation into the Project.
 - b. Certification of compliance with the Forest Stewardship Council "Principals and Criteria" for forest management.
 - c. Submit vendor/supplier invoices for each certified wood product containing product name, vendor name, product cost, certified wood percentage, Forest Stewardship Council chain-of-custody certification numbers on a line-item basis. An example of this documentation can be found at the end of this section.
9. Credit EQ 1.0: Product Data and Shop Drawings for carbon dioxide monitoring system.

- 10. Credit EQ 3.1:**
- a. Construction Indoor Air Quality Management Plan.
 - b. Product Data for temporary filtration media indicating location used, model number and MERV value.
 - c. Product Data for filtration media used during occupancy indicating location used, model number and MERV value.
 - d. Construction Documentation: Six photographs at three different occasions during construction along with a brief description of the SMACNA approach employed, documenting implementation of the IAQ management measures, such as protection of ducts and on-site stored or installed absorptive materials.
- 11. Credit EQ 3.2:**
- a. Signed statement describing the building air flush-out procedures including the dates when flush-out was begun and completed and statement that filtration media was replaced after flush-out.
 - b. Product Data for filtration media used during flush-out and during occupancy.
 - c. Report from testing and inspecting agency indicating results of IAQ testing and documentation showing conformance with IAQ testing procedures and requirements.
- 12. Credit EQ 4.1: Product Data and material safety data sheets (MSDSs) for adhesives and sealants used on the interior (inside the weatherproofing system) of the building indicating all adhesives and sealants used and stating that they meet the noted requirements and indicating maximum volatile organic compound (VOC). Indicate VOC content in g/L calculated according to 40 CFR 59, Subpart D (EPA method 24). The VOC content of adhesives and sealants used must be less than the current VOC content limits of South Coast Air Quality Management District (SCAQMD) Rule #1168, and all sealants used as fillers must meet or exceed the requirements of the Bay Area Air Quality Management District Regulation 8, Rule 51.**
- 13. Credit EQ 4.2: Product Data and material safety data sheets (MSDSs) for paints and coatings used on the interior (inside the weatherproofing system) of the building indicating chemical composition and VOC content of each product used. Indicate VOC content in g/L calculated according to 40 CFR 59, Subpart D (EPA method 24). VOC emissions from paints and coatings must not exceed the VOC and chemical component limits of Green Seal's Standard GS-11 requirements. List all interior paints and coatings used in the building that are addressed by Green Seal Standard GS-11, GS 03 or South Coast Air Quality Management District (SCAQMD) Rule 1113 and document that they comply with the current VOC and chemical component limits of the standard. Include a summary table comparing credit requirements and actual VOC levels for each product.**
- 14. Credit EQ 4.3: Product Data for carpet products indicating VOC content of each product used. Carpet systems must meet or exceed the requirements of the Carpet and Rug Institute's Green Label Indoor Air Quality Test Program. Product data for carpet cushion indicating it meets the requirements of the Carpet and Rug Institute's Green Label Program. Product data for all carpet adhesive indicating VOC content in grams/Liter. Carpet adhesive shall have no more than 50 g/L VOC content.**
- 15. Credit EQ 4.4: Product Data for composite wood, agrifiber, bonding agent and laminating adhesive products indicating that products contain no added urea-formaldehyde resin.**

16. Credit EQ 6.2: Product Data and Shop Drawings for sensors and control system used to provide individual airflow and temperature controls for minimum 50 percent of non-perimeter, regularly occupied space.
17. Credit EQ 7: Product Data and Shop Drawings for sensors and control system used to monitor and control room temperature and humidity.

1.6 QUALITY ASSURANCE

- A. Sustainability/LEED Coordinator: Engage a responsible person on the construction team who is familiar with Sustainable/LEED program and procedures. The LEED Coordinator may also serve as the Waste Management coordinator.

PART 2 – PRODUCTS

2.1 RECYCLED CONTENT OF MATERIALS

- A. Credit 4.1 and 4.2: Provide building materials with recycled content for a minimum of 10% of the total value of all materials in Division 2 – 10 of the project, such that the sum of post-consumer recycled content plus one-half of the pre-consumer is 10% of content of the materials in the project.
 1. The cost of post-consumer recycled content of an item shall be determined by dividing the weight of post-consumer recycled content in the item by the total weight of the item and multiplying by the cost of the item.
 2. The cost of post consumer recycled content plus one-half of pre-consumer recycled content of an item shall be determined by dividing the weight of post-consumer recycled content plus one-half of pre-consumer recycled content in the item by the total weight of the item and multiplying by the cost of the item.
 3. Do not include furniture, plumbing, mechanical and electrical components in the calculation.
 4. Recycled content of materials shall be defined according to the Federal Trade Commission's "Guide for the Use of Environmental Marketing Claims," 16 CFR 260.7(e).

2.2 LOCAL/REGIONAL MATERIALS

- A. Credit MR 5.1 and 5.2: Provide regionally manufactured materials with a goal of achieving 10 percent of the total value of all materials in Division 2 – 10 of the project.

2.3 CERTIFIED WOOD

- A. Credit MR 7: Provide a minimum of 50 percent by cost of wood-based materials that are produced from wood obtained from forests certified by an Forest Stewardship Council (FSC) accredited certification body to comply with FSC STD-01-001, "Principles and Criteria for Forest Stewardship."
 1. Wood-based materials include but are not limited to the following materials when made from made wood, engineered wood products, or wood-based panel products:
 - a. Rough carpentry.
 - b. Miscellaneous carpentry.
 - c. Heavy timber construction.
 - d. Wood decking.
 - e. Metal-plate-connected wood trusses.
 - f. Structural glued-laminated timber.
 - g. Finish carpentry.
 - h. Architectural woodwork.

- i. Wood paneling.
- j. Wood veneer wall covering.
- k. Wood flooring.
- l. Wood lockers.
- m. Wood cabinets.
- n. Furniture.
- o. Non-rented temporary construction, including bracing, concrete formwork, pedestrian barriers, and temporary protection.

2.4 LOW-EMITTING MATERIALS

- A.** Credit EQ 4.1: For interior (inside the weatherproofing system) applications use adhesives and sealants that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA method 24):

1. Wood Glues: 30 g/L.
2. Metal to Metal Adhesives: 30 g/L.
3. Adhesives for Porous Materials (Except Wood): 50 g/L.
4. Sub-floor Adhesives: 50 g/L.
5. Plastic Foam Adhesives: 50 g/L.
6. Carpet Adhesives: 50 g/L.
7. Carpet Pad Adhesives: 50 g/L.
8. Vinyl Composition Tile (VCT) and Asphalt Tile Adhesives: 50 g/L.
9. Cove Base Adhesives: 50 g/L.
10. Gypsum Board and Panel Adhesives: 50 g/L.
11. Rubber Floor Adhesives: 60 g/L.
12. Ceramic Tile Adhesives: 65 g/L.
13. Multipurpose Construction Adhesives: 70 g/L.
14. Fiberglass Adhesives: 80 g/L.
15. Structural Glazing Adhesives: 100 g/L.
16. Wood Flooring Adhesive: 100 g/L.
17. Contact Adhesive: 80 g/L.
18. Plastic Cement Welding Compounds: 250 g/L.
19. ABS Welding Compounds: 325 g/L.
20. CPVC Welding Compounds: 490 g/L.
21. PVC Welding Compounds: 510 g/L.
22. Adhesive Primer for Plastic: 550 g/L.
23. Sheet applied Rubber Lining Adhesive: 850g/L
24. Aerosol Adhesive, General Purpose Mist spray: 65% by weight
25. Aerosol Adhesive, General Purpose Web spray: 55% by weight
26. Special Purpose Aerosol Adhesive, (All types): 70% by weight
27. Structural Wood Member Adhesive: 140 g/L.
28. Special Purpose Contact Adhesive (contact adhesive that is used to bond melamine covered board, metal, rubber or wood veneer 1/16 inch or less in thickness to any surface): 250g/L.
29. Top and Trim Adhesive: 250g/L.
30. Architectural Sealants: 250g/L.
31. Non-membrane Roof Sealants: 450g/L.
32. Single Ply Roof Membrane Sealants: 450g/L
33. Sealant Primers for Nonporous Substrates: 250 g/L.
34. Sealant Primers for Porous Substrates: 775 g/L.
35. Modified Bituminous Sealant Primers: 500g/L
36. Other Sealant Primers: 750g/L

- B.** Credit EQ 4.2: For interior (inside the weatherproofing system) applications use paints and coatings that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA method 24) and the following chemical restrictions:
1. Flat Paints and Coatings: VOC not more than 50 g/L.
 2. Non-Flat Paints and Coatings: VOC not more than 150 g/L.
 3. Anti-Corrosive/Anti-rust Coatings: VOC not more than 250 g/L.
 4. Floor Coatings: VOC not more than 100 g/L.
 5. Clear Wood Finishes: Do not exceed the VOC content limits established in the South Coast Air Quality Management District (SCAQMD) Rule 1113 January 1, 2004 including:
 - a. Clear Wood Finishes: Varnishes VOC not more than 350 g/L, Lacquers 550g/L.
 - b. Sanding Sealers: VOC not more than 275 g/L.
 - c. Waterproofing Sealers: VOC not more than 250 g/L.
 - d. Varnishes and Sanding Sealers: VOC not more than 350 g/L.
 - e. Shellac: clear VOC 730g/L, pigmented 550g/L
 - f. Stains: VOC not more than 250 g/L.
 6. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
 7. Restricted Components: Paints and coatings shall not contain any of the following:
 - a. Acrolein.
 - b. Acrylonitrile.
 - c. Antimony.
 - d. Benzene.
 - e. Butyl benzyl phthalate.
 - f. Cadmium.
 - g. Di (2-ethylhexyl) phthalate.
 - h. Di-n-butyl phthalate.
 - i. Di-n-octyl phthalate.
 - j. 1,2-dichlorobenzene.
 - k. Diethyl phthalate.
 - l. Dimethyl phthalate.
 - m. Ethylbenzene.
 - n. Formaldehyde.
 - o. Hexavalent chromium.
 - p. Isophorone.
 - q. Lead.
 - r. Mercury.
 - s. Methyl ethyl ketone.
 - t. Methyl isobutyl ketone.
 - u. Methylene chloride.
 - v. Naphthalene.
 - w. Toluene (methylbenzene).
 - x. 1,1,1-trichloroethane.
 - y. Vinyl chloride.
- C.** Credit EQ 4.4: Composite wood and agrifiber products used on the interior of the building (defined as inside of the weatherproofing system) shall contain no added urea-formaldehyde resins. Laminating adhesives and bonding agents used to fabricate on-site and shop-applied composite wood and agrifiber assemblies bonding agent shall contain no added urea formaldehyde resin.

PART 3 – EXECUTION

3.1 SITE DISTURBANCE

A. Special Site Practices

1. Prerequisite SS 1: Construction Activity Pollution Prevention: Comply with City of Austin standard requirements.
2. Credit SS 5.1: Protect and restore natural vegetation per division 1 Sections and plans, and restrict construction activity only to defined site limits per plans.

3.2 CONSTRUCTION WASTE MANAGEMENT

- A.** Credit MR 2.1 and 2.2: Comply with Division 1 Section 01505 "Construction Waste Management."

3.3 CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT

- A.** Credit EQ 3.1 and 3.2: Comply with Division 1 Section 01510 "Construction Indoor Air Quality Management."
- B.** Comply with SMACNA IAQ Guideline for Occupied Buildings under Construction.
- C.** Credit EQ 3.2 Comply with Division 1 Section 01510 "Construction Indoor Air Quality Management."
1. After construction ends prior to occupancy and with all interior finishes installed, conduct a building air flush-out by supplying a total air volume of 14,000 cubic ft. of outdoor air per sq.ft. of floor area while maintaining an internal temperature of at least 60°F and relative humidity no higher than 60%. Use new filtration media for the flush-out and 100 percent outside air. Replace filtration media after building air flush-out.
 2. Contractor will conduct a baseline indoor air quality testing program according to EPA Protocol for Environmental Requirements, Baseline IAQ and Materials, for Research Triangle Park Campus, Section 01445.

3.4 COMMISSIONING

- A.** Credit EA Prerequisite 1 and credit 3: Comply with Division 1 Section "Facility Start-up/Commissioning."

APPENDIX A: Sustainable/LEED Construction Submittal Form

APPENDIX B: LEED Project Checklist

SECTION 01352.1 APPENDIX A

PROJECT NAME: _____ REQUIRED FOR ALL SUBMITTALS
 LEED Construction Submittal Information SUBMITTALS CAN NOT BE APPROVED UNTIL RECEIPT OF THIS COMPLETED FORM.

1. General Information: PROVIDE FOR ALL MATERIALS

This information is used exclusively for LEED calculations. All answers must be provided and supporting documentation must accompany this form.

Product/Material: _____ CSI Code(s): _____

Vendor/Sub: _____ Submittal #: _____

Contact name: _____ Phone: _____

Manufacturer: _____ Does the product/material meet the Project Specification requirements?
 YES OR NO ?

Cost Information: PROVIDE FOR ALL MATERIALS IN DIVS. 2 - 10 ONLY
 Each material/product must have a separate spreadsheet.

Provide the "materials cost" for each product/material. The material cost is the cost paid to guarantee the material in final assembly form excluding installation costs (labor & equipment). Overhead, transportation, and taxes shall be included in materials costs.

Material Cost: \$ _____ OR Unit Cost \$ _____ per _____ unit
 # of units installed: _____

2. Recycled Content - LEED MR Credits 4.1, 4.2 - FOR MATERIALS IN DIVS. 2 - 10 ONLY

* If the product is NOT an assembly of various components:

- * What percentage of the product is post-consumer? _____ %
 post-consumer = product went through consumer stream as another product
- * What is the source of this information? (Submittal, cost sheet, product brochure, letter from mfg., etc) _____
- * What percentage of the product is pre-consumer / post-industrial? _____ %
 pre-consumer/post-industrial = product is by-product from a manufacturing process
- * What is the source of this information? (Submittal, cost sheet, product brochure, letter from mfg., etc) _____

* If the product is an assembly of various components, fill in the table below.

Assembly: (List Product)	Weight (lbs)	Recycled Content (%)	% By Weight	Recycled Content Source	Company Providing Components
Components					

3. Regional Materials - LEED MR Credits 5.1, 5.2 - FOR MATERIALS IN DIVS. 2 - 10 ONLY

- * Was the product extracted, recovered, harvested, and manufactured within 500 miles of the project site? _____
- * Provide the name and street address of the manufacturing facility. _____
- * What is the distance of the manufacturing facility from the job site? _____ miles
- * Provide the name and street address of the extraction or harvesting site or facility. _____

SECTION 01352.1 APPENDIX A

PROJECT NAME:

REQUIRED FOR ALL SUBMITTALS

LEED Construction Submittal Information

SUBMITTALS CAN NOT BE APPROVED UNTIL RECEIPT OF THIS COMPLETED FORM.

* What is the distance of the extraction or harvesting site from the project site? _____ miles

* Use table below for assemblies that have multiple sources for the same material:

Materials	Extraction Site location (address):	Distance in miles	Manufacturing location (address):	Distance in miles

4. Low Emitting Materials - LEED EQ Credit 4.1 - 4.4

FOR PAINTS, COATINGS, STAINS, ADHESIVES, SEALANTS, CAULK, FIRESTOPPING, OR ANYTHING FROM A BUCKET, TUBE OR AEROSOL CAN (inside the weatherproofing system and applied on-site only)

* Does it meet the VOC requirements listed in the Specifications (shown in grams/Liter)?
If yes, provide manufacturer's data sheet with VOC content clearly shown. _____ grams/Liter

FOR CARPET OR CARPET TILE AND CARPET CUSHION

* For carpet, does it meet Green Label Plus certification? _____ Yes or No
If yes, provide manufacturer's data sheet stating Green Label Plus certification has been met.

* For cushion, does it meet Green Label Plus certification? _____ Yes or No
If yes, provide manufacturer's data sheet stating Green Label Plus certification has been met.

FOR COMPOSITE WOOD AND AGRIFIBER PRODUCTS (particleboard, MDF, plywood, wheatboard, strawboard, panel substrates and door cores) (inside the weatherproofing system and applied on-site only)

* Does it meet requirement of containing no added urea-formaldehyde resins? _____ Yes or No
If yes, provide manufacturer's data sheet stating no added urea-formaldehyde resins are contained in material/product.

LAMINATING ADHESIVES USED TO FABRICATE ON-SITE AND SHOP-APPLIED COMPOSITE WOOD AND AGRIFIBER ASSEMBLIES

* Does the adhesive meet the requirement of containing no added urea-formaldehyde resins? _____ Yes or No
If yes, provide manufacturer's data sheet stating no added urea-formaldehyde resins are contained in adhesive.

5. Rapidly Renewable Materials - LEED EQ Credit 6.1 - 6.2

INCLUDES MATERIALS SUCH AS: BAMBOO, CORK, COTTON, LINOLEUM, WOOL AND WHEAT

What percentage, if any, does the manufacturing process use any rapidly renewable materials _____ %

Wood Product Type	Cost	Percentage of product by weight	Manufacturer/Vendor

6. Certified Wood - LEED EQ Credit 7

INCLUDES WOOD PRODUCTS SUCH AS: FRAMING, FLOORS, DOORS AND FINISHES

What percentage, if any, of the wood based materials are FSC Certified? _____ %

Product Name	Cost	Percentage of product by weight	FSC Chain of Custody Number	Manufacturer/Vendor

END SECTION 01352



Project Name: Austin Onion Creek Fire Station

Project Address: 11112 Old San Antonio Rd. Austin, TX 78748

Const. or Design		PROJECT INFORMATION FORMS				
D	Y	Prereq 1	Minimum Program Requirements			Required
D	Y	Prereq 2	Project Summary Details			Required
D	Y	Prereq 3	Occupant and Usage Data			Required
D	Y	Prereq 4	Schedule and Overview Documents			Required
		Yes	?	No		
		13	0	13	SUSTAINABLE SITES	24 POINTS
C	Y	Prereq 1	Construction Activity Pollution Prevention			Required
D	1	Credit 1	Site Selection			1
D		Credit 2	Development Density and Community Connectivity	5		5
D		Credit 3	Brownfield Redevelopment	1		1
D		Credit 4.1	Alternative Transportation - Public Transportation Access	6		6
D	1	Credit 4.2	Alternative Transportation - Bicycle Storage and Changing Rooms			1
D	3	Credit 4.3	Alternative Transportation - Low-Emitting and Fuel-Efficient Vehicles			3
D	2	Credit 4.4	Alternative Transportation - Parking Capacity			2
C		Credit 5.1	Site Development - Protect or Restore Habitat	1		1
D	1	Credit 5.2	Site Development - Maximize Open Space			1
D	1	Credit 6.1	Stormwater Design - Quantity Control			1
D	1	Credit 6.2	Stormwater Design - Quality Control			1
C	1	Credit 7.1	Heat Island Effect - Nonroof			1
D	1	Credit 7.2	Heat Island Effect - Roof			1
D	1	Credit 8	Light Pollution Reduction			1
		Yes	?	No		
		6	0	4	WATER EFFICIENCY	10 POINTS
	Y	Prereq 1	Water Use Reduction			Required
D	4	Credit 1	Water Efficient Landscaping			2 to 4
				0	Reduce by 50%	2
				4	No Potable Water Use or Irrigation	4
D		Credit 2	Innovative Wastewater Technologies	2		2
D	2	Credit 3	Water Use Reduction			2 to 4
				2	Reduce by 30%	2
					Reduce by 35%	3
					Reduce by 40%	4

C	Y		Prereq 1	Fundamental Commissioning of Building Energy Systems	Required
D	Y		Prereq 2	Minimum Energy Performance	Required
D	Y		Prereq 3	Fundamental Refrigerant Management	Required
D	13		Credit 1	Optimize Energy Performance	1 to 19
				Improve by 12% for New Buildings or 8% for Existing Building Renovations	1
				Improve by 14% for New Buildings or 10% for Existing Building Renovations	2
				Improve by 16% for New Buildings or 12% for Existing Building Renovations	3
				Improve by 18% for New Buildings or 14% for Existing Building Renovations	4
				Improve by 20% for New Buildings or 16% for Existing Building Renovations	5
				Improve by 22% for New Buildings or 18% for Existing Building Renovations	6
				Improve by 24% for New Buildings or 20% for Existing Building Renovations	7
				Improve by 26% for New Buildings or 22% for Existing Building Renovations	8
				Improve by 28% for New Buildings or 24% for Existing Building Renovations	9
				Improve by 30% for New Buildings or 26% for Existing Building Renovations	10
				Improve by 32% for New Buildings or 28% for Existing Building Renovations	11
				Improve by 34% for New Buildings or 30% for Existing Building Renovations	12
				13 Improve by 36% for New Buildings or 32% for Existing Building Renovations	13
				Improve by 38% for New Buildings or 34% for Existing Building Renovations	14
				Improve by 40% for New Buildings or 36% for Existing Building Renovations	15
				Improve by 42% for New Buildings or 38% for Existing Building Renovations	16
				Improve by 44% for New Buildings or 40% for Existing Building Renovations	17
				Improve by 46% for New Buildings or 42% for Existing Building Renovations	18
				Improve by 48%+ for New Buildings or 44%+ for Existing Building Renovations	19
D			Credit 2	On-Site Renewable Energy	1 to 7
				1% Renewable Energy	1
				3% Renewable Energy	2
				5% Renewable Energy	3
				7% Renewable Energy	4
				9% Renewable Energy	5
				11% Renewable Energy	6
				13% Renewable Energy	7
C			Credit 3	Enhanced Commissioning	2
D			Credit 4	Enhanced Refrigerant Management	2
C			Credit 5	Measurement and Verification	3
C	2		Credit 6	Green Power	2

Yes	?	No	INDOOR ENVIRONMENTAL QUALITY		15 POINTS
11	1	3			

D	Y			Prereq 1	Minimum Indoor Air Quality Performance	Required
D	Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
D	1			Credit 1	Outdoor Air Delivery Monitoring	1
D			1	Credit 2	Increased Ventilation	1
C	1			Credit 3.1	Construction Indoor Air Quality Management Plan - During Construction	1
C		1		Credit 3.2	Construction Indoor Air Quality Management Plan - Before Occupancy	1
C	1			Credit 4.1	Low-Emitting Materials - Adhesives and Sealants	1
C	1			Credit 4.2	Low-Emitting Materials - Paints and Coatings	1
C	1			Credit 4.3	Low-Emitting Materials - Flooring Systems	1
C	1			Credit 4.4	Low-Emitting Materials - Composite Wood and Agrifiber Products	1
D	1			Credit 5	Indoor Chemical and Pollutant Source Control	1
D	1			Credit 6.1	Controllability of Systems - Lighting	1
D	1			Credit 6.2	Controllability of Systems - Thermal Comfort	1
D	1			Credit 7.1	Thermal Comfort - Design	1
D	1			Credit 7.2	Thermal Comfort - Verification	1
D			1	Credit 8.1	Daylight and Views - Daylight	1
D			1	Credit 8.2	Daylight and Views - Views	1

Yes	?	No	INNOVATION IN DESIGN		6 POINTS
5	0	1			

C or D	4		1	Credit 1	Innovation in Design	1 to 5
			1		Innovation or Exemplary Performance	1
			1		Innovation or Exemplary Performance	1
			1		Innovation or Exemplary Performance	1
			1		Innovation or Exemplary Performance	1
					Innovation or Exemplary Performance	1
C	1			Credit 2	LEED® Accredited Professional	1

Yes	?	No	REGIONAL PRIORITY		4 POINTS
3	1	2			

C or D	3	1	2	Credit 1	Regional Priority	1 to 4
					EAc2 On-site Renewable Energy	up to 7
			1		MRC2 Construction Waste Management	1 to 2
					SSc5.1 Site Development - Protect or Restore Habitat	1
			1		SSc6.1 Stormwater Design - Quantity Control	1
			1		SSc6.2 Stormwater Design - Quality Control	1
					WEc2 Innovative Wastewater Technologies	1 to 2

Yes	?	No	PROJECT TOTALS (Certification Estimates)		108 POINTS
58	2	52			

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points

Division 1 General Requirements
CONSTRUCTION INDOOR AIR QUALITY
MANAGEMENT PLAN
Section 01510

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** This Section includes requirements for construction indoor air quality, including:
 - 1.** Construction Indoor Air Quality Management Purpose
 - 2.** Construction Indoor Air Quality Procedures
 - 3.** Construction Indoor Air Quality Submittals
- B.** This section includes references to the following external documents:
 - 1.** The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED^{AP}) "NC", for New Construction, version 2.2. This information is available from the U.S. Green Building Council, 1015 18th St NW, Ste. 105, Washington, DC 20036, 202-828-7422 or 866-828-7422, www.usgbc.org.
 - 2.** "IAQ Guidelines for Occupied Buildings Under Construction", Sheet Metal and Air Conditioning Contractors' National Association (SMACNA), www.smacna.org, (703) 803-2980.
 - 3.** "ANSI/AHSRAE 52.2-1999: Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size", American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), www.ashrae.org, (800) 527-4723.

1.3 PURPOSE

- A.** The intent of Construction IAQ (Indoor Air Quality) management is to reduce indoor air quality problems resulting from the construction process in order to help sustain the health and well-being of construction workers and building occupants.

1.4 PROCEDURES

- A.** The Contractor shall make every effort to reduce pollutants throughout the construction process in order to achieve compliance with IAQ testing maximum concentrations discussed below. The most significant method for achieving success is through source control, that is:
 - 1.** Install products and materials that are low- or zero-VOC, do not contain added formaldehyde, and are free of particulates
 - 2.** Request in-factory flush-out from manufacturers wherever possible, to flush out pollutants before products arrive at the site
- B.** The Contractor shall adopt an IAQ management plan to protect the HVAC system during construction, control pollutant sources, and interrupt contamination pathways.

- C. Contractor shall sequence the installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile, and gypsum wallboard.
- D. Temporary HVAC units (independent of permanent ductwork and distribution systems) are recommended as the optimal method for achieving the Construction IAQ requirements. This allows permanent HVAC equipment to be fully protected. If contractor is utilizing permanent HVAC equipment for fresh air, heating, or cooling during construction, all air intakes shall be protected from incoming construction debris. Contractor shall use filtration media in all permanent air handling equipment during construction, and replace this media immediately before occupancy.
 - 1. Regularly occupied spaces: Filtration media during and after construction shall have a Minimum Efficiency Reporting Value (MERV) of 13 as determined by ANSI/ASHRAE 52.2-1999. Obtain a diagram from MEP Engineer indicating location of all regularly occupied spaces.
 - 2. All other spaces: Filtration media during and after construction shall have a Minimum Efficiency Reporting Value (MERV) of 8 as determined by ANSI/ASHRAE 52.2-1999.
- E. The Contractor shall employ Green Housekeeping methods wherever practicable.
 - 1. Use non-toxic cleaners per Green Seal: <http://www.greenseal.org/>
 - 2. Conserve energy by shutting off lights and HVAC in all areas except those currently being cleaned.
- F. AFTER all finishes are installed, but BEFORE occupancy, the Contractor shall coordinate testing for Indoor Air Quality by a qualified testing agency. Testing shall be performed per LEED-NC Version 2.2 IEQ Credit 3.2. The testing agency shall employ the following procedures:
 - 1. One testing point per 25,000 sq. ft., or for each contiguous floor area, whichever is less.
 - 2. Test for the following contaminants, and demonstrate that the maximum concentrations listed below are not exceeded.
 - a. Formaldehyde: 50 parts per billion
 - b. Particulates (PM10): 50 micrograms per cubic meter
 - c. Total Volatile Organic Compounds (TVOC): 500 micrograms per cubic meter.
 - d. 4-Phenylcyclohexane (4-PCH): 6.5 micrograms per cubic meter (only required if carpets and fabrics with styrene butadiene rubber (SBR) latex backing material are installed as part of the base building systems).
 - e. Carbon Monoxide (CO): 9 parts per million and no greater than 2 parts per million above outdoor levels
 - 3. All measurements shall be conducted prior to occupancy, but during normal occupied hours, and with the building ventilation system starting at the normal daily start time and operated at the minimum outside air flow rate for the occupied mode throughout the duration of air testing.
 - 4. The building shall have all interior finishes installed, including but not limited to millwork, doors, paint, carpet and acoustic tiles. Non-fixed furnishings such as workstations and partitions are not required, to be in place for the testing. Better results will be achieved without furniture.
 - 5. The number of sampling locations will vary depending upon the size of the building and number of ventilation systems. For each portion of a building served by a separate ventilation system, the number of points shall not be less than one per 25,000 sq. ft., or

for each contiguous floor area, whichever is larger, and include areas with the least ventilation and the greatest presumed pollutant source strength.

6. Air samples shall be collected between 3 feet and 6 feet from the floor to represent the breathing zone of occupants, and over a minimum 4-hour period.
7. For each sampling point where the maximum concentration limits are exceeded, conduct additional flush-out with outside air and retest the specific parameters exceeded to indicate the requirements are achieved. When re-testing non-complying building areas, take samples from the same locations as in the first test.

1.5 SUBMITTALS

- A. With first Application for Payment, the General Contractor is to submit a draft Construction IAQ Management Plan. Architect will return plan with revisions or approval, to be resubmitted as many times as necessary for Architect's final approval. The plan shall be divided into 6 parts, addressing each of the following topics per "IAQ Guidelines for Occupied Buildings Under Construction", Sheet Metal and Air Conditioning Contractors' National Association (SMACNA); <http://www.smacna.org/> ; (703) 803-2980. The plan shall also include requirements described in "Procedures" above.
 1. HVAC protection
 2. Source Control
 3. Pathway Interruption
 4. Housekeeping
 5. Filter Maintenance Schedule
 6. Scheduling
- B. With subsequent Applications for Payment, the General Contractor is to submit documentation of IAQ procedures as follows:
 1. Provide cut sheets of filtration media used during construction with MERV values highlighted (per ANSI/ASHRAE 52.2-1999). Fresh clean filters must be installed immediately prior to occupancy.
 2. During construction, take photographs of Construction IAQ Management procedures, such as protection of ducts, physical barriers protecting areas under construction, and the sequencing of installation for absorptive materials.
- C. The Contractor shall provide a report from the Indoor Air Quality Testing Agency, describing the testing process, reporting results for every testing point, and indicating compliance with the pollutant maximum concentration levels.

END

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

SECTION 12 48 13 - ENTRANCE MATS AND FRAMES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes:
 - 1. Complete recessed floor mat system, installed flush with adjacent flooring systems. Coordinate with other trades as required.
- B. Related Sections include the following:
 - 1. Division 3 Section: Cast-In-Place Concrete

1.03 QUALITY ASSURANCE

- A. Entrance Mat Manufacturer: Except as otherwise indicated, provide entrance mats and accessories by a single manufacturer, Reese Enterprises, Inc., Construction Specialties Inc., J. L. Industries, or other approved equal, for entire project.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's specification and installation instructions for each type of entrance mat. Include methods of installation for each type of substrate.
- B. Samples: Submit samples for colors and materials of products.
- C. Shop Drawings: Submit shop drawings for entrance mats. Include full scale sections of typical installations. Show details of designs, anchors, and accessories. Coordinate shop drawing submittal with concrete work shop drawings showing oversized recess for delayed installation of mat frames.
- D. LEED submittals:
 - 1. Recycled content certification: Manufacturer's or fabricator's certificate indicating percentage of post-consumer recycled content by weight and post-industrial recycled content by weight for each Product specified under this Section.
 - 2. Local/regional source certification: Manufacturer or fabricator's certificate indicating location, and distance in miles from the Project Site, of each Product's final assembly, extraction, harvesting, or recovery prior to shipment to the Project Site.

PART 2 - PRODUCTS

2.01 ENTRANCE MAT

- A. General: Provide colors/patterns/profiles of materials, including metals and metal finishes, as indicated on drawings or by this specification or, where not indicated, as selected by Architect from manufacturer's standard colors/patterns/profiles. Shop fabricate units of entrance mat work in sizes as indicated. Miter corner joints in framing elements, with hairline joints, or provide prefabricated corner units without joints. Where possible, verify sizes by field measurement prior to shop fabrication.

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

- B. Surface Type Foot Grilles: Provide manufacturer's standard extruded aluminum tread-rails system by Reese Enterprises, Model No. 546, Carpet Tread Mat, 3/8" thick, with top-surface tread inserts of fusion-bonded carpet of 1/4" high x 28 oz. per sq. yd. level-out DuPont "Antron III" nylon filament, No. 8603 "Charcoal" with continuous vinyl cushions on bottom surface of slats, and vinyl edge accessories to accommodate aluminum recessed frame No. 548 application as indicated. Finish of metals shall be clear anodized.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install recessed frames and entrance mats to comply with manufacturer's instructions, at locations indicated and with top of frames and mats in proper relationship to one another and to adjoining finished flooring. Set mat tops at proper height for most effective cleaning action; coordinate top of mat surfaces with doors that swing across mats, to provide under door clearance.

3.02 PROTECTION

- A. After completing frame installations, provide temporary filler of plywood or fiber board in foot grille recesses and cover frames with plywood protective flooring.
- B. Maintain protection until construction traffic has ended and Project is near Substantial Completion. Clean recessed floor mats of construction dirt and debris just prior to substantial completion.

END OF SECTION 12 48 13

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

SECTION 32 31 20 – ORNAMENTAL STEEL FENCES AND CANTILEVER GATE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. The contractor shall provide all labor, materials and appurtenances necessary for installation of the electronic steel roll gate system defined herein.

1.03 RELATED WORK

- A. Division 03 Section “Concrete”.
- B. Division 22 Section “Earthwork”.

1.04 SYSTEM DESCRIPTION

- A. The manufacturer shall supply a total roll gate system of Ameristar® TransPort® II Ornamental design series and Majestic style. The system shall include all components pickets, rails, gate uprights, wheels motor, motor housing, and access hardware required.

1.05 SUBMITTAL

- A. Shop drawings: Submit shop drawings under the provisions of Section 013300.
- B. The manufacturer’s submittal package consisting of gate elevations, hardware details, and installation details, shall be submitted prior to installation.
- C. Submit drawings showing connections to adjacent construction, range of travel, and all electrical and mechanical connections to the operator. Drawings shall also show the size and location of the concrete mounting pad. Underground electrical runs shall be shown on shop drawings.
- D. Test reports:

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

1. Submit affidavits from the manufacturer demonstrating that the gate operator has been tested to 200,000 cycles without breakdown.
2. Each operator shall bear a label indicating that the gate operator has been tested to a set of quality control procedures, including full power, function and inherent reversing sensor function

1.06 QUALITY ASSURANCE

- A. The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.
- B. Manufacturer: A company specializing in the manufacture of automatic gate operators of the type specified, with a minimum of ten years experience.
- C. Installer: A minimum of three years experience installing similar equipment.

1.07 CODES AND REGULATORY REQUIREMENTS

- A. Operators shall be built to UL325 standards and be listed by a NRTL testing laboratory. Complete all electrical work according to local codes and National Electrical code. All fieldwork shall be performed in a neat and professional manner, completed to journeyman standards.
- B. Current safety standards require the use of multiple external sensors to be capable of reversing the gate in either direction upon sensing an obstruction. See also 2.02D.
- C. Automated gates shall be constructed to conform to the ASTM F2200-02 standard for sliding gates.
- D. Current safety standards require gate operators to be designed and labeled for specific usage classes. HySecurity Model SlideWinder 38 is compliant in all usage classes, Classes I-IV.

1.08 WARRANTY

- A. Provide a five-year limited warranty against all defects in materials or workmanship. Defective materials shall be replaced with comparable materials furnished by the manufacturer, at no cost to the owner. Freight, labor and other incidental costs are not covered under the factory warranty, but may be covered by a separate service agreement between installing company and the owner.
 1. To ensure validation of warranty, return completed warranty registration form (included in Installation and Reference manual) to manufacturer.

1.09 REFERENCES

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

- A. ASTM D523 - Test Method for Specular Glass.
- B. ASTM D822 – Practive for Conducting Tests on Paint and Related Coatings and Materials using Filtered Open-Flame Carbon-Arc Light and Water Exposure Apparatus.
- C. ASTM D1654 - Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.
- D. ASTM D2244 - Test Method for Calculations of Color Differences from Instrumentally Measured Color Coordinates.
- E. ASTM D2794 - Test Method for Resistance of Organic Coatings to The Effects of Rapid Deformation (Impact).
- F. ASTM D3359 - Test Method for Measuring Adhesion by Tape Test.

1.10 PRODUCT HANDLING AND STORAGE

- A. Upon receipt at the job site, all materials shall be checked to ensure that no damages occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage and to protect against damage, weather, vandalism and theft.

PART 2 - MATERIALS

2.01 MANUFACTURER

- A. The fence system shall conform to Montage Plus™ / Montage Plus ATFT™ Welded Ornamental Steel Classic™ design series and Majestic stye, extended picket bottom rail treatment, rigid weld treatment, 3-Rail style manufactured by Ameristar Fence Products, Inc., in Tulsa, Oklahoma
- B. The ornamental cantilever gate system shall conform to Ameristar® TransPort® II Ornamental design series and Majestic style and frame configuration as 3-rail frame configuration manufactured by Ameristar Fence Products, Inc. in Tulsa, Oklahoma.
- C. Fence and Gate Height: 72 inches.

2.02 MATERIAL

- A. Steel material for fence panels and posts shall conform to the requirements of ASTM A653/A653M, with a minimum yield strength of 50,000 psi (344 MPa) and a minimum zinc (hot-dip galvanized) coating weight of 0.90 oz/ft² (276 g/m²), Coating Designation G-6.

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

- B. Material for fence pickets shall be 3/4" square x 18 Ga. tubing. The rails shall be steel channel, rigid-Montage Plus profile, 1.5" x 1.4375" x 14 Ga. Picket holes in the rail shall be spaced 4.334" o.c. Posts shall be a minimum of 2-1/2" square x 16 Ga. 12 Ga. posts may be used for heavy applications.
- C. The materials used for cantilever gate framing (i.e., uprights, diagonal braces and pickets or pales) shall be manufactured from ASTM B221 aluminum (designation 6063-T-6) with a yield strength of 25,000 PSI, a tensile strength of 30,000 PSI and a standard mill finish. The TransPort® Fast-Trak™ rails shall be manufactured from ASTM B221 aluminum (designation 6063-T-6) with minimum yield strength of 25,000 PSI, a tensile strength of 30,000 PSI and a standard mill finish.
- D. Material for diagonal bracing and uprights shall be 2" sq. x 1/4" aluminum. The design of the top and bottom enclosed track shall conform to the manufacturers 5" x 2" Fast-Trak system. Material for pickets shall be 1" x 1/8" wall aluminum.
- E. Internal roller truck assembly shall be self-aligning swivel ball-and-socket type running on four bearing wheels. Internal roller truck assembly shall be affixed to the hanger bracket by means of a 5/8" diameter industrial-grade rod end/center bolt, with a minimum static load rating of 10,000 pounds. Attachment of the center bolt to the truck body shall be by means of a swivel joint to ensure equivalent and consistent loading on all bearing wheels and internal track surfaces throughout the travel of the gate.
- F. Ornamental picket material shall be 1" square x 14 Ga. tubing for TransPort® II Ornamental gate pickets. Picket spacing shall be 4-3/4" for TransPort® II Ornamental gate pickets. Material for top rails, uprights and diagonal rails shall be 2" square x 11 Ga. Material for the bottom rail shall be 2" x 4" x 11 Ga. Posts shall be 4" square x 11 Ga.
- G. Steel material for fence framework (i.e., tubular pickets, rails, and posts), when galvanized prior to forming, shall conform to the requirements of ASTM A924/A924M, with a minimum yield strength of 50,000 psi (344 MPa). The steel shall be hot-dip galvanized to meet the requirements of ASTM A653/A653M with a minimum zinc coating weight of 0.90 oz/ft² (276 g/m²), Coating Designation G-90.

2.03 FABRICATION

- A. Pickets, rails, uprights and posts shall be pre-cut to specified lengths. Diagonals shall be pre-cut to specified lengths and angles. Frame materials shall be joined by welding. Pickets shall be face welded to roll gate frame, except for Invincible style gates over 18' long. Invincible style gates over 18' long shall have pickets face-welded to 2" x 2" angle iron to form panels equal in length to the gate frame bay width.
- B. The manufactured cantilever gates and bolt-on panels (if applicable) shall be subjected to the PermaCoat® thermal stratification coating process

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

(hightemperature, in-line, multi-stage, multi-layer) including, as a minimum, a six-stage pre-treatment/wash (with zinc phosphate), an electrostatic spray application of an epoxy base, and a separate electrostatic spray application of a polyester finish. The base coat shall be a thermosetting epoxy powder coating (gray in color) with a minimum thickness of 2 mils (0.0508mm). The topcoat shall be a “no-mar” TGIC polyester powder coat finish with a minimum thickness of 2 mils (0.0508mm). The color shall be (specify Black, Bronze, White, or Desert Sand). The stratification-coated framework shall be capable of meeting the performance requirements for each quality characteristic shown in Table 1.

- C. Completed gates shall be capable of supporting a 200 lb. load applied at midspan without permanent deformation.

2.04 GATE OPERATORS

- A. HySecurity Gate Operators SlideDriver 15 with Smart Touch Controller, or other comparable operator, as approved by the architect. Substitute operators that are approved will be published in an addendum, not less than ten days prior to bid opening.

2.05 OPERATION

- A. Gate operation shall be by means of a cable winch system employing a 5/32” (4 mm) diameter stainless steel cable that is fixedly attached to a 7.6 inch (193 mm) diameter drum. The electric motor shall be a 3 phase inverter duty rated induction motor, mated to a 40 Ampere variable speed controller, which allows smooth acceleration and precise stop and start functionality. The gate operator system shall not employ roller chains or sprockets to transfer power from operator to gate panel. Operator shall contain an integrated UPS power supply that keeps the gate operator fully functional without AC power in case of power failure. The UPS system shall also be capable of keeping the external access control system functional during a power failure. Operator shall detect and automatically adjust to either 115 Volt or 230 Volt 50/60 Hz source power and supply 24 Volt DC control power as well as three-phase to a single universal motor. Operator system shall provide automatic electronic locking to prevent unauthorized entry. Operator shall automatically unlock when the DC power is turned off so that the gate can be manually pushed if necessary.

- B. Operator ratings:

1. Motor rating: 1 Horsepower
2. Voltage compatibility: 115/208/230 Volts 50/60Hz Single Phase
3. Current draw: 6 Amps @115V / 3 Amps @208/230V
4. Control circuit: 24 Volts DC
5. Gate travel capacity: 38 feet (11.58 m)
6. Gate weight capacity: 2,000 pounds (907 kg) maximum
7. Pull force capacity: 200 pounds (90 kg)

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

8. Speed: selectable to 9 inches (229 mm)/sec or 1 foot (.30 m)/sec
 9. Environmental: -20F to 180F
 10. UPS capacity during power failure: 2,000 feet (610 m) of gate travel, depending upon accessory loads.
30,000 feet (9.14 km) of UPS gate travel available with optional larger batteries.
- C. Security lock / Emergency operation / Manual operation:
1. Operator shall have automatic electronic locking to prevent unauthorized entry which shall function after the loss of AC power.
 2. Operator shall unlock with a switch input so that the gate can be manually pushed.
 3. Operator shall have inputs for Emergency open and Emergency close.
 4. Operator shall have outputs to indicate forced entry, full open and full closed gate position.
- D. Operator shall contain these electrical components as standard equipment:
1. Electric motor: Shall be a NEMA 56 size, totally enclosed, inverter rated variable speed 3 phase continuous duty motor.
 2. Limit sensors: Programmable electronic sensing system with gate position resolution exceeding 3/16 of an inch (4.76 mm).
 3. Transformer: 500VA. Fully enclosed with integral circuit breakers for all primary taps.
 4. All components shall have overload protection.
 5. Integrated board for 3 phase inverter drive / charger / UPS controller containing:
 - a. 40 Amp rated output 3 phase motor drive.
 - b. 24 Amp rated output battery charger.
 - c. DSP microprocessor with flash memory to control all motor and charger functions.
- E. Standard mechanical components shall include as a minimum:
1. Electrical enclosure: Oversized, metal, with Plexiglas cover for protection from intrusion of foreign objects, and providing ample space for the addition of accessories.
 2. Chassis: 10 gauge (3.4 mm) Galvanized steel with powder coated finish mounted on an insulating polyethylene base plate.
 3. Cover: Molded polyethylene.
- F. Controls: Smart Touch Controller Board containing:
1. Built-in power surge/lightening strike protection on all inputs.
 2. Double sided control board with all sensitive electronic components on the protected bottom side, conformal coated for environmental protection.
 3. 256k flash memory allows updates to program software without removal of parts.
 4. Non-volatile memory to support system configuration and event logs without power.

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

5. Clock chip to support time date recording of event logging system.
 6. Liquid crystal display for reporting of functions and setup menu programming.
 7. Membrane switch interface allowing full system control with only five buttons.
 8. Automatically self adaptive inherent entrapment sensor.
 9. Integrated “warn before operate” system.
 10. Integrated timer to close and maximum run timer.
 11. Two spare RS-485 ports for external communication and support of expansion controls.
 12. RS-232 port for external serial communication, reading of event log and programming.
 13. Two spare output relays, 40 Amp rated with at least 19 programmable function options.
 14. Spare solid state output with, 4 Amp rated with at least 19 programmable function options.
 15. Programmable anti-tailgate mode for faster gate closure and to deter following vehicles.
- G. Required external sensors: See 1.05B. Specify photo eyes or gate edges or a combination thereof to be installed such that the gate is capable of reversing in either direction upon sensing an obstruction.
- H. Optional control devices: Radio control and keypads.

2.06 FACTORY TESTING

- A. Fully assemble and test, at the factory, each gate operator to assure smooth operation, sequencing and electrical connection integrity. Tests shall simulate physical and electrical loads equal to the fully rated capacity of the operator components.
- B. Assure reliability of control boards by testing 100% of production for 19 hours in an environmental chamber that cycles between 0F – 160F while a computer monitors and records board functions.
- C. Check all mechanical connections for tightness and alignment.
- D. Check all mechanical parts and electrical wires to assure that chafing cannot occur during shipping or operation.

PART 3 - EXECUTION

3.01 PREPARATION

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

- A. All new gate installations shall be laid out by the contractor in accordance with the construction plans.
- B. All hardware shall be installed in accordance with the Passport installation instructions. Passport roll gates shall be installed so they comply with current ASTM F2200 & UL325 standards.
- C. Gate stops shall be installed on each track in a way that conforms to current ASTM F2200 standards.

3.02 SITE EXAMINATION

- A. Locate concrete mounting pad in accordance with approved shop drawings.
- B. Make sure that gate is operating smoothly under manual conditions before installation of gate operators. Do not proceed until gate panel is level, aligned and operates without binding.

3.03 FIELD QUALITY CONTROL

- A. Test gate operator through ten full cycles and adjust for operation without binding, scraping or uneven motion. Test limit settings for proper "at rest" gate position.
- B. All anchor bolts shall be fully concealed in the finished installation.

3.04 CONTINUED SERVICE AND DOCUMENTATION

- A. Train owner's personnel in the general maintenance of the gate operator and accessories and provide one copy of "Installation and Reference", manual for the owner's use (a second manual is available upon request.) Manuals will identify parts of the equipment for future procurement.

NOTE: HySecurity Gate Operators reserves the right to change these specifications at any time, without notice and without prejudice. Call (800) 321-9947 or check for updated current specifications online at www.hysecurity.com if you are not sure that you have the latest version.

3.05 INSTALLATION

- A. Gate posts shall be set in accordance with the spacings shown in the construction plans. The "Earthwork" and "Concrete" sections of this specification shall govern post base material requirements. 6" wheels shall be bolted to the gate between the wheel plates welded near the ends of the gate bottom rail. The gate shall be set upright with the V-grooved wheels positioned over the pre-installed steel V-track

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

that traverses the gate opening. Roller guides shall be affixed to the gate posts at a height even with the gate top rail to hold the gate in a vertical position. Gate stops shall be welded to the end of the gate or track so gate cannot pass rollers in either direction.

- B. Install gate operator in accordance with the manufacturer's printed instructions, current at the time of installation. Coordinate locations of operators with contract drawings, other trades and shop drawings.
- C. Installer shall insure that the electric service to the operator is rated for 20 AMPS. Operator draws 700 watts maximum.

3.06 CLEANING

The contractor shall clean the jobsite of excess materials; post hole excavations shall be scattered uniformly away from posts.

Table 1 – Coating Performance Requirements		
Quality Characteristics	ASTM Test Method	Performance Requirements
Adhesion	D3359 – Method B	Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).
Corrosion Resistance	B117, D714 & D1654	Corrosion Resistance over 3,500 hours (Scribed per D1654; failure mode is accumulation of 1/8” coating loss from scribe or medium #8 blisters).
Impact Resistance	D2794	Impact Resistance over 60 inch lb. (Forward impact using 0.625” ball).
Weathering Resistance	D822 D2244, D523 (60° Method)	Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).

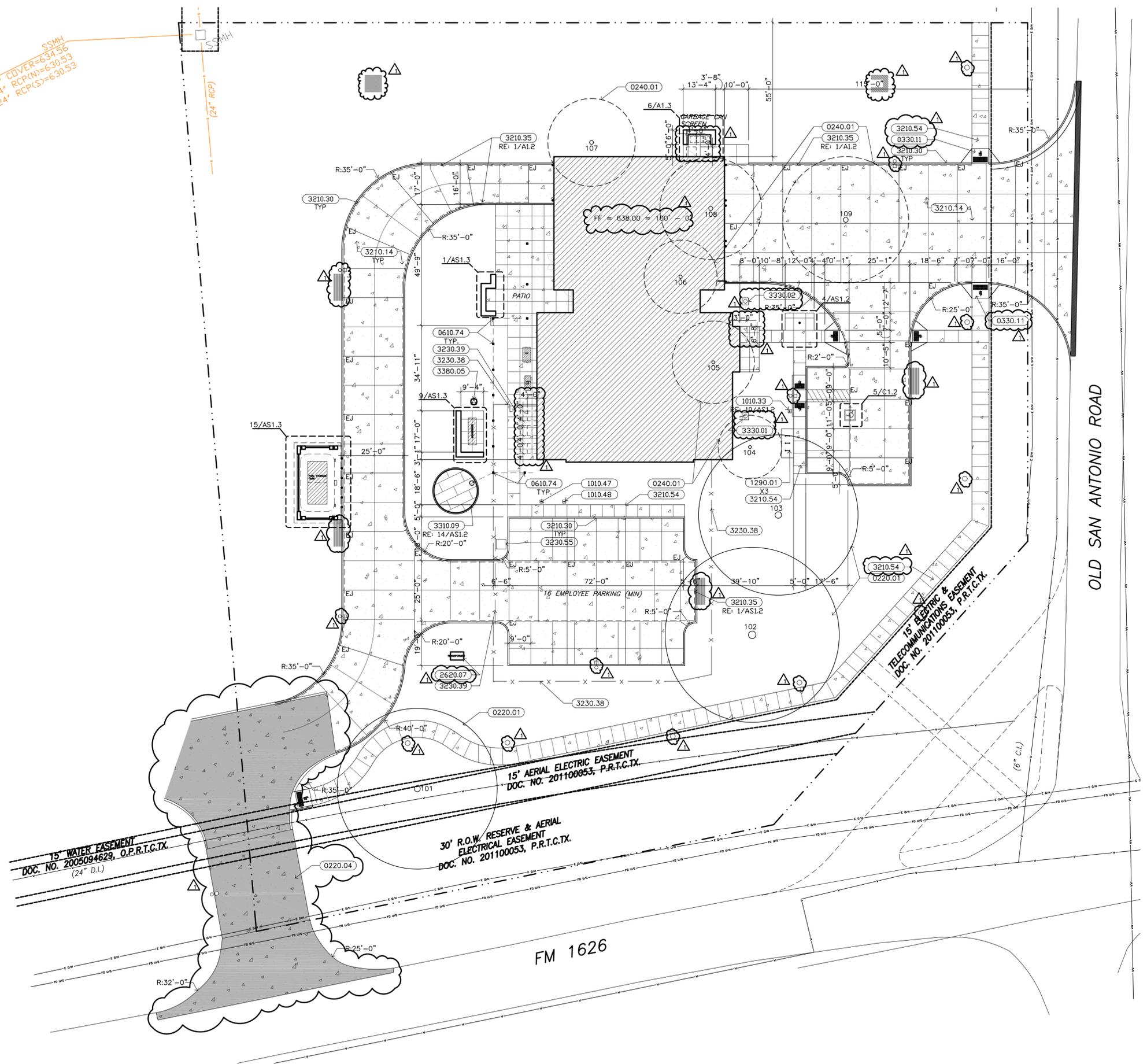
3.07 PRODUCT HANDLING AND STORAGE

- A. Upon receipt at the job site, all materials shall be checked to ensure that no damage occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism and theft.

ROCIP Project: Withhold insurance cost. Please refer to sections 00425 & 00810 for information.

END OF SECTION 32 31 20

SSMH
 TOP COVER=634.56
 FL 24" RCP(N)=630.53
 FL 24" RCP(S)=630.53



KEYNOTES

- DIVISION 02 - EXISTING CONDITIONS (TO REMAIN, U.N.O.) & DEMOLITION
 - 0220.01 EXISTING TREE
 - 0220.04 EXISTING CONCRETE PAVING
 - 0240.01 REMOVE EXISTING TREE
- DIVISION 03 - CONCRETE
 - 0330.11 CONCRETE RAMP
- DIVISION 06 - WOOD, PLASTICS, & COMPOSITES
 - 0610.74 HEAVY TIMBER COLUMN
- DIVISION 10 - SPECIALTIES
 - 1010.33 POLE MOUNTED SIGNAGE - "H.C. PARKING ONLY"
 - 1010.47 POLE MOUNTED SIGNAGE - "FUEL EFFICIENT VEHICLE PARKING"
 - 1010.48 POLE MOUNTED SIGNAGE - "CARPOOL PARKING"
- DIVISION 12 - FURNISHINGS
 - 1290.01 PRE-MANUFACTURED METAL BICYCLE RACK
- DIVISION 26 - ELECTRICAL (RE: ELECTRICAL)
 - 2620.07 ELECTRICAL TRANSFORMER WITH HOUSEKEEPING PAD AS REQUIRED (RE: ELECTRICAL)
- DIVISION 32 - EXTERIOR IMPROVEMENTS
 - 3210.14 CONCRETE PAVING (RE: CIVIL)
 - 3210.30 6" CONCRETE CURB (RE: CIVIL)
 - 3210.35 FIRE LANE STRIPING PER CITY REQUIREMENTS
 - 3210.54 CONCRETE SIDEWALK
 - 3230.38 DECORATIVE METAL FENCE
 - 3230.39 DECORATIVE METAL GATE
 - 3230.55 MOTORIZED GATE OPERATOR
- DIVISION 33 - UTILITIES (RE: CIVIL & MEP)
 - 3310.09 CISTERN
 - 3330.01 GREASE INTERCEPTOR
 - 3330.02 SAND / OIL SEPARATOR
 - 3380.05 RADIO COMMUNICATIONS ANTENNA



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 979-694-1791
 WWW.BRWARCH.COM

AUSTIN ONION CREEK FIRE & EMS STATION
 11112 OLD SAN ANTONIO ROAD
 AUSTIN, TEXAS 78748

REVISIONS	DATE	BY	APPENDUM #1
1	10/24/16		

DATE 9/23/2016
 DRAWN BY LA, MW
 CHECKED BY RH
 PROJECT NO. 21-4106-00

1 SITE PLAN
 1" = 20'-0"



AS1.1
 SITE PLAN

09/23/16

KEYNOTES

- DIVISION 03 - CONCRETE**
 0330.01 CONCRETE (RE: STRUCTURAL)
 0330.02 CONCRETE SLAB (RE: STRUCTURAL)
 0330.05 CONCRETE GRADE BEAM (RE: STRUCTURAL)
 0360.03 FILL WITH GROUT
- DIVISION 04 - MASONRY**
 0405.02 MORTAR NET
 0420.02 HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
 0420.14 8" CONCRETE MASONRY UNITS
 0420.23 CONCRETE MASONRY UNIT BOND BEAM
 0420.24 VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
 0440.07 STONE VENEER
 0470.01 CAST STONE
 0470.06 CAST STONE CAP - PIN BOLT CONNECTIONS
- DIVISION 05 - METALS**
 0510.02 STEEL COLUMN (RE: STRUCTURAL)
 0510.07 STEEL BEAM (RE: STRUCTURAL)
 0530.04 METAL ROOF DECK (RE: STRUCTURAL)
 0550.02 3" X 3" X 1/4" STEEL ANGLE
 0550.62 6" PIPE BOLLARD: FILL WITH CONCRETE
- DIVISION 07 - THERMAL & MOISTURE PROTECTION**
 0710.01 BITUMINOUS DAMPPROOFING MASTIC
 0760.02 THROUGH-WALL FLASHING
- DIVISION 10 - SPECIALTIES**
 1040.03 FIRE EXTINGUISHER AND SEMI-RECESSED CABINET
- DIVISION 22 - PLUMBING (RE: PLUMBING)**
 2210.23 WEATHERPROOF PLUMBING ENCLOSURE
- DIVISION 31 - EARTHWORK**
 3120.03 COMPACTED SUBGRADE
- DIVISION 32 - EXTERIOR IMPROVEMENTS**
 3230.38 DECORATIVE METAL FENCE
- DIVISION 33 - UTILITIES (RE: CIVIL & MEP)**
 3350.02 FUEL DISPENSER



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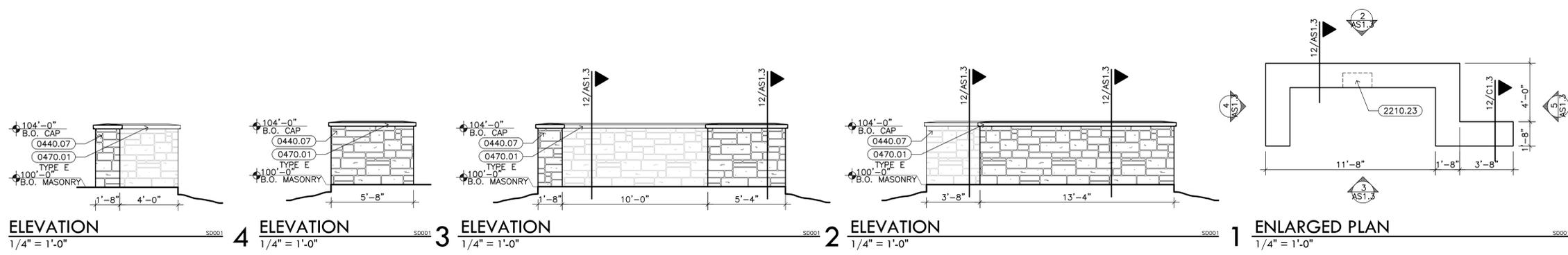
AUSTIN ONION CREEK FIRE & EMS STATION
 11112 OLD SAN ANTONIO ROAD
 AUSTIN, TEXAS 78748

NO.	DATE	DESCRIPTION
1	10/24/16	ADDENDUM #1

REVISIONS

DATE	9/23/2016
DRAWN BY	LA, MW
CHECKED BY	RH
PROJECT NO.	21-4106-00

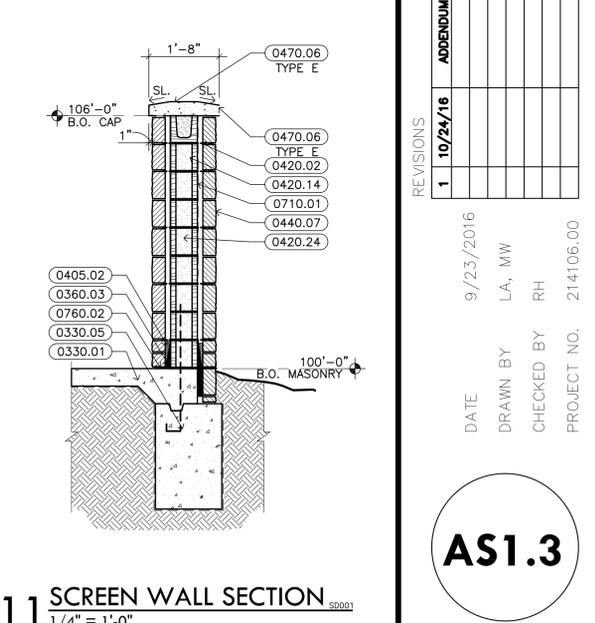
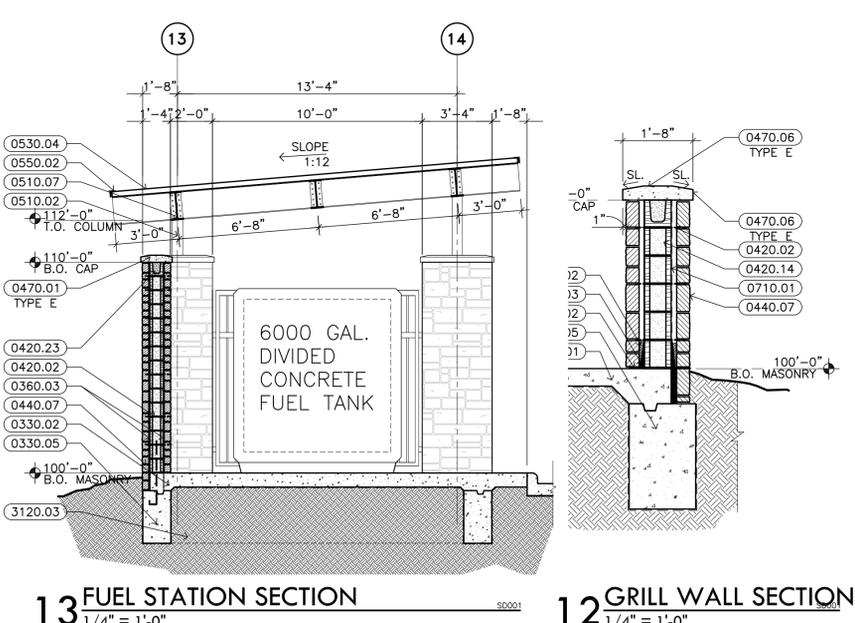
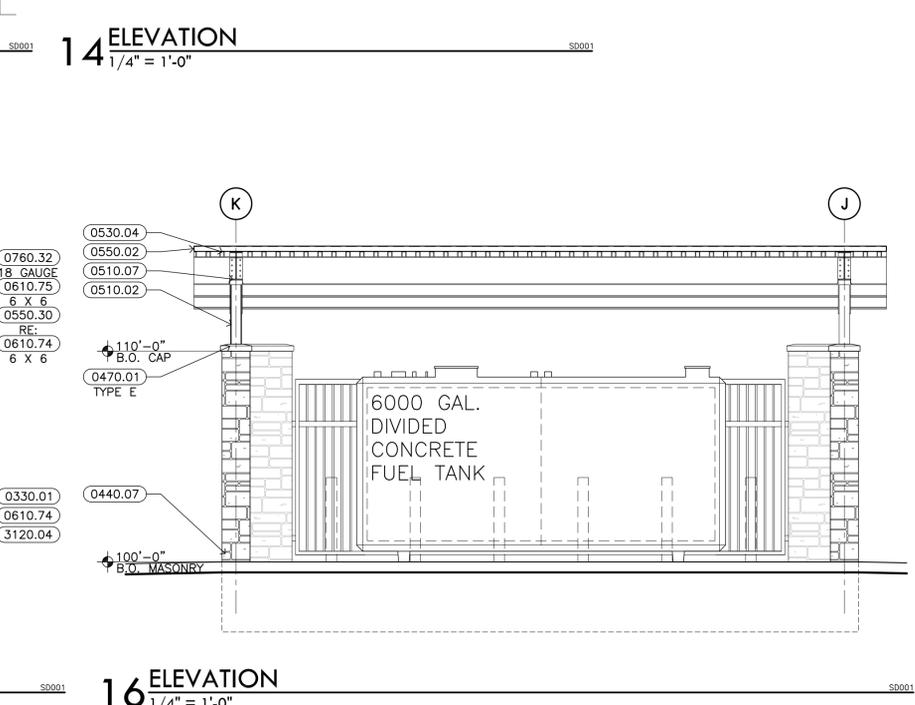
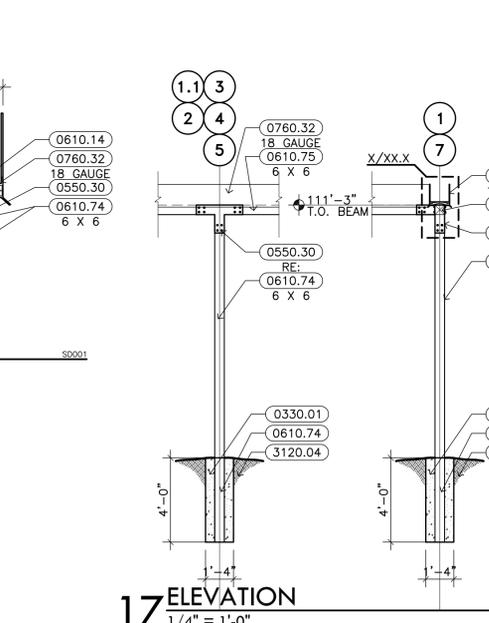
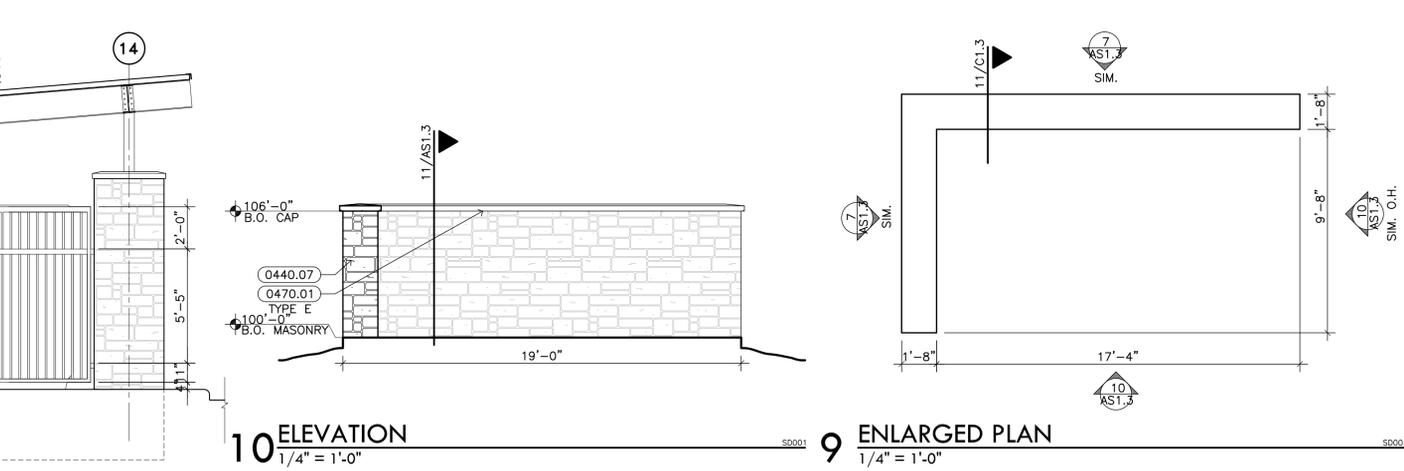
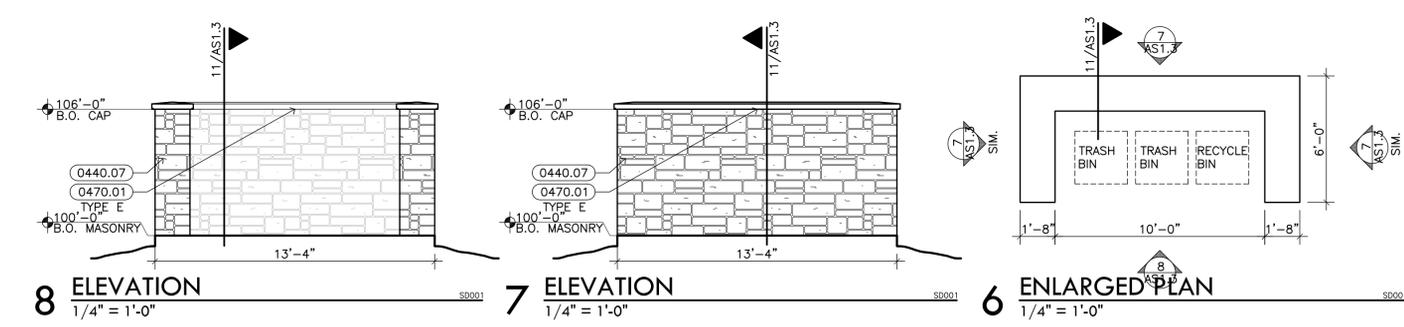
AS1.3
 SITE DETAILS



REQUIRED SIGNAGE
 PROVIDE PERMANENTLY ATTACHED SIGNAGE AT FUEL DISPENSING STATION

1. A SIGN STATING THE MATERIAL STORED WITHIN THE TANK.
2. "NO SMOKING"
3. "SIMULTANEOUS TANK FILLING AND FUEL DISPENSING IS PROHIBITED"
4. "IN CASE OF FIRE OR SPILL" USE EMERGENCY PUMP SHUTOFF REPORT THE ACCIDENT FIRE DEPARTMENT NO. _____ FACILITY ADDRESS _____
5. A SIGN SHOWING THE 90% FULL CAPACITY OF THE TANK. LETTERING TO HAVE 1" STROKE.
6. A SIGN REQUIRING MOTORS TO BE STOPPED DURING FUELING OPERATIONS
7. A SIGN PROHIBITING DISPENSING INTO UNAPPROVED CONTAINERS

PROVIDE AN ENGRAVED PLASTIC 3" X 8" SIGN AT THE PUMP MASTER SWITCH LABELED "EMERGENCY PUMP SHUTOFF" PROVIDE OTHER SIGNAGE AS REQUIRED BY THE UNIFORM FIRE CODE AND THE CITY OF AUSTIN LOCAL ORDINANCE NO. 321001-L





NO.	DATE	DESCRIPTION
1	10/21/2016	ADDENDUM 1

DATE	DRAWN BY	CHECKED BY	PROJECT NO.
10/21/2016	CD	JRK	214106.00

C6.0

LEAD FREE NOTE:

ALL POTABLE WATER SYSTEM COMPONENTS INSTALLED AFTER JANUARY 4, 2014, SHALL BE ESSENTIALLY "LEAD FREE" ACCORDING TO THE US SAFE DRINKING WATER ACT. EXAMPLES ARE VALVES (CORPORATION STOPS, CURB STOP, AND PRESSURE REDUCING VALVES), NIPPLE BUSHINGS, PIPE, FITTINGS AND BACKFLOW PREVENTERS. FIRE HYDRANTS, TAPPING SADDLES, 2-INCHES AND LARGER GATE VALVES ARE THE ONLY COMPONENTS EXEMPT FROM THIS REQUIREMENT. COMPONENTS THAT ARE NOT CLEARLY IDENTIFIED BY THE MANUFACTURER AS MEETING THIS REQUIREMENT EITHER BY MARKINGS ON THE COMPONENT OR ON THE PACKAGING SHALL NOT BE INSTALLED.

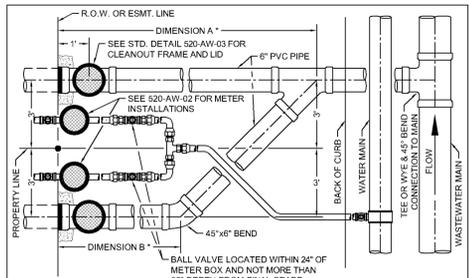
NO.	CALLOUT
I-1	STA. 1+00.00 IRRIGATION LINE INSTALL: NEW 2" SERVICE LINE, SEE DETAIL 3 / C6.3
I-2	STA. 1+11.38 IRRIGATION LINE INSTALL: NEW 1 1/2" IRRIGATION METER (TYPE TURBINE) (SEE DETAIL 3 / C6.3) 1-2" BALL VALVE GIS# _____ (SEE DETAIL 3 / C6.3)
I-3	STA. 1+24.18 IRRIGATION LINE INSTALL: 1-2" BALL VALVE (SEE NOTE 14) (SEE DETAIL 3 / C6.3) PRIVATE WATER CUT-OFF 1-2" x 2 1/2" REDUCER 1-2 1/2" PRIVATE REDUCED PRESSURE ZONE BACKFLOW PREVENTER (SEE NOTE 15)
I-4	STA. 1+36.51 IRRIGATION LINE SEE IRRIGATION PLAN FOR CONTINUATION

NO.	CALLOUT
W-1	STA. 0+00.00 PROPOSED 8" DI WATERLINE INSTALL: 1-8"x 8" WET CONNECTION 1-8"x 6" REDUCER CONNECT TO EXISTING 6" WL RESTRAIN CONNECTION (SEE NOTE 8)
W-2	STA. 0+16.09 PROPOSED 8" DI WATERLINE BEGIN INST 4 / C6.3 ON 16" STEEL CASING PIPE SEE DETAIL
W-3	STA. 1+07.72 PROPOSED 8" DI WATERLINE END INSTALLATION OF 16" STEEL CASING / C6.3 SEE DETAIL
W-4	STA. 1+24.15 PROPOSED 8" DI WATERLINE SEE FIRE LINE CALLOUT "F-9"
W-5	STA. 1+30.99 PROPOSED 8" DI WATERLINE INSTALL: 1-2" SERVICE CLAMP FOR 2" IRRIGATION WATER SERVICE
W-6	STA. 1+35.99 PROPOSED 8" DI WATERLINE INSTALL: 1-2" SERVICE CLAMP FOR 2" DOMESTIC WATER SERVICE
W-7	STA. 1+45.01 PROPOSED 8" DI WATERLINE INSTALL: 1-8"x 6" REDUCER CONNECT TO EXISTING 6" CI WL AT PROPERTY LINE, RESTRAIN CONNECTION (SEE NOTE 8)

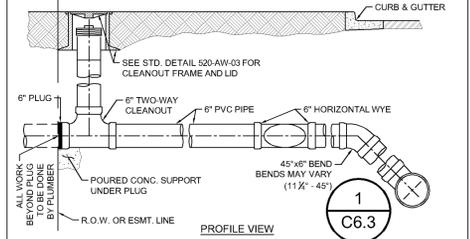
NO.	CALLOUT
D-1	STA. 1+00.00 DOMESTIC WATER INSTALL NEW 2" SERVICE LINE, SEE DETAIL 3 / C6.3
D-2	STA. 1+11.42 DOMESTIC WATER INSTALL: 1- NEW 1-1/2" WATER METER ASSEMBLY # _____ SEE DETAIL 3 / C6.3 1-2" BALL VALVE GIS# _____ SEE DETAIL 3 / C6.3
D-3	STA. 1+14.15 DOMESTIC WATER INSTALL: 1-2" BALL VALVE (SEE NOTE 14) SEE DETAIL 3 / C6.3 PRIVATE WATER CUT-OFF 1-2" x 2 1/2" REDUCER SEE DETAIL 3 / C6.3
D-4	STA. 1+16.61 DOMESTIC WATER INSTALL: 1-2 1/2" PRIVATE REDUCED PRESSURE ZONE BACKFLOW PREVENTER (SEE NOTE 15)
D-5	STA. 1+20.30 DOMESTIC WATER INSTALL: 1-2 1/2" 45° BEND LT.
D-6	STA. 1+29.72 DOMESTIC WATER INSTALL: 1-2 1/2" 45° BEND RT.
D-9	STA. 1+46.05 DOMESTIC WATER -STA. 1+31.73 WASTE WATER SYSTEM UTILITY CROSSING: MIN. 2 FT. VERTICAL CLEARANCE
D-10	STA. 3+17.40 DOMESTIC WATER INSTALL: 1-2 1/2" 45° BEND LT.
D-11	STA. 3+20.48 DOMESTIC WATER INSTALL: 1-2 1/2" 45° BEND LT.
D-12	STA. 3+26.65 DOMESTIC WATER -STA. 2+48.38 STORM DRAIN "A1" UTILITY CROSSING: MIN. 2 FT. VERTICAL CLEARANCE
D-13	STA. 4+03.93 DOMESTIC WATER INSTALL: 1-2 1/2" 45° BEND LT.
D-14	STA. 4+07.00 DOMESTIC WATER INSTALL: 1-2 1/2" 45° BEND LT.
D-15	STA. 4+11.16 DOMESTIC WATER CONNECT TO WATER LINE FROM BUILDING REFER TO ARCH./M.E.P. DWGS FOR CONTINUATION

NO.	CALLOUT
WW-1	STA. 1+00.00 WASTEWATER EX. MANHOLE (#248550) INSTALL: 1-6" SERVICE CONNECTION (SEE NOTE 13) FL(OUT)=+622.27 (EX. 8" SDR-26) FL(IN)=624.00 (6" PVC SDR-26 (PRIVATE))
WW-2	STA. 1+18.65 WASTEWATER INSTALL: 1-6" W.W. DOUBLE CLEANOUT SEE DETAIL 5 / C6.3 FL(IN)=624.19 (6" PVC SDR-26 (PRIVATE)) FL(OUT)=624.19 (6" PVC SDR-26 (PRIVATE))
WW-3	STA. 1+21.65 WASTEWATER INSTALL: 1-6" 22.5° VERT. BEND FL(IN)=624.22 (6" PVC SDR-26 (PRIVATE)) FL(OUT)=624.22 (6" PVC SDR-26 (PRIVATE))
WW-4	STA. 1+25.38 WASTEWATER -STA. 1+46.05 DOMESTIC WATER UTILITY CROSSING: MIN. 2 FT. VERTICAL CLEARANCE FL(IN)=625.69 (6" PVC SDR-26 (PRIVATE)) FL(OUT)=625.69 (6" PVC SDR-26 (PRIVATE))
WW-5	STA. 1+33.65 WASTEWATER INSTALL: 1-6" 22.5° VERT. BEND FL(IN)=628.96 (6" PVC SDR-26 (PRIVATE)) FL(OUT)=628.96 (6" PVC SDR-26 (PRIVATE))
WW-6	STA. 1+68.08 WASTEWATER -STA. 4+43.57 STORM DRAIN "A" UTILITY CROSSING: MIN. 2 FT. VERTICAL CLEARANCE FL(IN)=629.37 (6" PVC SDR-26 (PRIVATE)) FL(OUT)=629.37 (6" PVC SDR-26 (PRIVATE))
WW-7	STA. 2+38.80 WASTEWATER INSTALL WYE FL(IN)=630.22 (6" PVC SDR-26 (PRIVATE)) FL(OUT)=630.22 (6" PVC SDR-26 (PRIVATE))
WW-8	STA. 2+40.22 WASTEWATER INSTALL: 1-6" W.W. SINGLE CLEANOUT SEE DETAIL 5 / C6.3 FL(OUT)=630.36 (6" PVC SDR-26 (PRIVATE))
WW-9	STA. 2+55.14 WASTEWATER INSTALL WYE FL(IN)=630.41 (6" PVC SDR-26 (PRIVATE)) FL(OUT)=630.41 (6" PVC SDR-26 (PRIVATE))
WW-10	STA. 2+56.14 WASTEWATER INSTALL: 1-6" W.W. DOUBLE CLEANOUT SEE DETAIL 5 / C6.3 CONNECT TO WASTEWATER LINE FROM BUILDING REFER TO ARCH./M.E.P. DWGS FOR CONTINUATION FL(OUT)=633.00 (6" PVC SDR-26 (PRIVATE))
WW-11	STA. 2+94.14 WASTEWATER INSTALL WYE FL(IN)=630.88 (6" PVC SDR-26 (PRIVATE)) FL(OUT)=630.88 (6" PVC SDR-26 (PRIVATE))
WW-12	STA. 2+95.14 WASTEWATER INSTALL: 1-6" W.W. DOUBLE CLEANOUT SEE DETAIL 5 / C6.3 CONNECT TO WASTEWATER LINE FROM BUILDING REFER TO ARCH./M.E.P. DWGS FOR CONTINUATION FL(OUT)=633.00 (6" PVC SDR-26 (PRIVATE))
WW-13	STA. 3+02.08 WASTEWATER INSTALL WYE FL(IN)=630.97 (6" PVC SDR-26 (PRIVATE)) FL(OUT)=630.97 (6" PVC SDR-26 (PRIVATE))
WW-14	STA. 3+03.08 WASTEWATER INSTALL: 1-6" W.W. DOUBLE CLEANOUT SEE DETAIL 5 / C6.3 CONNECT TO WASTEWATER LINE FROM BUILDING REFER TO ARCH./M.E.P. DWGS FOR CONTINUATION FL(OUT)=633.00 (6" PVC SDR-26 (PRIVATE))
WW-15	STA. 3+03.08 WASTEWATER INSTALL 6" W.W. SINGLE CLEANOUT SEE DETAIL 5 / C6.3 FL(OUT)=630.99 (6" PVC SDR-26 (PRIVATE))

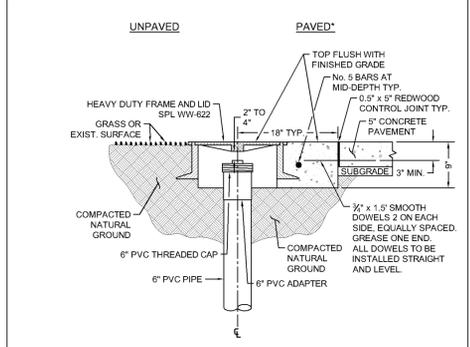
LEGEND	
---	PROJECT PROPERTY LINE
---	EXISTING R.O.W./PROPERTY LINE
---	EXISTING EASEMENT LINE
---	EXISTING PAVEMENT
---	PROPOSED CURB & GUTTER
493	EX. CONTOURS
W	EX. WATER LINE
→	FLOW ARROW
WW	EX. WASTEWATER
SD	EX. STORM DRAIN
⊗	EX. WATER VALVE
⊗	EX. FIRE HYDRANT
⊗	EX. WATER METER
⊗	EX. WASTEWATER MANHOLE
⊗	EX. STORM DRAIN MANHOLE
⊗	EX. STORM DRAIN INLET WITH LATERAL
⊗	EX. SIGN
⊗	EX. POWER POLE
⊗	EX. GUY WIRE
⊗	EX. LIGHT POLE
⊗	EX. ELECTRIC MANHOLE
⊗	EX. ELECTRIC BOX
⊗	EX. ELECTRIC MARKER
⊗	EX. SPRINKLER
⊗	PROP. CONTOURS
W	PROP. WATER LINE
F	PROP. FIRE LINE
WW	PROP. WASTEWATER
SD	PROP. STORM DRAIN
⊗	PROP. WATER VALVE
⊗	PROP. FIRE HYDRANT
⊗	PROP. WATER METER
⊗	PROP. WASTEWATER M.H.
⊗	PROP. STORM DRAIN M.H.
⊗	PROP. STORM DRAIN INLET WITH LATERAL
⊗	EX. TELEPHONE MANHOLE
⊗	EX. TELEPHONE MARKER
⊗	EX. FIBER OPTICS MARKER
⊗	EX. TELEPHONE BOX
⊗	EX. TRAFFIC SIGNAL POLE
⊗	EX. TRAFFIC SIGNAL BOX
⊗	EX. GAS VALVE
⊗	EX. GAS METER
⊗	EX. GAS MARKER
⊗	EX. MAIL BOX
⊗	EX. PARKING METER
⊗	EX. CHAINLINK FENCE
⊗	EX. WIRE FENCE
⊗	EX. WOOD FENCE
⊗	EX. GUARD RAIL
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⊗	EX. OVERHEAD ELECT



NOTE: FOR SINGLE SERVICES, BOTH WATER AND WASTEWATER SERVICE SHALL BE PERPENDICULAR TO THE MAIN, FROM MAIN TO THE R.O.W. OR EASEMENT LINE.

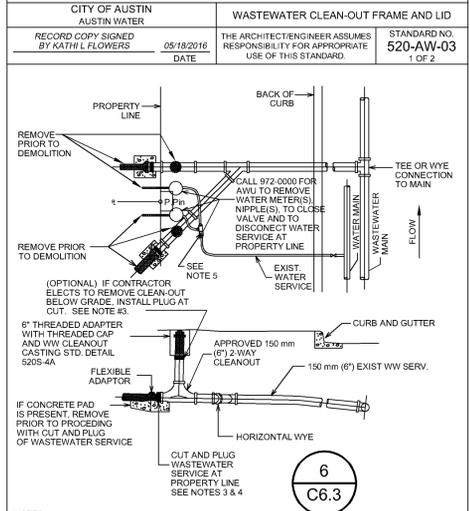


CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & WASTEWATER SERVICE CONNECTION	STANDARD NO. 520-AW-01 2 OF 4
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



*CLEAN-OUTS MAY NOT BE PLACED IN PAVED AREAS - I.E. SIDEWALKS, DRIVEWAYS, OR PARKING LOTS, AND MUST BE LOCATED A MINIMUM OF 6\"/>

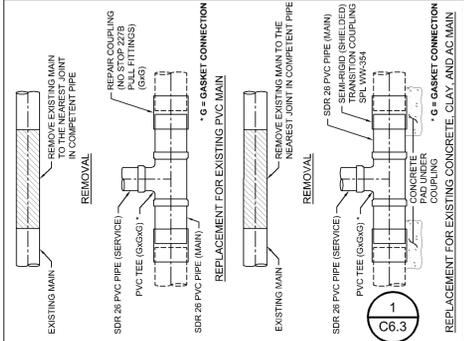
CITY OF AUSTIN AUSTIN WATER	WASTEWATER CLEAN-OUT FRAME AND LID	STANDARD NO. 520-AW-03 1 OF 2
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



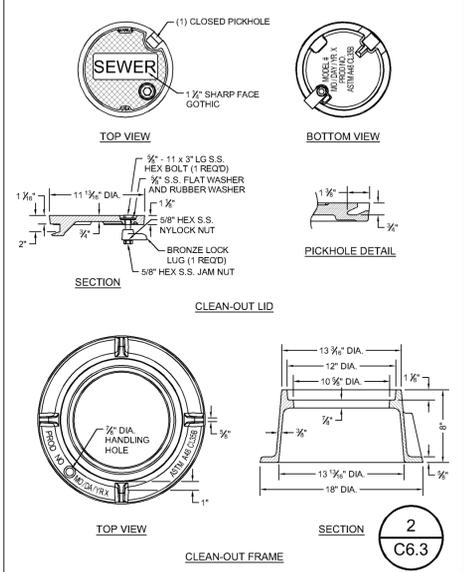
NOTES:
1. CONTRACTOR SHALL PROTECT EXISTING CLEAN-OUT FROM DAMAGE DURING CONSTRUCTION AND SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT IF DAMAGED. CONTRACTOR HAS THE OPTION TO REMOVE CLEAN-OUT AND REPLACE WHEN SERVICE IS RE-ESTABLISHED.
2. DISCONNECTS MUST BE COMPLETE AND INSPECTED PRIOR TO COMMENCEMENT OF DEMOLITION.
3. PLUG SHALL BE LISTED ON SPL WW-227C. PVC PIPE MAY USE PVC PUSH ON CAP.
4. CONTRACTOR SHALL CALL 972-0000 TO REQUEST INSPECTOR CUT & PLUG THREE (3) BUSINESS DAYS PRIOR TO THE TIME THAT THE INSPECTION WILL BE NEEDED.
5. BALL VALVE SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT BE LOCATED MORE THAN 24\"/>

CITY OF AUSTIN AUSTIN WATER UTILITY	TEMPORARY CUT AND PLUG OF W/W SERVICE LINES FOR DEMOLITION PERMIT	STANDARD NO. 520S-2
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	06/01/10 ADOPTED

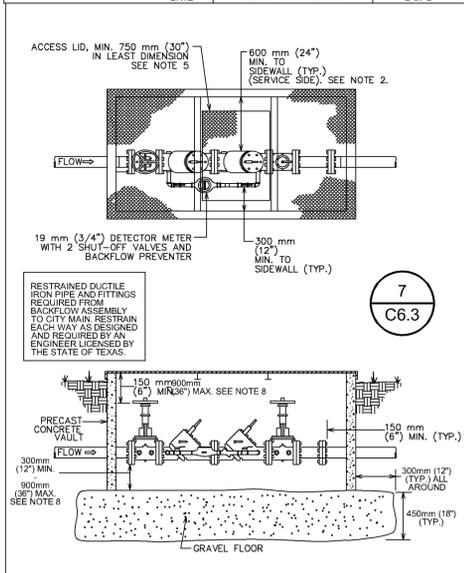
NOTES:
1. DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 6\"/>



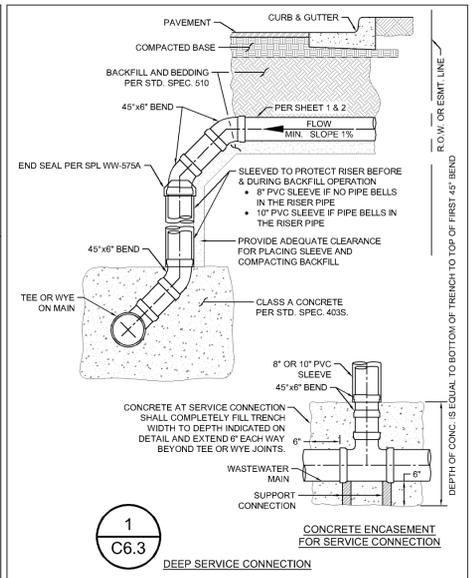
CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & WASTEWATER SERVICE CONNECTION	STANDARD NO. 520-AW-01 2 OF 4
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



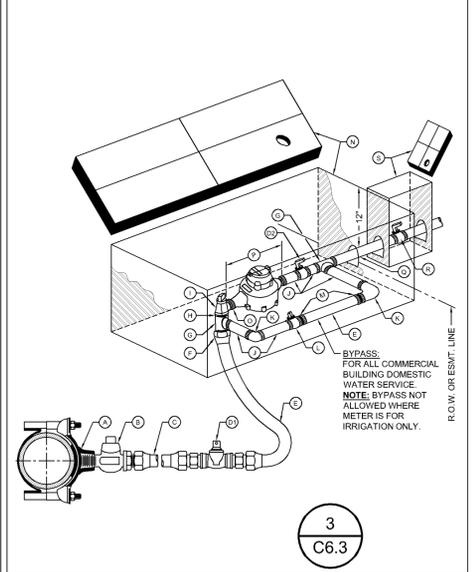
CITY OF AUSTIN AUSTIN WATER	WASTEWATER CLEAN-OUT FRAME AND LID	STANDARD NO. 520-AW-03 2 OF 2
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



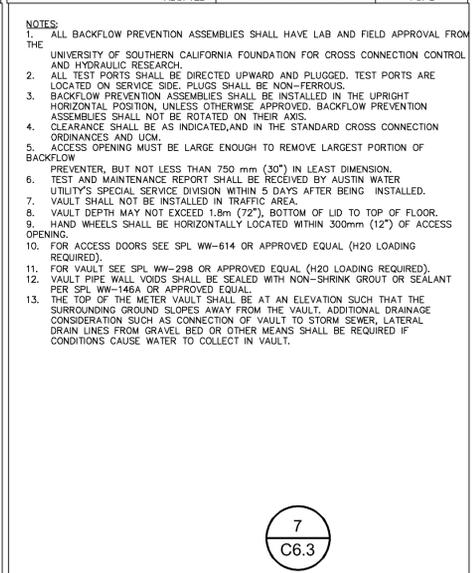
CITY OF AUSTIN WATER AND WASTEWATER UTILITY	STANDARD FIRE LINE INSTALLATION WITHOUT MASTER METER	STANDARD NO. 520S-19C 1 OF 2
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	08/31/2011 ADOPTED



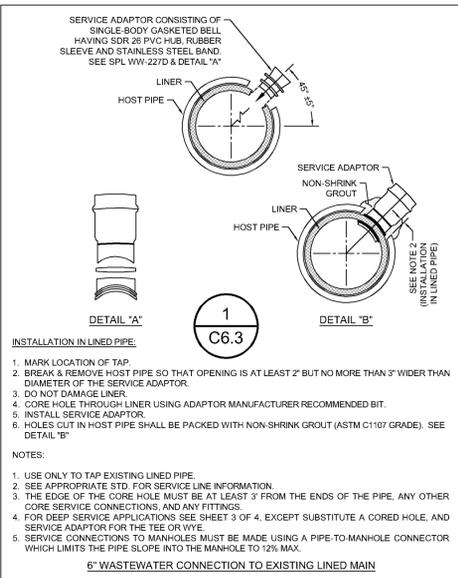
CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & WASTEWATER SERVICE CONNECTION	STANDARD NO. 520-AW-01 3 OF 4
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



CITY OF AUSTIN AUSTIN WATER	1 1/2\"/>	STANDARD NO. 520-AW-04 1 OF 2
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



CITY OF AUSTIN WATER AND WASTEWATER UTILITY	STANDARD FIRE LINE INSTALLATION WITHOUT MASTER METER	STANDARD NO. 520S-19C 2 OF 2
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	08/31/2011 ADOPTED



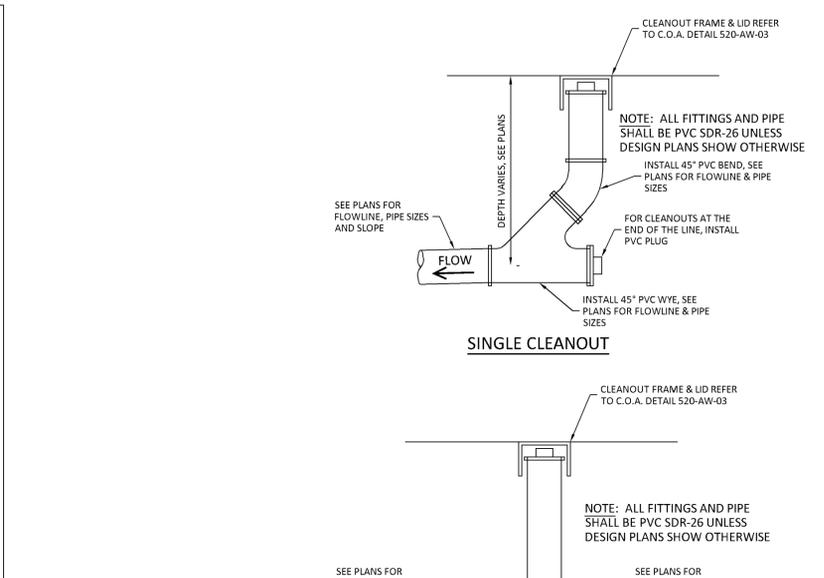
CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & WASTEWATER SERVICE CONNECTION	STANDARD NO. 520-AW-01 4 OF 4
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



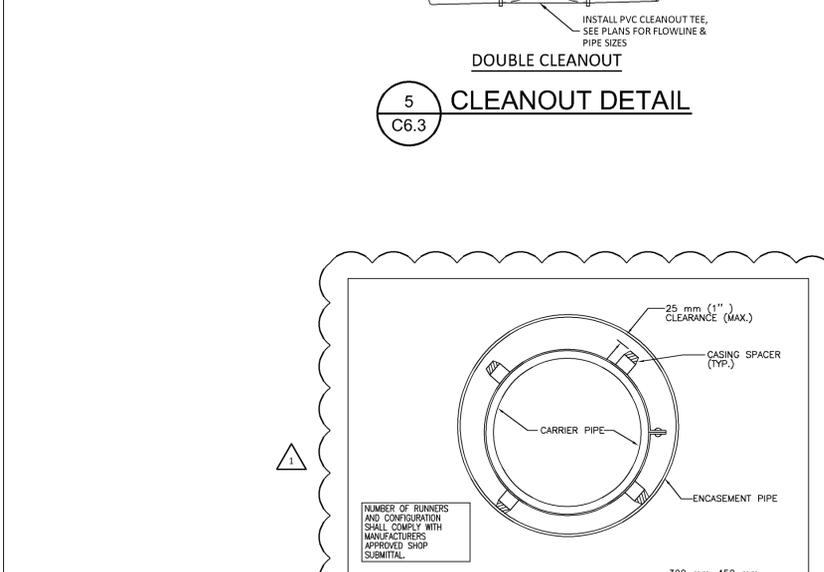
CITY OF AUSTIN AUSTIN WATER	1 1/2\"/>	STANDARD NO. 520-AW-04 2 OF 2
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



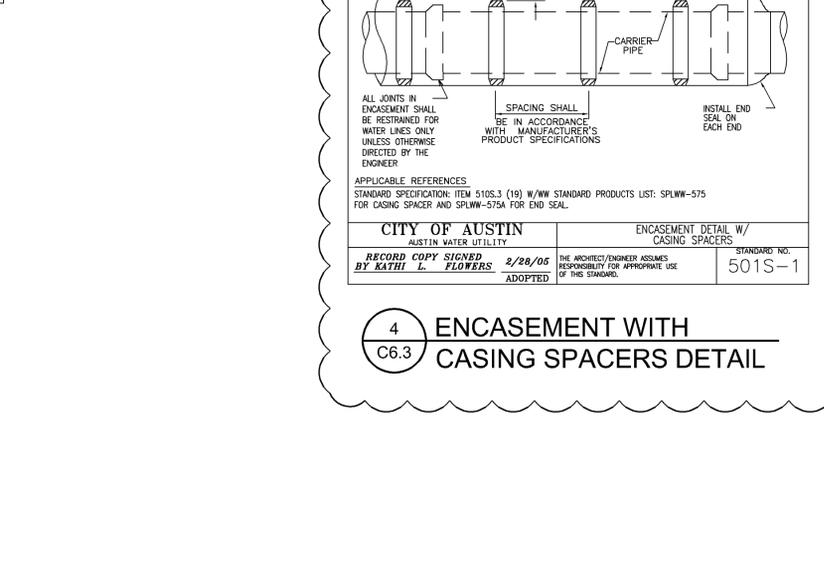
CITY OF AUSTIN WATER AND WASTEWATER UTILITY	1 1/2\"/>	STANDARD NO. 520-AW-04 2 OF 2
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & WASTEWATER SERVICE CONNECTION	STANDARD NO. 520-AW-01 4 OF 4
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



CITY OF AUSTIN AUSTIN WATER	1 1/2\"/>	STANDARD NO. 520-AW-04 2 OF 2
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



CITY OF AUSTIN AUSTIN WATER UTILITY	ENCASUREMENT DETAIL W/ CASING SPACERS	STANDARD NO. 501S-1
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	2/28/05 ADOPTED



CPE
CHAN & PARTNERS
CONSULTING CIVIL ENGINEERS

4919 AMES CASEY STREET #600
AUSTIN, TEXAS 78745
672-460-8155 (PH) • 512-480-8811 (FAX)
E-mail: info@chanpartners.com
TEXAS REGISTRATION NO. F-12013

**AUSTIN ONION CREEK
FIRE & EMS STATION**

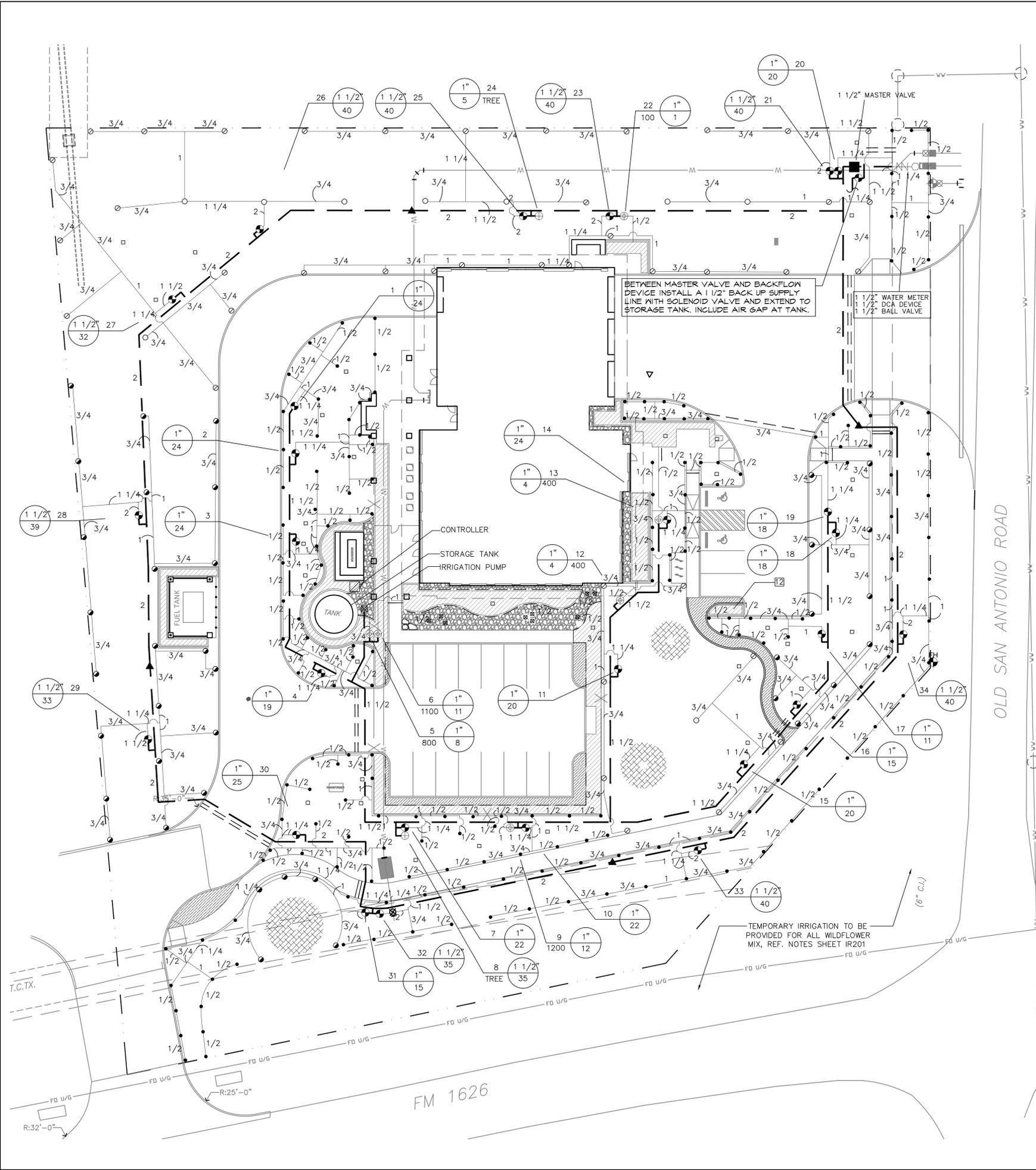
11112 OLD SAN ANTONIO ROAD
AUSTIN, TEXAS 78748



REVISIONS	DATE	BY	CD	JRK	214106.00
Δ	10/21/2016				

DATE: 10/20/2016
DRAWN BY: CD
CHECKED BY: JRK
PROJECT NO.: 214106.00

WATER & WASTEWATER DETAILS
SHEET 2 OF 2
C6.3



LEGEND

- HUNTER PROS-06-NSI-PRS30 SERIES POP UP SPRAY HEADS WITH HUNTER MSBN-50H STREAM BUBBLER NOZZLES. (TWO PER TREE). SEE INSTALLATION NOTE # 13 FOR LATERAL PIPE.
- HUNTER PROS-04-PRS30 POP UP SPRAY HEAD WITH PRO SPRAY NOZZLE AS NOTED BELOW
- ⊗ RAINBIRD XERI-BUG SINGLE / MULTI OUTLET (XB-T-10-PC / XBT-10-6) POINT SOURCE DRIP EMITTERS. SEE INSTALLATION NOTE #16 REGARDING LAYOUT AND CONNECTION.
- ▨ NETAFIM TECHLINE TLHCVXR5-12 SERIES DRIP TUBE IN SHRUB BED INSTALLED AT 2" DEPTH SEE INSTALLATION NOTE #16 REGARDING DRIP TUBE LAYOUT IN SHRUB BEDS.
- HUNTER PGP ULTRA, ADJ. ARC 4" POP UP ROTARY HEAD, PART CIRCLE, #2.5 BLUE NOZZLE
- HUNTER PGP ULTRA, ADJ. ARC 4" POP UP ROTARY HEAD, PART CIRCLE, #4.0 BLUE NOZZLE
- HUNTER PGP ULTRA, 4" POP UP ROTARY HEAD, FULL CIRCLE, #8.0 BLUE NOZZLE
- ⊕ HUNTER ICV SERIES ELECTRIC REMOTE CONTROL VALVE
- ⊕ HUNTER ICV SERIES ELECTRIC REMOTE CONTROL, "TREE BUBBLER ZONE" VALVE SEE INSTALLATION NOTE #13 REGARDING TREE BUBBLER LATERAL PIPE
- ⊕ NETAFIM LVCZ SERIES DRIP VALVE ASSEMBLY WITH 42 PSI REGULATOR AND 140 MESH FILTER USE MODEL LVCZS8010075-LF FOR DRIP ZONES WITH .25 TO 4 GPM FLOW RATE USE MODEL LVCZS8010075-HF FOR DRIP ZONES WITH 5 TO 12 GPM FLOW RATE
- ▲ HUNTER HQ-33-LRC-R QUICK COUPLING VALVE WITH PURPLE COVER AND 3/4" PVC BALL VALVE
- ⊕ LASCO "V101N" SERIES SCH. 80 PVC TRUE UNION BALL VALVE, MAINLINE SIZE
- ⊕ WILKINS 350 SERIES D.C.A. INSTALLED PER CITY CODE, WITH SAME SIZE WILKINS 850 SERIES BRONZE BALL VALVE AND WILKINS YB SERIES BRONZE 20 MESH WYE FILTER.
- 1 1/2" IRRIGATION WATER METER AND TAP
- ⊕ HUNTER IC-3600M SERIES AUTOMATIC CONTROLLER WITH WIRELESS SOLAR SYNC ET SENSOR LOCATE SENSOR AS FIELD DIRECTED BY THE LANDSCAPE ARCHITECT
- ⊕ FLOODED SUCTION VARIABLE SPEED BOOSTER PUMP PROVIDING UP TO 26 GPM AT 55 PSI. PUMP, PRESSURE START, HEATED ENCLOSURE, AND LEVEL SENSOR CONTROLS SHALL ALL AS PROVIDED BY SITE ONE GREEN TECH COMPANY. CONTACT MR. BILL ROSSER 214.283.2851
- CLASS 200 PVC MAINLINE PIPE, SIZED TO ALLOW A MAXIMUM FLOW VELOCITY OF 5 F.P.S.
- CLASS 200 (EXCEPT 1/2 INCH #315) PVC LATERAL PIPE, SIZED TO ALLOW 5 F.P.S. VELOCITY
- ONE 4" CLASS 200 PVC SLEEVE PIPES
- ONE 4" AND ONE 2" CLASS 200 SLEEVE PIPES

L.I.C. SHALL SELECT PRO-SPRAY SPRAY NOZZLES FOR "HEAD-TO-HEAD" COVERAGE, ADJUSTED FOR NO OVERSPRAY ONTO WALLS AND WALKS. NO OVERSPRAY INTO STREETS IS PERMITTED.

ZONES #1 THROUGH #18 SHALL INCLUDE PURPLE PIPE AND NON-POTABLE HEAD TOPS AND VALVE BOXES.

WATER SOURCE COORDINATION

ZONES 1 THROUGH 18 SHALL BE SERVED BY CAPTURED RAINWATER AS SHOWN ON THE PLANS. ZONES 19 THROUGH 33 ARE TO BE SERVED BY METERED WATER ONLY. AN 18,000 GALLON RAINWATER STORAGE TANK SHALL PROVIDE WATER THROUGH A FLOODED SUCTION BOOSTER PUMP.

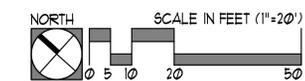
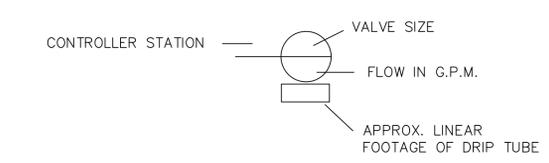
LEVEL SENSOR CONTROLS SHALL ACTIVATE A 1" SOLENOID VALVE CONNECTED TO THE IRRIGATION SYSTEM WATER METER TO MAINTAIN A MINIMUM WATER LEVEL IN THE TANK. A 1 1/2" FILL LINE FROM THE METER TO THE TANK SHALL EMPLOY AN "AIR GAP" AT THE TOP OF THE TANK.

RAINWATER SYSTEM COMPONENTS TO BE PROVIDED BY THE IRRIGATION CONTRACTOR INCLUDE:

- FLOODED SUCTION BOOSTER PUMP AND LEVEL SENSOR CONTROLS.
- 1 1/2" "BACK-UP" LINE TO THE TANK, WITH 1" SOLENOID VALVE.
- HEATED ENCLOSURE.

RAINWATER SYSTEM COMPONENTS TO BE PROVIDED BY THE GENERAL CONTRACTOR INCLUDE:

- ELECTRIC POWER TO THE PUMP.
- 18,500 GALLON ABOVE-GROUND STORAGE TANK WITH PRE-FILTER.
- INLET PIPES FROM THE ROOF GUTTER TO THE TANK.
- OVERFLOW PIPE FROM THE TANK TO STORM DRAIN.



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IRRIGATION IN TEXAS IS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) (MC-178) P.O. BOX 13087 T.C.E.Q.'S WEB SITE IS: WWW.TCEQ.STATE.TX.US

FILE NUMBER: _____ SHEET _____ OF _____

CASE MANAGER: _____ EXPIRATION DATE: _____

APPROVED ADMINISTRATIVELY ON: _____ APPLICATION DATE: _____

APPROVED BY PLANNING COMMISSION ON: _____

APPROVED BY CITY COUNCIL ON: _____

Under Section _____ of Chapter _____ of the Austin City Code.

Signing For Director, Planning and Development Review Department

DATE OF RELEASE: _____ ZONING: _____

Rev. 1 _____ Correction 1 _____

Rev. 2 _____ Correction 2 _____

Rev. 3 _____ Correction 3 _____

RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA. INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY ENGINEERS.

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9511 Modesto Ave. NE
Albuquerque, New Mexico 87122
Ph: 505-433-3426

04 / 23 / 2016

IRRIGATION PLAN
ISSUE FOR BIDDING

ONION CREEK FIRE STATION
11112 OLD SAN ANTONIO RD.
AUSTIN, TX

REVISIONS	DATE	DESCRIPTION

SCALE: 1"=20'-0"

DRAWN BY: ZW

CHECKED BY: CD

APP. BY: JP

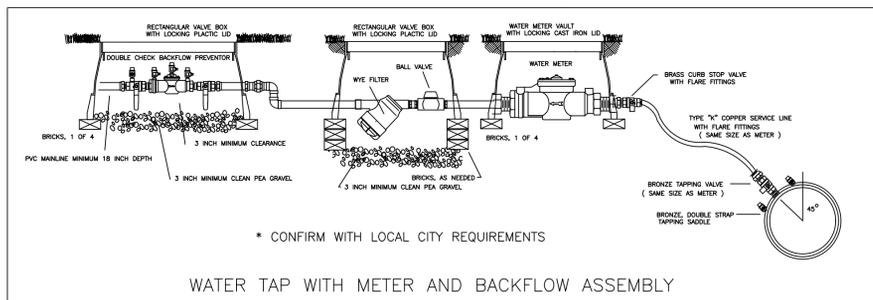
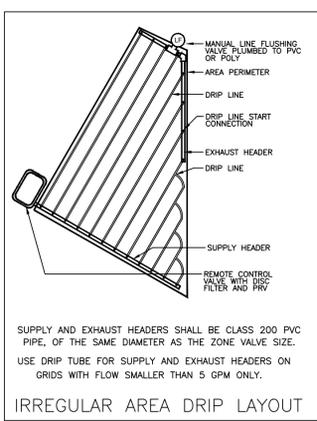
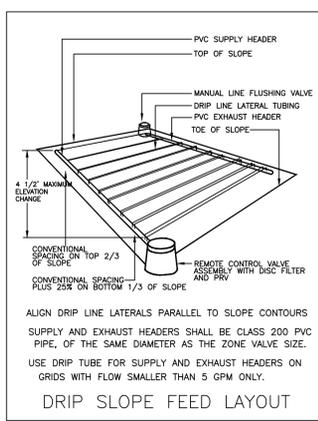
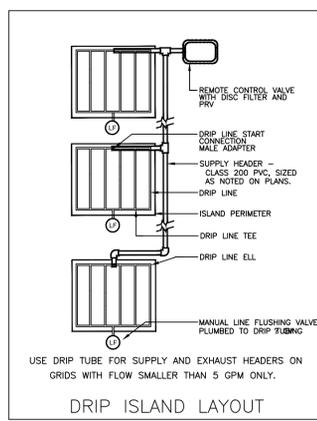
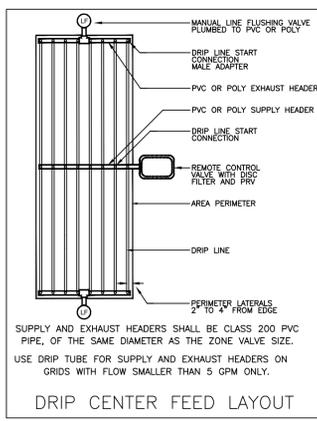
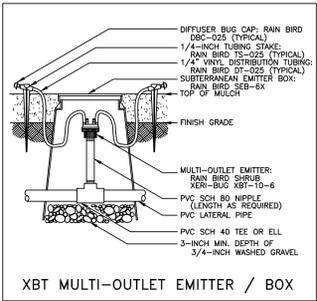
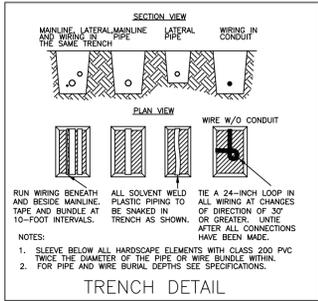
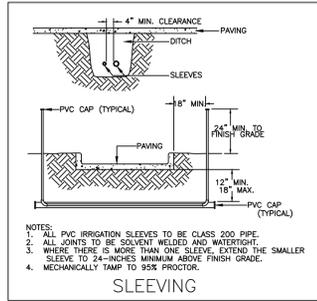
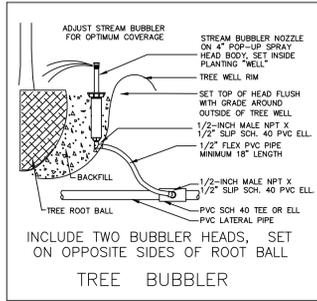
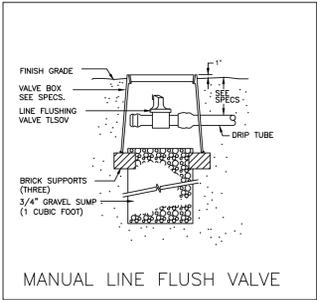
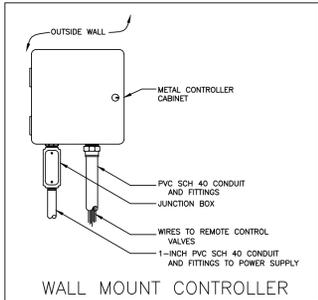
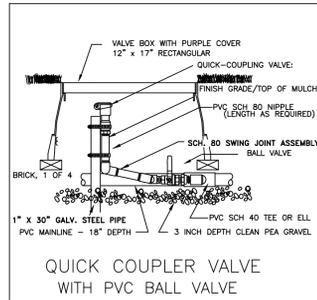
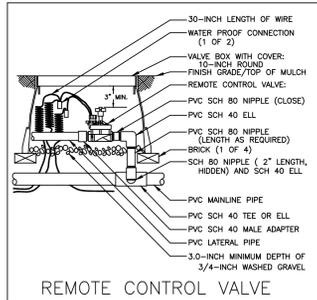
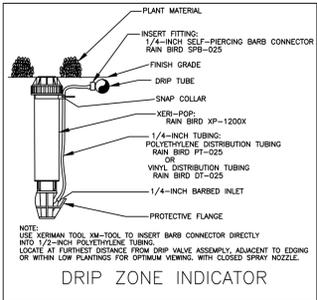
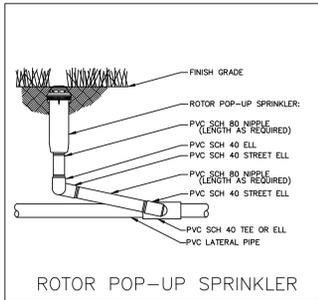
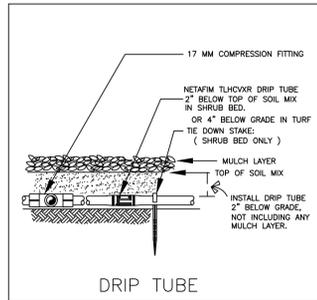
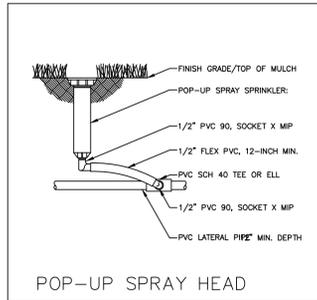
PROJECT NO. 342-15-01/T

DATE: 09-23-2016

SHEET: **IR200**

OF

INSTALLATION NOTES



- COORDINATE IRRIGATION INSTALLATION WITH PLANTING PLAN AND SITE CONDITIONS TO PROVIDE COMPLETE COVERAGE WITH MINIMUM OVERSPRAY. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER. THE IRRIGATION CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE MANDATED IRRIGATION ORDINANCES AND CODES, AND WILL SECURE ALL REQUIRED PERMITS. L.I.C. SHALL PAY ANY ASSOCIATED FEES UNLESS OTHERWISE NOTED. ALL LOCAL CODES SHALL PREVAIL OVER ANY DISCREPANCIES HEREIN AND SHALL BE ADDRESSED BEFORE ANY CONSTRUCTION BEGINS.
- NO MACHINE TRENCHING SHALL BE PERMITTED WITHIN THE ROOT ZONE OF EXISTING TREES. HAND-DIG ONLY, WITHIN THE ROOT ZONES OF EXISTING TREES. NO ROOTS OVER 1" DIAMETER SHALL BE CUT. STAKE ALL PROPOSED TRENCH ROUTES NEAR EXISTING TREES FOR APPROVAL BY THE LANDSCAPE ARCHITECT BEFORE DIGGING BEGINS.
- CONFIRM MINIMUM STATIC WATER PRESSURE OF 60 PSI AT THE HIGHEST ELEVATION OF THE SYSTEM LIMITS, AND MAXIMUM STATIC WATER PRESSURE OF 90 P.S.I. AT THE LOWEST ELEVATION OF THE SYSTEM LIMITS AT LEAST 7 DAYS BEFORE BEGINNING WORK. IF STATIC WATER PRESSURE IS OUTSIDE THE RANGE STATED ABOVE, DO NOT PROCEED UNTIL DIRECTED BY THE LANDSCAPE ARCHITECT.
- LATERAL PIPE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 12 INCHES. MAINLINE PIPE AND WIRES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 18 INCHES. NO MACHINE TRENCHING SHALL BE PERMITTED WITHIN EXISTING TREE ROOT ZONES. WHEN HAND - TRENCHING WITHIN EXISTING TREE ROOT ZONES, NO ROOTS LARGER THAN 1" DIAMETER SHALL BE CUT.
- UNSLEEVED PIPES MAY BE SHOWN UNDER PAVEMENT FOR GRAPHIC CLARITY ONLY. INSTALL THESE PIPES IN ADJACENT LANDSCAPED AREAS.
- ELECTRIC POWER SHALL BE PROVIDED WITHIN FIVE FEET OF CONTROLLER AND PUMP LOCATIONS BY GENERAL CONTRACTOR. L.I.C. TO PROVIDE FINAL HARD-WIRE CONNECTIONS.
- 24 VOLT VALVE WIRE SHALL BE A MINIMUM OF #14 GAUGE, U.F. APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR "IRRIGATION WIRE". WIRE SPLICES SHALL INCLUDE DBY CONNECTORS AS MANUFACTURED BY 3M COMPANY. ALL FIELD SPLICES SHALL BE LOCATED IN A ROUND VALVE BOX OF SUFFICIENT SIZE TO ALLOW INSPECTION.
- VALVE BOXES SHALL BE INSTALLED FLUSH WITH GRADE, SUPPORTED BY BRICKS IF NEEDED, WITH 3 INCHES OF CLEAN PEA GRAVEL LOCATED BELOW THE VALVE. USE 12" x 17" RECTANGULAR VALVE BOXES WITH PURPLE LID FOR QUICK COUPLING VALVES, AND 10" ROUND BOXES FOR ELECTRIC VALVES UNLESS NOTED OTHERWISE. D.C.A., WITH UPSTREAM BALL VALVE AND WYE FILTER SHALL BE BOXED AND LOCATED ACCORDING TO LOCAL CODE.
- USE RIGID SCH. 80 PVC SWING JOINT ASSEMBLIES TO CONNECT ALL ROTARY HEADS AND QUICK COUPLERS.
- ALL SPRAY HEADS SHALL BE CONNECTED WITH A 12" MINIMUM LENGTH OF 1/2" FLEX PVC. THE FLEX PVC SHALL BE SOLVENT WELDED TO SCHEDULE 40 PVC FITTINGS WITH WELD-ON #795 SOLVENT AND #P-70 PRIMER.
- PROVIDE ONE QUICK COUPLER KEY WITH SWIVEL HOSE ELL FOR EVERY SIX Q.C. VALVES. (MINIMUM ONE SET).
- CONTRACTOR IS TO CONTACT APPROPRIATE AUTHORITIES AND LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
- LATERAL PIPE TO TREE STREAM BUBBLER HEADS IS OMITTED FOR GRAPHIC CLARITY. CONNECT TREE BUBBLER HEADS TO VALVES AS SHOWN WITH CLASS 200 PVC PIPE SIZED TO ALLOW A MAXIMUM FLOW VELOCITY OF 5 FEET PER SECOND
- THE PROPOSED LOCATIONS OF ALL ABOVE- GROUND EQUIPMENT INCLUDING BACKFLOW PREVENTORS, CONTROLLERS AND WEATHER SENSORS SHALL BE STAKED BY THE CONTRACTOR FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE BEFORE THESE ITEMS ARE INSTALLED.
- ALL HEADS SHALL BE INSTALLED A MINIMUM OF 4" FROM PAVEMENT EDGES. (6" OR GREATER WHERE REQUIRED BY LOCAL CODE) FINAL HEAD ADJUSTMENTS BY THE CONTRACTOR SHALL INCLUDE THE ADDITION OF CHECK VALVES WHEN NEEDED TO PREVENT EXCESSIVE LOW HEAD DRAINAGE. THE CONTRACTOR SHALL BUDGET FOR, AND INSTALL CHECK VALVES FOR UP TO 10 % OF THE TOTAL NUMBER OF HEADS WHEN NEEDED, WITH NO ADDITIONAL COST TO THE OWNER.
- WHERE SHOWN ON THE PLANS, MASS SHRUB / GROUNDCOVER BEDS SHALL INCLUDE HUNTER PLD SERIES DRIP TUBE WITH PRE-INSTALLED .6 GPH DRIP EMITTERS EVERY 12" (PLD-06-12), INSTALLED IN CENTER-FED GRIDS WITH ROWS SPACED 18" APART. INDIVIDUAL DRIP TUBE RUNS SHALL NOT EXCEED 200 L.F. SEE DRIP GRID DETAILS FOR HEADER AND EXHAUST PIPE SIZES. WHERE REQUIRED, PVC LATERAL "TRUNK" LINES SHALL BE INSTALLED 10" DEEP. DRIP TUBE SHALL BE SET 2" BELOW FINISHED SOIL GRADE (NOT INCLUDING MULCH LAYER), SECURED WITH 6" WIRE STAPLES OR STAKES EVERY 18". MANUAL FLUSH VALVES (1/2" PVC BALL VALVE) SHALL BE INSTALLED AT THE FARTHEST POINTS FROM THE ZONE VALVE. USE 17 MM BARBED FITTINGS FOR DRIP LINE CONNECTIONS, PRESSURE TESTING ALL CONNECTIONS BEFORE BACKFILLING. ALL DRIP TUBING SHALL BE INSTALLED PERPENDICULAR TO SLOPE FACE. EACH DRIP ZONE SHALL INCLUDE ONE "MAINTENANCE FLAG" WHICH SHALL CONSIST OF A 12" POP-UP SPRAY HEAD AND COMPLETELY CLOSED SPRAY NOZZLE. THE POP-UP HEAD SHALL BE CONNECTED TO THE DRIP ZONE PIPE, SET FLUSH WITH GRADE, AND LOCATED AT THE FARTHEST DISTANCE FROM THE DRIP VALVE ASSEMBLY. SPARSLEY SPACED, INDIVIDUAL SHRUB PLANTINGS MAY INCLUDE RAINBIRD #XBT-10 SINGLE-OUTLET EMITTERS OR RAINBIRD #XBT-10-6 MULTI-OUTLET EMITTERS INSTALLED AS DETAILED. PROVIDE MINIMUM TWO, 1 G.P.H. OUTLETS PER INDIVIDUAL SHRUB. SINGLE / MULTI-OUTLET EMITTERS MAY BE CONNECTED TO THE SAME DRIP ZONE VALVE WHICH SERVES ADJACENT DRIP TUBE GRIDS, UNLESS NOTED OTHERWISE.

17. TEMPORARY IRRIGATION TO BE PROVIDED FOR ALL PROPOSED SEED/TURF AREAS OUTSIDE OF THE PROPOSED IRRIGATION COVERAGE. CONTRACTOR TO VERIFY SQ. FOOTAGE OF ALL TEMPORARY IRRIGATION AREAS. PERMANENT SLEEVING TO BE PROVIDED UNDER PAVEMENT FOR ALL TEMPORARY IRRIGATION AS NOT TO CREATE A HAZARD. TEMPORARY IRRIGATION TO REMAIN OR BE PROVIDED FOR 1 YEAR OR UNTIL FULLY ESTABLISHED.

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IRRIGATION DETAILS
ISSUE FOR BIDDING

ONION CREEK FIRE STATION
11112 OLD SAN ANTONIO RD.
AUSTIN, TX

REVISIONS	DATE	DESCRIPTION

SCALE: none
DRAWN BY: ZW
CHECKED BY: CD
APP. BY: JP
PROJECT NO. 342-15-01T
DATE: 09-23-2018

James Pole
IRRIGATION CONSULTANTS
IRRIGATION DESIGN, CONSULTING, AND
LANDSCAPE WATER MANAGEMENT
TEXAS L.I.C. #658 PHONE: 440.249.2864
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DENTON, TEXAS 76201 james@jamespoleirrigation.com

NORTH SCALE IN FEET (1"=20')

FILE NUMBER: _____ SHEET _____ OF _____
EXPIRATION DATE: _____
CASE MANAGER: _____ APPLICATION DATE: _____
APPROVED ADMINISTRATIVELY ON: _____
APPROVED BY PLANNING COMMISSION ON: _____
APPROVED BY CITY COUNCIL ON: _____
Under Section _____ of Chapter _____ of the Austin City Code.

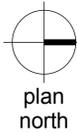
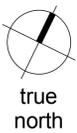
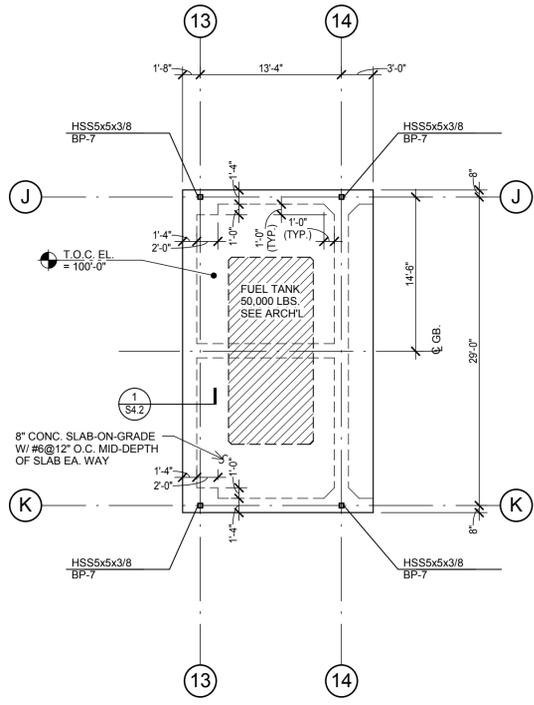
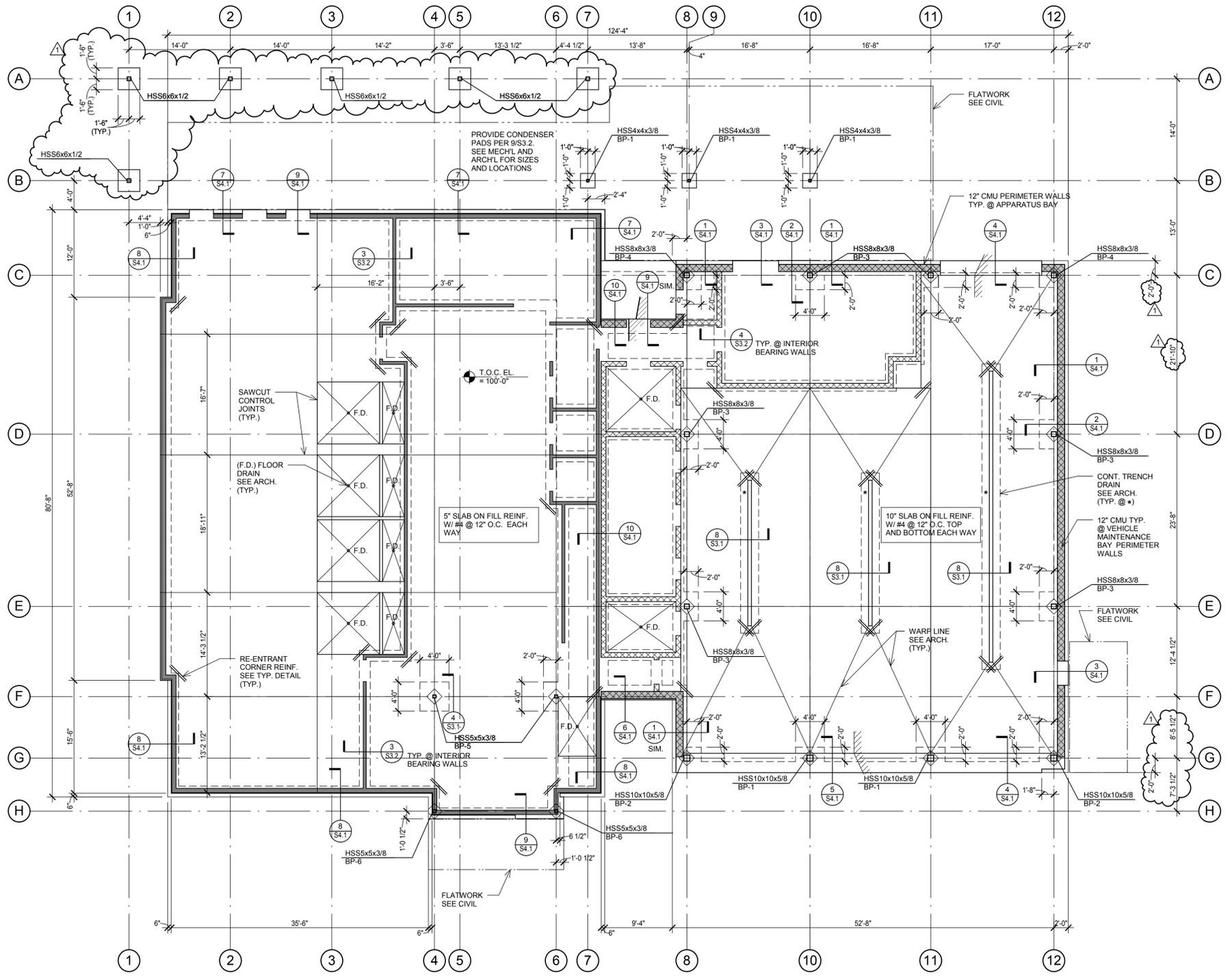
Signing For Director, Planning and Development Review Department

DATE OF RELEASE: _____ ZONING: _____
Rev. 1 _____ Correction 1 _____
Rev. 2 _____ Correction 2 _____
Rev. 3 _____ Correction 3 _____

WaterSense PARTNER
IRRIGATION IN TEXAS IS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) (MC-178) P.O. BOX 13087 T.C.E.Q.'S WEB SITE IS: WWW.TCEQ.STATE.TX.US

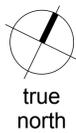
REVISIONS	1	10/25/16	ADDENDA 1
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DATE: 09/28/16
DRAWN BY: TG
CHECKED BY: ST
PROJECT NO.: 214106.00



2 FUEL TANK FOUNDATION PLAN
SCALE: 1/8" = 1'-0"
PLAN NOTES:

1. FINISH FLOOR ELEVATION = 100'-0", UNLESS NOTED OTHERWISE. ACTUAL ELEVATION 638.0' = 100'-0".
2. TOP OF CONCRETE ELEVATION (T.O.C. EL.) = FINISH FLOOR UNLESS RECESSED TO RECEIVE FLOORING MATERIALS.
3. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF FLOOR RECESSES, DROPS AND SLOPES NOT DIMENSIONED ON PLAN.
4. "BP-#" INDICATES BASEPLATE TYPES. SEE S5.1 FOR BASEPLATE TYPES.



1 FOUNDATION PLAN
SCALE: 1/8" = 1'-0"
PLAN NOTES:

1. FINISH FLOOR ELEVATION = 100'-0", UNLESS NOTED OTHERWISE. ACTUAL ELEVATION 638.0' = 100'-0".
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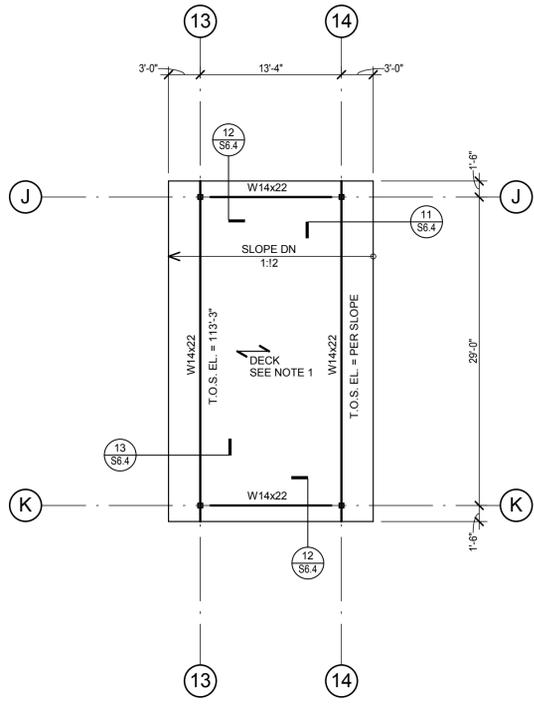
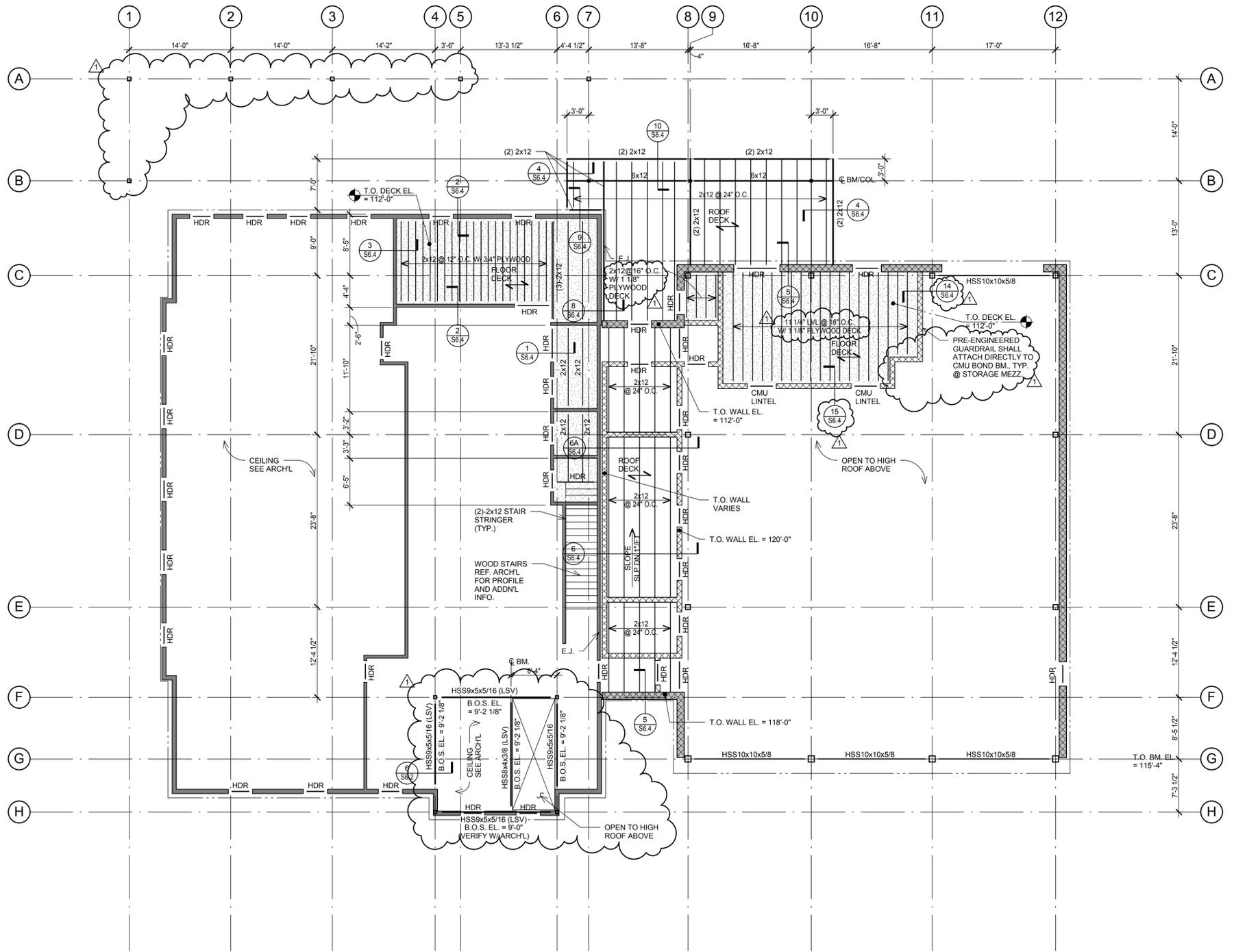
SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
	STEEL COLUMN
	DROP IN SLAB OR DECK
	DROP AND SLOPE IN SLAB OR DECK
	SLOPE IN SLAB OR DECK
	8" MASONRY WALL
	12" MASONRY WALL
	LOAD-BEARING WALL



REVISIONS	DATE	DESCRIPTION
1	10/25/16	ADDENDA 1

DATE: 09/28/16
 DRAWN BY: TG
 CHECKED BY: ST
 PROJECT NO.: 214106.00

S2.2



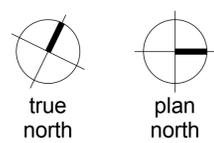
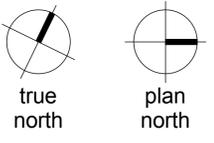
2 FUEL STORAGE CANOPY FRAMING PLAN
 SCALE: 1/8" = 1'-0"
 PLAN NOTES:

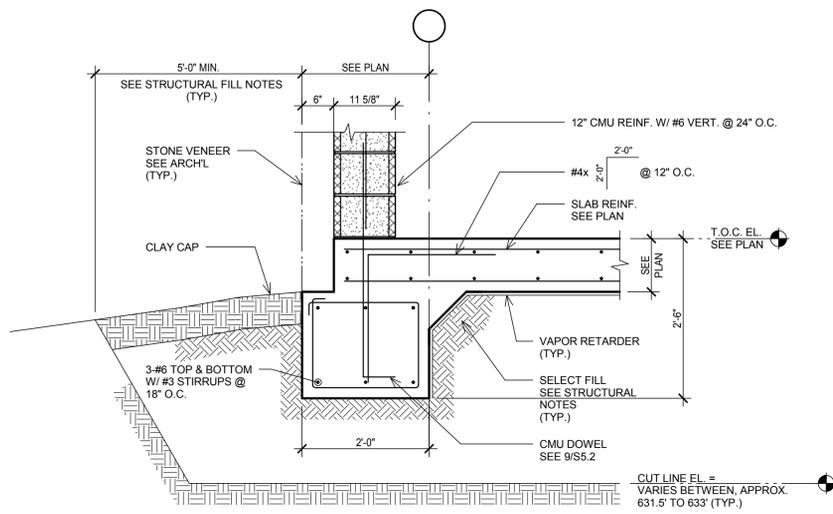
- ROOF DECK SHALL BE TORIS 4, 20 GA. MANUFACTURED BY EPIC METALS OR APPROVED EQUAL. W/ G390 FINISH. FASTEN DECK TO SUPPORTING MEMBERS WITH TEK SCREWS @ 6" O.C. W/ CAPTURED WASHER W/ STAINLESS STEEL CAP, SUCH AS SCOT SCREW OR APPROVED EQUAL.

1 MEZZANINE & LOW ROOF FRAMING PLAN
 SCALE: 1/8" = 1'-0"
 PLAN NOTES:

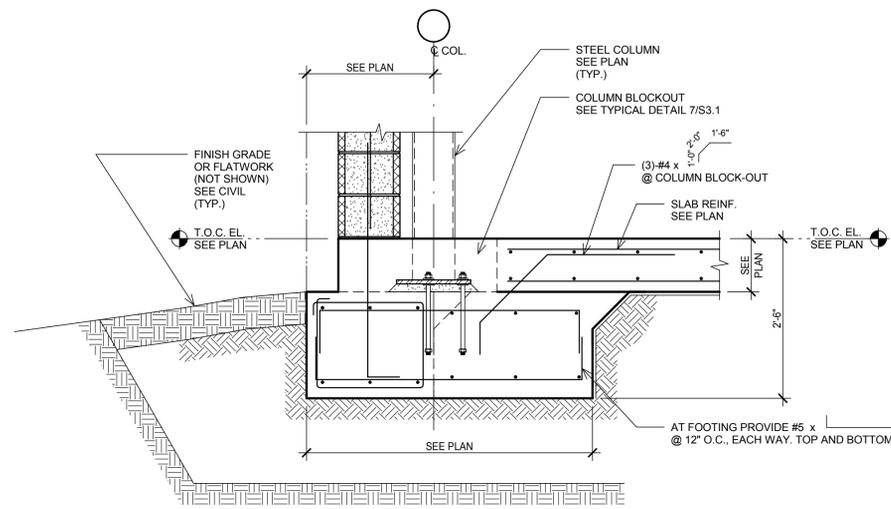
- FINISH FLOOR ELEVATION = 112'-0" AT MEZZANINE.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ROOF SLOPES.
- VERIFY AND COORDINATE ALL DIMENSIONS W/ ARCHITECTURAL DRAWINGS.
- SEE STRUCTURAL NOTES FOR WALL FRAMING SIZES, SPACING, AND SPECIES.
- REFER TO WOOD BEAM/HEADER SCHEDULE FOR ALL HEADERS IN INTERIOR WOOD FRAMED WALLS.
- ROOF DIAPHRAGM SHALL BE INSTALLED AS DIAPHRAGM AS DEFINED BY BUILDING CODE.
- REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR LOCATION AND DIMENSIONS FOR PENETRATIONS NOT DIMENSIONED ON PLAN. CONTRACTOR TO COORDINATE.
- INDICATES FLOOR AREAS.

SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
	SLAB OR DECK SPAN DIRECTION
	NON-LOAD-BEARING WALL
	8" MASONRY WALL
	12" MASONRY WALL
	LOAD-BEARING WALL, SEE SCHEDULE
	WINDOW IN LOAD-BEARING WALL
	DOOR IN LOAD-BEARING WALL

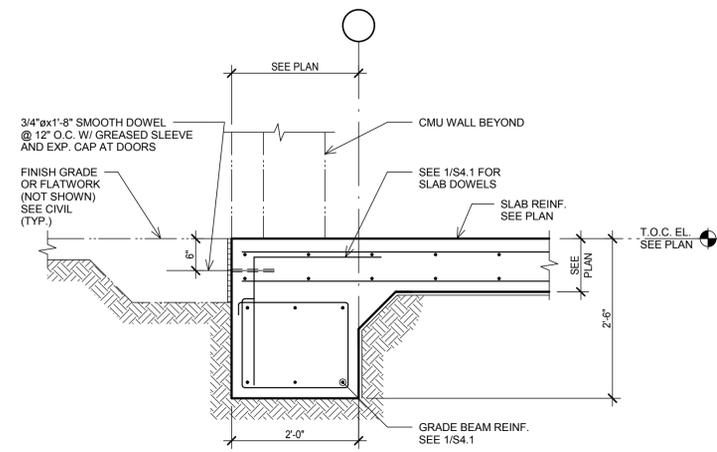




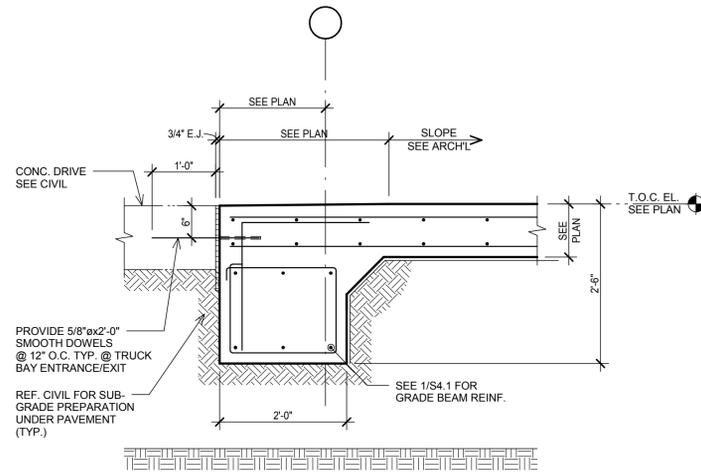
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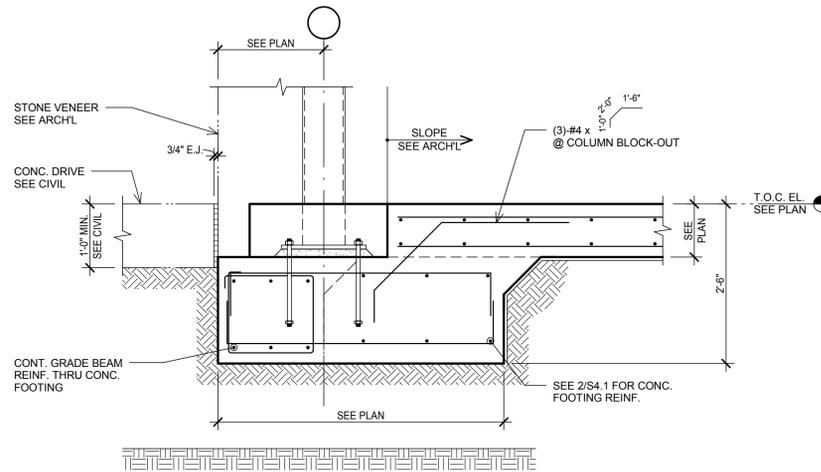
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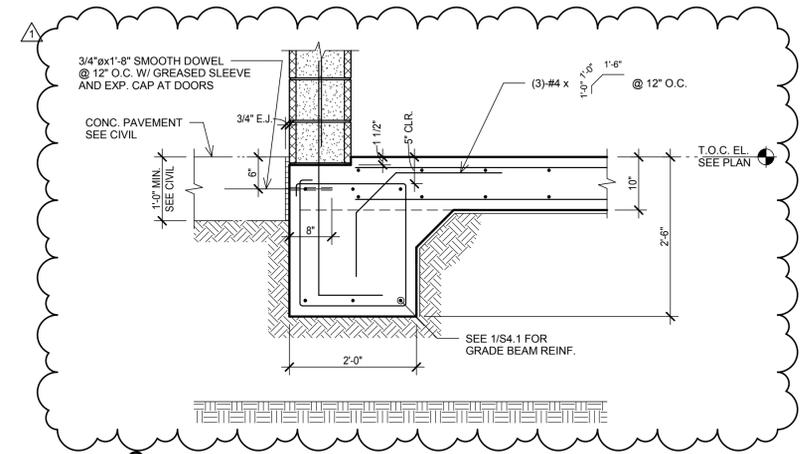
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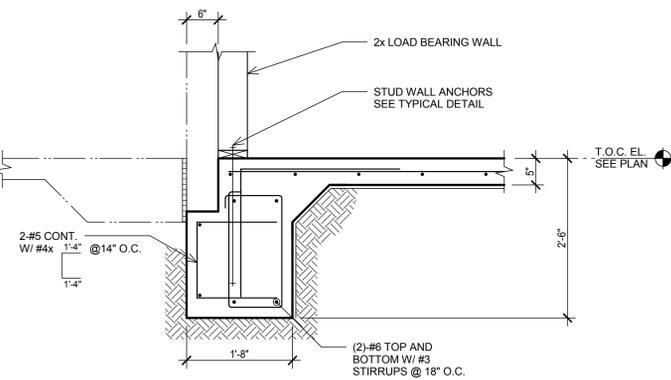
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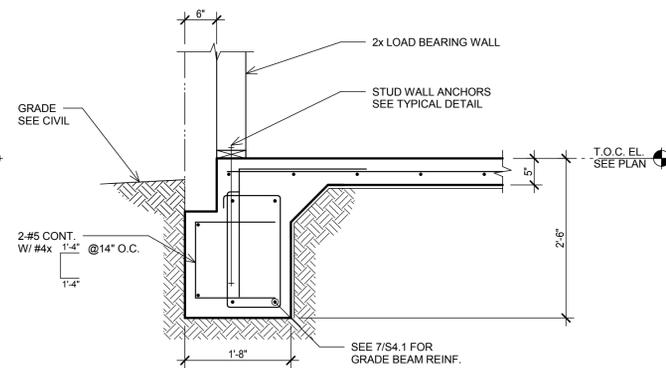
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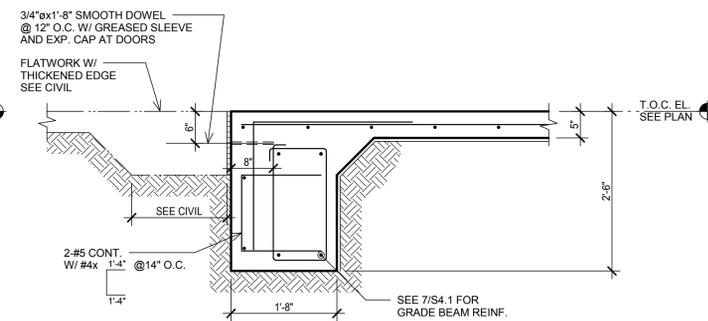
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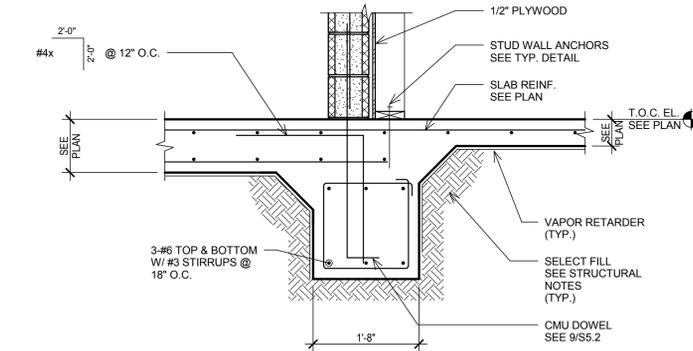
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8
SCALE: 3/4" = 1'-0"



9
SCALE: 3/4" = 1'-0"



10
SCALE: 3/4" = 1'-0"



JQ TSEN
 JQ TSEN, LLC
 160 WEST FIFTH STREET, SUITE 200
 AUSTIN, TEXAS 78703
 512.474.4001
 JAT PROJECT NO. 214106.00
 TBE FIRM # 12778

**AUSTIN ONION CREEK
 FIRE & EMS STATION**
 11112 OLD SAN ANTONIO ROAD
 AUSTIN, TEXAS 78748

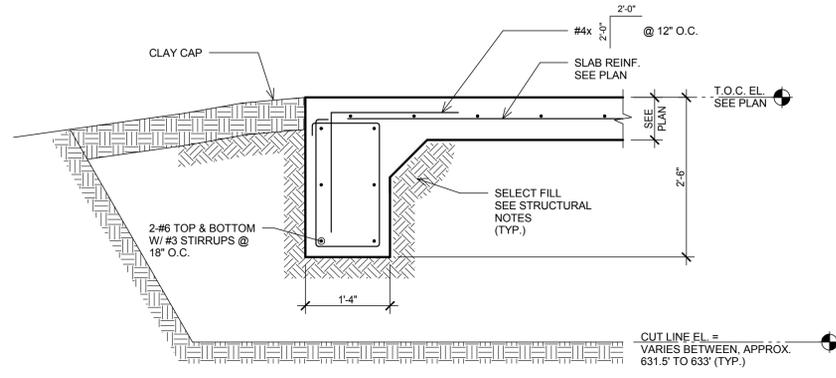


REVISIONS	DATE	BY	CHKD	APP'D
1	10/25/16			

ADDENDA 1

DATE: 09/28/16
 DRAWN BY: TG
 CHECKED BY: ST
 PROJECT NO.: 214106.00

S4.1



1 S4.2 - 1
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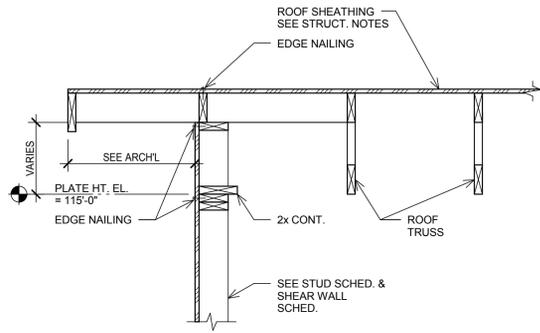
JQ+TSEN
 JQ+TSEN, LLC
 160 WEST FPM STREET, SUITE 200
 AUSTIN, TEXAS 78703
 512.474.4001
 JQ+TSEN.COM
 PBE FIRM # 12778

**AUSTIN ONION CREEK
 FIRE & EMS STATION**
 11112 OLD SAN ANTONIO ROAD
 AUSTIN, TEXAS 78748

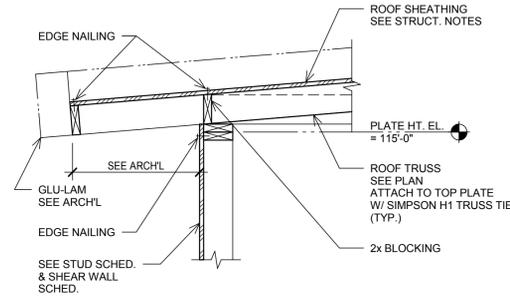
REVISIONS	DATE	DESCRIPTION
1	10/25/16	ADDENDA 1

DATE: 09/28/16
 DRAWN BY: TG
 CHECKED BY: ST
 PROJECT NO.: 214106.00

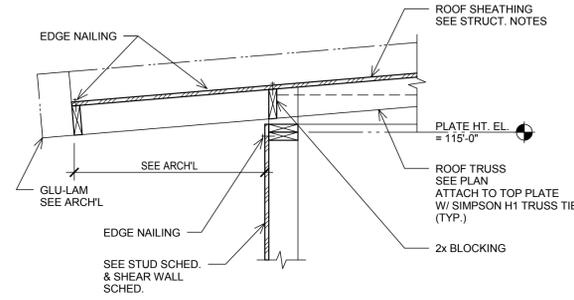




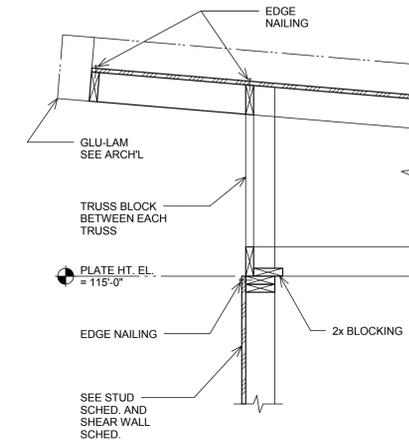
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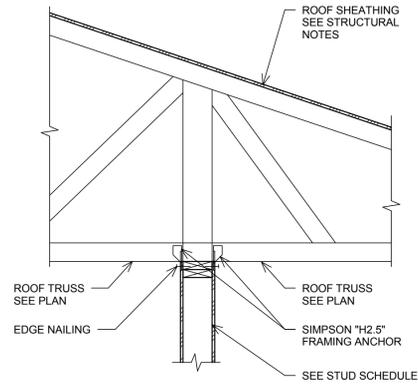
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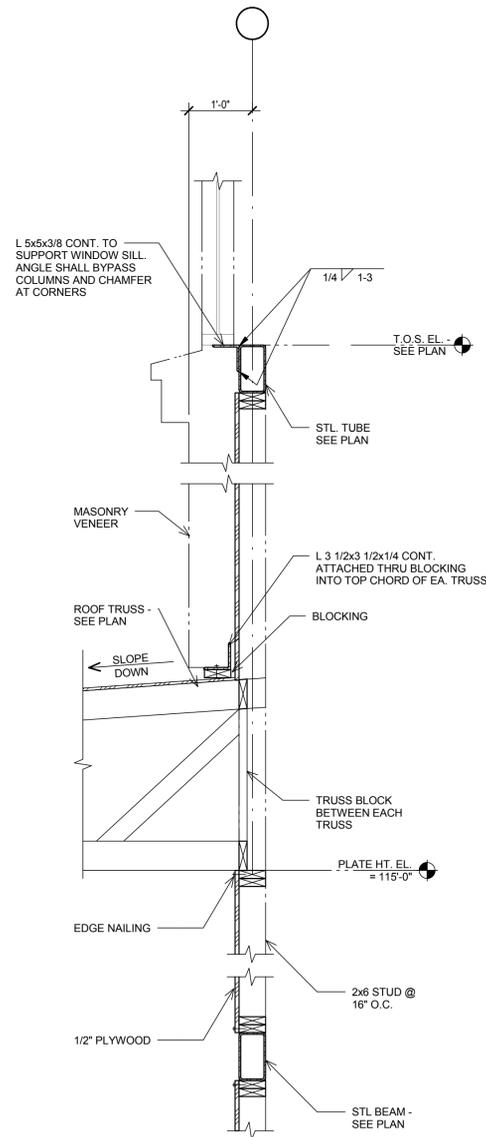
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4
SCALE: 3/4" = 1'-0"



5 TYPICAL ROOF TRUSS BEARING AT INTERIOR WALL
NO SCALE



6
SCALE: 3/4" = 1'-0"



JQ TSEN
 JQ TSEN, LLC
 160 WEST FIFTH STREET, SUITE 200
 AUSTIN, TEXAS 78701
 512.474.4001
 PROJECT NO. 16-00025
 P/E: RMT/STP

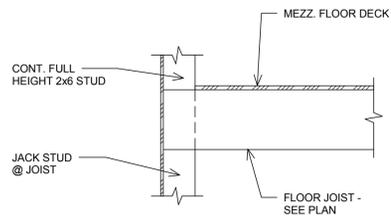
**AUSTIN UNION CREEK
 FIRE & EMS STATION**
 11112 OLD SAN ANTONIO ROAD
 AUSTIN, TEXAS 78748

REVISIONS	DATE	DESCRIPTION
1	10/25/16	ADDENDA 1

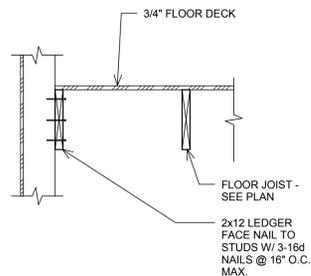
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DRAWN BY	TG
CHECKED BY	ST
PROJECT NO.	214106.00



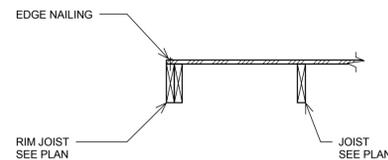
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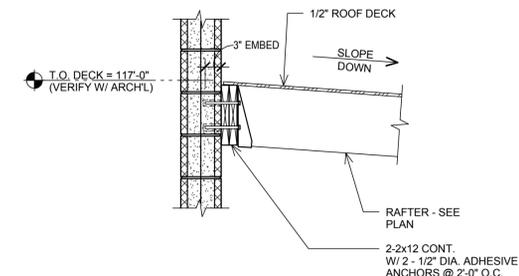
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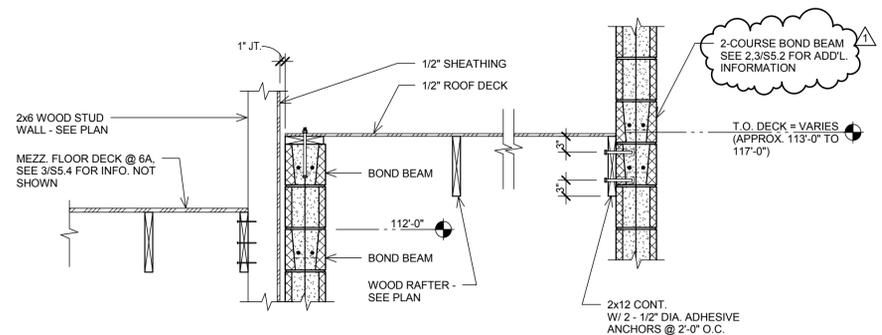
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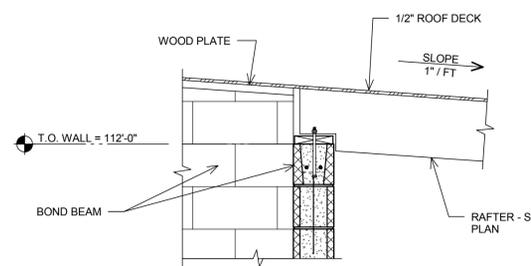
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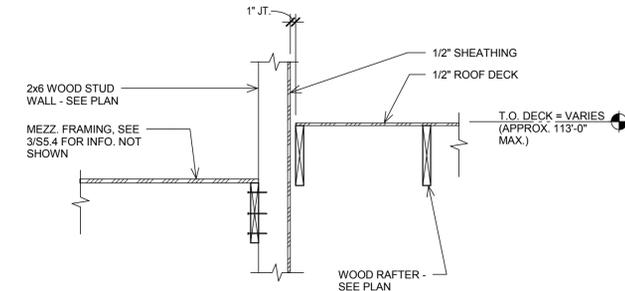
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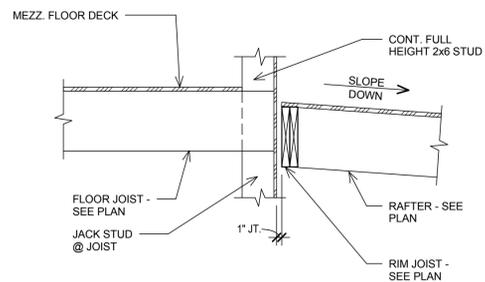
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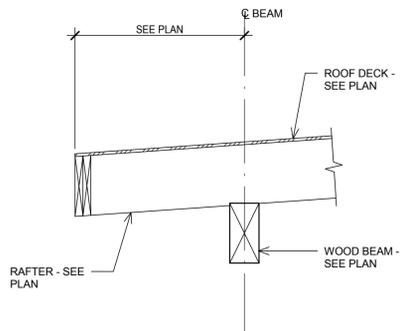
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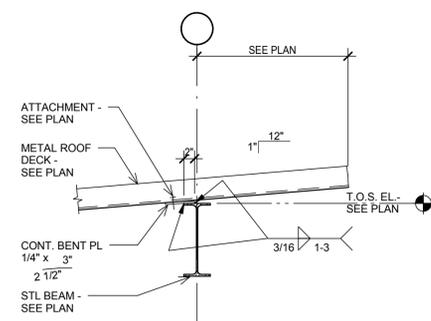
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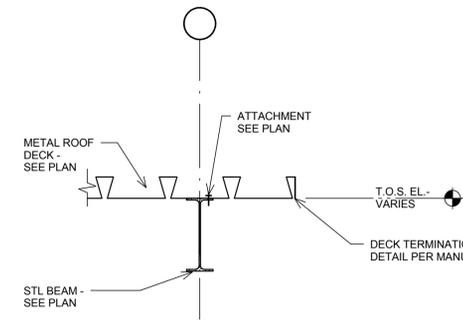
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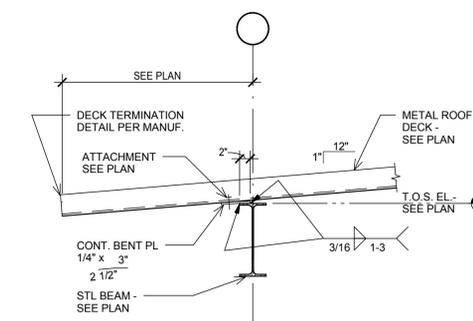
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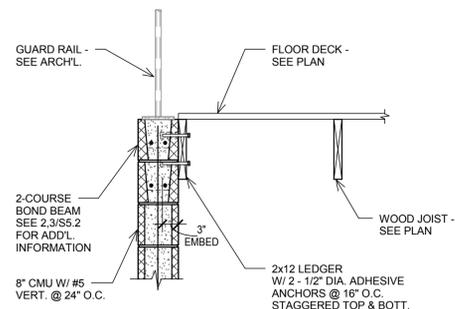
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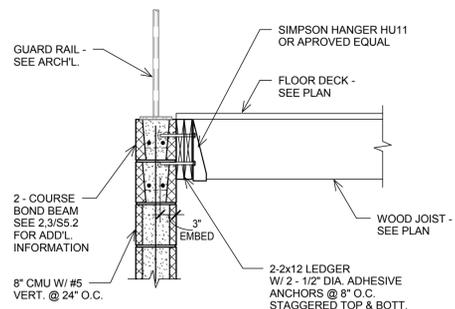
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SCALE: 3/4" = 1'-0"



12
SCALE: NO SCALE



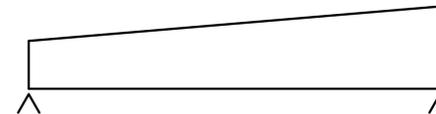
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SCALE: 3/4" = 1'-0"



14
SCALE: 3/4" = 1'-0"



15
SCALE: 1/8" = 1'-0"



NOTE:
1. TOP CHORD AND BOTTOM CHORD TYP. MIN. LOADING AS DESCRIBED ON S1.2 UNDER "PREFABRICATED METAL PLATE CONNECTED WOOD TRUSSES" NOT SHOWN FOR CLARITY.



JQ TSEN
STEPHANIE RAE TSEN
97275
LICENSED PROFESSIONAL ENGINEER
AUSTIN, TEXAS 78703
1600 WEBB FRIE STREET, SUITE 200
512.474.4001
JQ PROJECT NO. 214106.00
TBE FIRM # 1278

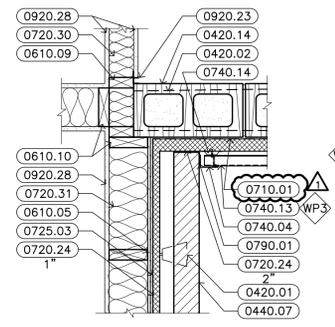
**AUSTIN ONION CREEK
FIRE & EMS STATION**
11112 OLD SAN ANTONIO ROAD
AUSTIN, TEXAS 78748



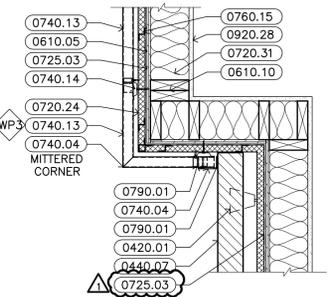
REVISIONS	1	10/25/16	ADDENDA 1
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DATE: 09/28/16
DRAWN BY: TG
CHECKED BY: ST
PROJECT NO.: 214106.00

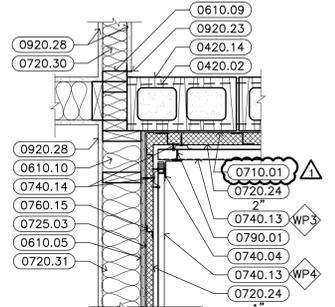
S6.4



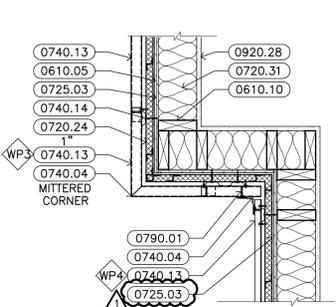
5 PLAN DETAIL
1" = 1'-0"



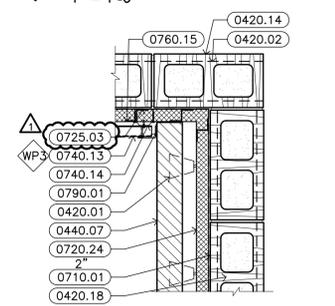
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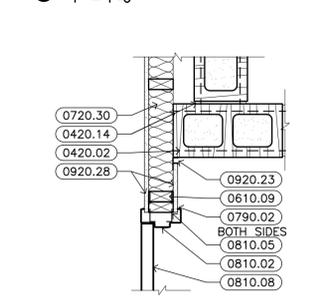
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1" = 1'-0"



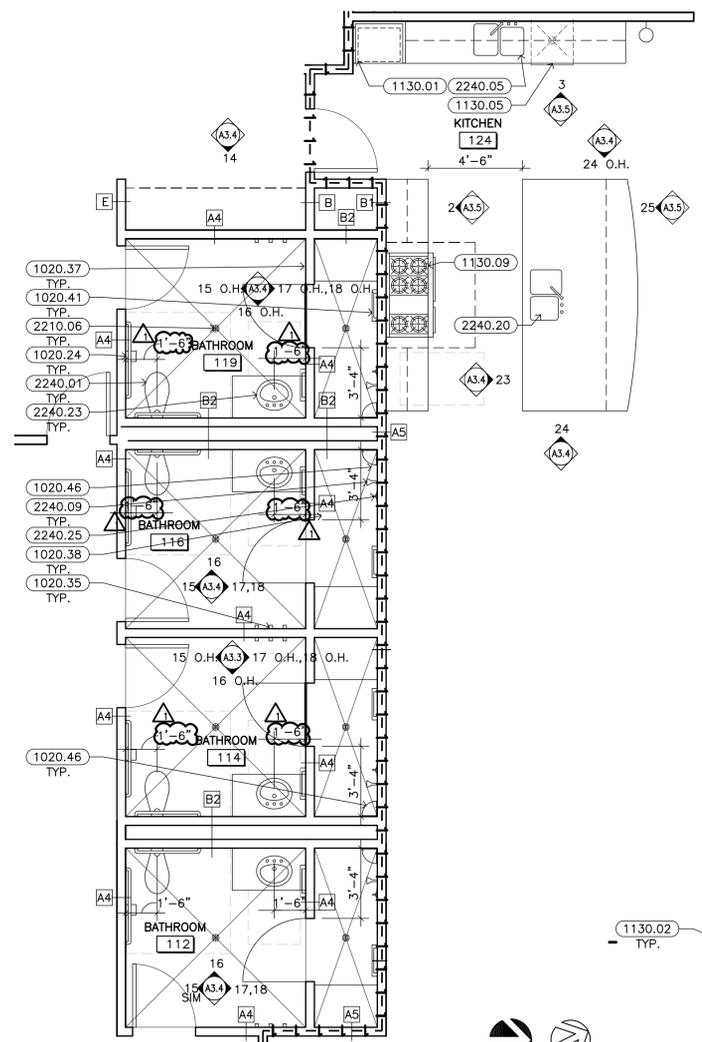
6 PLAN DETAIL
1" = 1'-0"



9 PLAN DETAIL
1" = 1'-0"



8 PLAN DETAIL
1" = 1'-0"



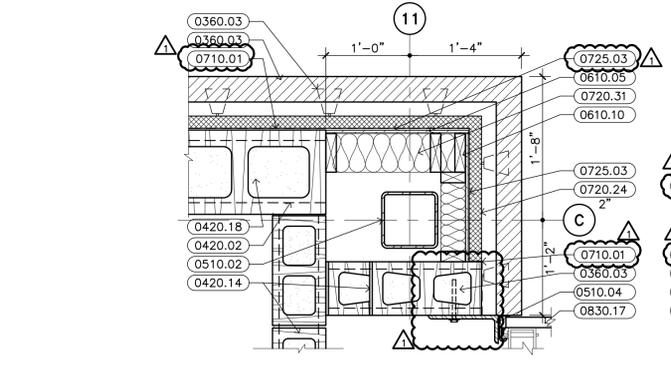
3 ENLARGED PLAN
1/4" = 1'-0"



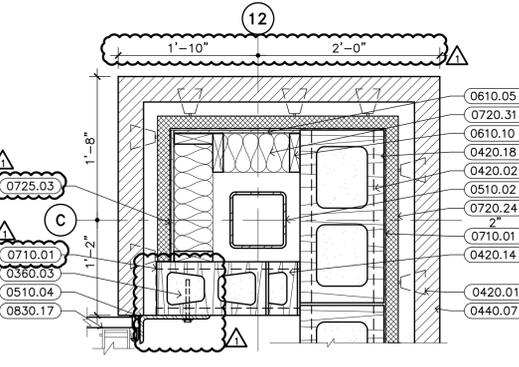
2 ENLARGED PLAN
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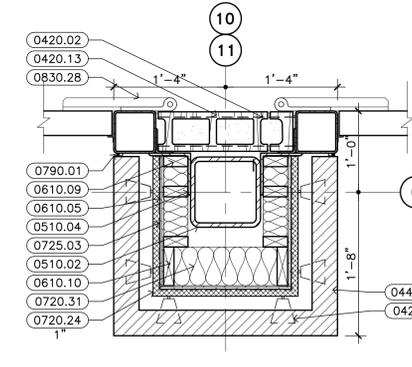
1 SECOND FLOOR PLAN
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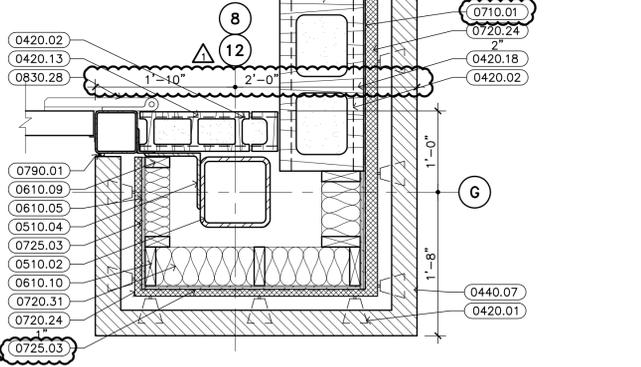
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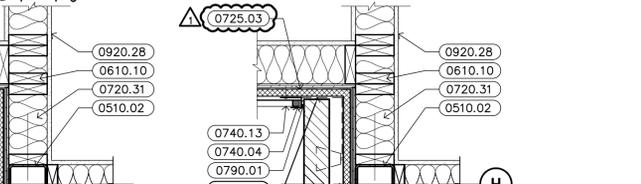
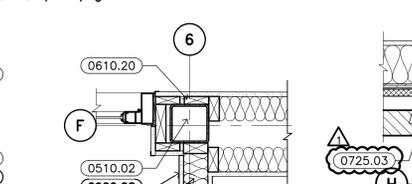
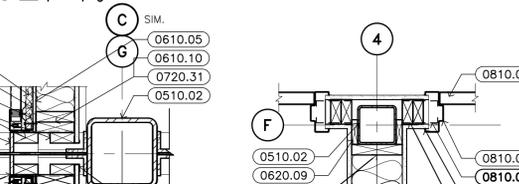
12 PLAN DETAIL
1" = 1'-0"



11 PLAN DETAIL
1" = 1'-0"



10 PLAN DETAIL
1" = 1'-0"



KEYNOTES

- DIVISION 03 - CONCRETE**
- 0360.03 FILL WITH GROUT
- DIVISION 04 - MASONRY**
- 0420.01 ADJUSTABLE MASONRY WALL TIES AT O.C.E.W.
- 0420.02 HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
- 0420.13 6" CONCRETE MASONRY UNITS
- 0420.14 8" CONCRETE MASONRY UNITS
- 0420.18 12" CONCRETE MASONRY UNITS
- 0440.07 STONE VENEER
- DIVISION 05 - METALS**
- 0510.02 STEEL COLUMN (RE: STRUCTURAL)
- 0510.04 STEEL ANGLE (RE: STRUCTURAL)
- 0550.80 1/2" STEEL PLATE (RE: STRUCTURAL)
- DIVISION 06 - WOOD, PLASTICS, & COMPOSITES**
- 0610.01 SHIM AS REQUIRED
- 0610.03 2X WOOD BLOCKING
- 0610.05 1/2" EXTERIOR GRADE PLYWOOD
- 0610.09 2 X 4 WOOD STUDS AT 16" O.C.
- 0610.10 2 X 6 WOOD STUDS AT 16" O.C.
- 0610.20 1X WOOD FURRING STRIP
- 0610.28 2 X 8 WOOD STUDS AT 16" O.C.
- 0620.09 WOOD STOP
- DIVISION 07 - THERMAL & MOISTURE PROTECT**
- 0710.01 BITUMINOUS DAMPPROOFING MASTIC
- 0720.24 RIGID INSULATION
- 0720.29 8" BATT INSULATION
- 0720.30 2 1/2" BATT INSULATION
- 0720.31 5 1/2" BATT INSULATION (R-20 MIN.)
- 0725.03 PLASTIC FILM AIR BARRIER
- 0725.05 SELF-ADHERING MEMBRANE FLASHING
- 0725.06 SELF-ADHERING FLEXIBLE SURROUND FLASHING
- 0740.04 PREFINISHED METAL WALL PANEL TRIM
- 0740.13 PREFINISHED CONCEALED FASTENER & WALL PANELS
- 0740.14 METAL WALL PANEL SUB-GIRT
- 0760.15 PREFINISHED METAL Z-CLIP
- 0760.23 FOAM CLOSURE (TOP AND BOTTOM), ADHERE INTO PLACE. PAINT TO MATCH ADJACENT SURFACE
- 0790.01 SEALANT WITH BACKER ROD AS REQL
- 0790.02 CAULKING
- DIVISION 08 - OPENINGS**
- 0810.02 HOLLOW METAL FRAME
- 0810.05 JAMB ANCHOR (3 PER JAMB)
- 0810.08 SOLID CORE WOOD DOOR
- 0830.17 UPWARD-ACTING SECTIONAL DOOR
- 0830.28 ELECTRIC OPERATED FOLDING DOORS
- DIVISION 09 - FINISHES**
- 0920.23 ALUMINUM "T" REGLET
- 0920.28 5/8" GYPSUM BOARD (TYPE X)
- 0920.36 J-MOULD, TYPICAL
- 0920.52 5/8" GYPSUM BOARD, MOISTURE RESISTANT (TYPE X)
- DIVISION 10 - SPECIALTIES**
- 1020.24 STAINLESS STEEL SURFACE MOUNTED TOILET PAPER DISPENSER
- 1020.35 ROBE / TOWEL HOOK
- 1020.37 WALL-MOUNTED FOLDING SHOWER SE
- 1020.38 PROVIDE BLOCKING IN WALL AS REQL
- 1020.38 STAINLESS STEEL SHOWER CURTAIN R WITH VINYL CURTAIN AND HOOKS.
- 1020.41 WALL MOUNTED TOWEL BAR
- 1020.46 SHOWER SHELF
- DIVISION 11 - EQUIPMENT**
- 1130.01 MICROWAVE
- 1130.02 REFRIGERATOR
- 1130.05 DISHWASHER
- 1130.07 CLOTHES DRYER
- 1130.09 GAS RANGE
- 1130.14 CLOTHES WASHER
- DIVISION 22 - PLUMBING (RE: PLUMBING)**
- 2210.06 FLOOR DRAIN
- 2240.01 WATER CLOSET. ORIENT FLUSH VALVE TOWARDS ACCESSIBLE SPACE AT ACCESSIBLE STALLS / RESTROOMS
- 2240.05 STAINLESS STEEL UNDERMOUNT SINK
- 2240.09 SHOWER HEAD
- 2240.11 MOP SINK
- 2240.20 ADA COMPLIANT KITCHEN SINK
- 2240.23 UNDERMOUNT SINK
- 2240.25 SHOWER VALVE



BROWN REYNOLDS WATFORD ARCHITECTS
 2700 EARL RUDBERFWY SOUTH
 COLLEGE STATION, TEXAS 77845
 979-694-1791
 WWW.BRWARCH.COM

AUSTIN ONION CREEK FIRE & EMS STATION
 11112 OLD SAN ANTONIO ROAD
 AUSTIN, TEXAS 78748

REVISIONS	DATE	BY	CHKD	PROJECT NO.
1	10/24/16			

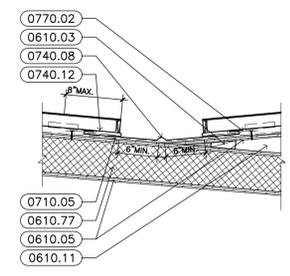
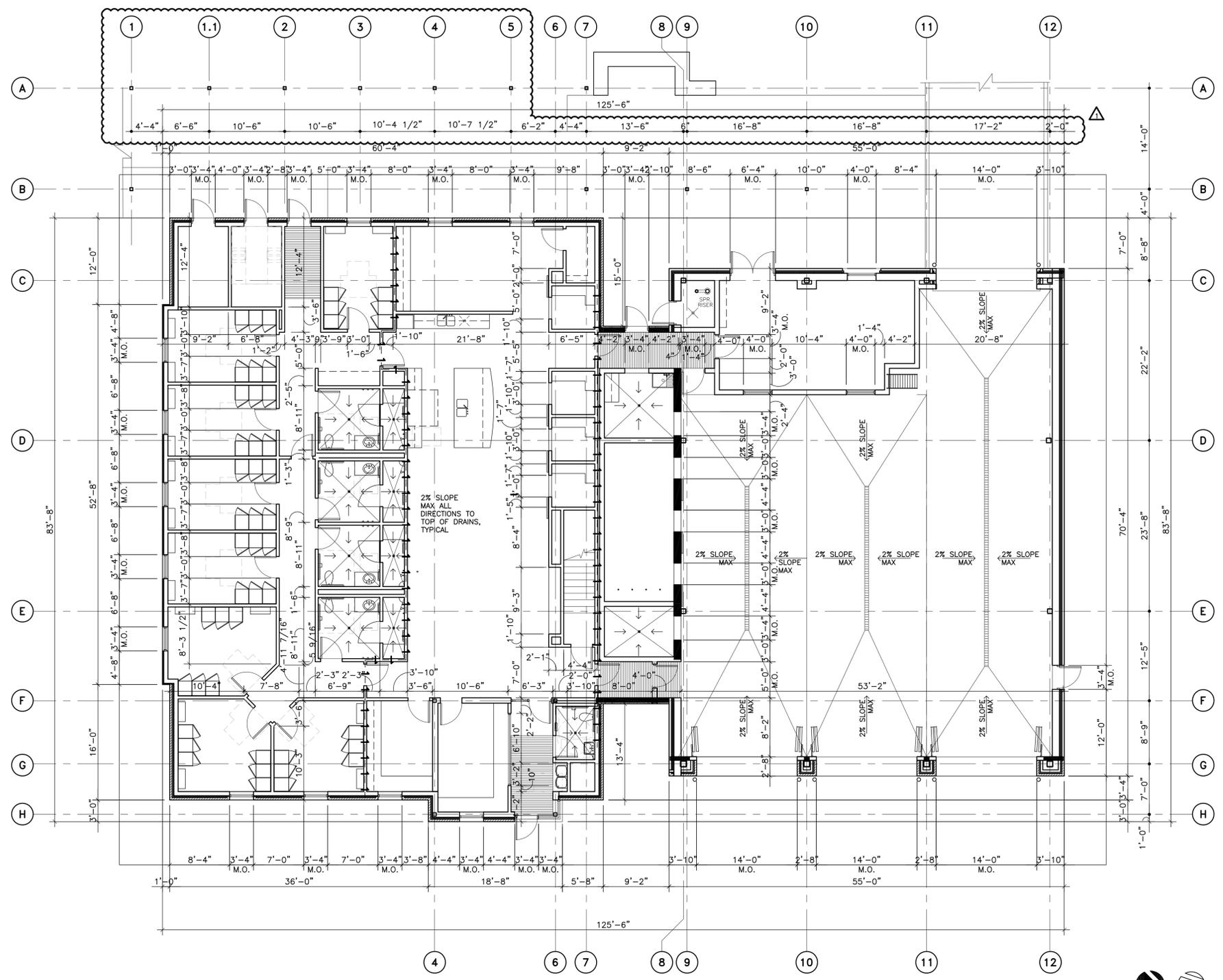
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 CHECKED BY: RH
 PROJECT NO.: 21-4106-00

A1.3

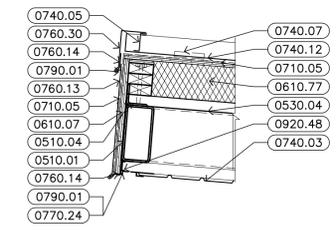
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KEYNOTES

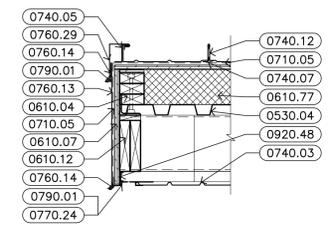
- DIVISION 04 - MASONRY**
 0420.14 8" CONCRETE MASONRY UNITS
 0420.24 VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
 0440.07 STONE VENEER
 0470.01 CAST STONE
- DIVISION 05 - METALS**
 0510.01 STEEL STRUCTURE (RE: STRUCTURAL)
 0510.03 STEEL TUBE COLUMN (RE: STRUCTURAL)
 0510.04 STEEL ANGLE (RE: STRUCTURAL)
 0510.07 STEEL BEAM (RE: STRUCTURAL)
 0530.04 METAL ROOF DECK (RE: STRUCTURAL)
 0550.05 5" X 5" X 1/4" STEEL ANGLE
- DIVISION 06 - WOOD, PLASTICS, & COMPOSITES**
 0610.01 SHIM AS REQUIRED
 0610.03 2X WOOD BLOCKING
 0610.04 2X PRESSURE TREATED WOOD BLOCKING
 0610.05 1/2" EXTERIOR GRADE PLYWOOD
 0610.07 3/4" EXTERIOR GRADE PLYWOOD
 0610.10 2 X 6 WOOD STUDS AT 16" O.C.
 0610.11 2 X 6 WOOD FRAMING
 0610.12 2 X 8 WOOD FRAMING
 0610.20 1X WOOD FURRING STRIP
 0610.36 1/2" PLYWOOD
 0610.44 2X WOOD FRAMING (RE: STRUCTURAL)
 0610.77 COMPOSITE NAIL BASE INSULATED ROOF SHEATHING
- DIVISION 07 - THERMAL & MOISTURE PROTECTION**
 0710.01 BITUMINOUS DAMPPROOFING MASTIC
 0710.03 ROOFING UNDERLAYMENT
 0720.24 RIGID INSULATION
 0720.31 5 1/2" BATT INSULATION (R-20 MIN.)
 0725.02 SELF-ADHERING SHEET DAMPPROOFING
 0725.03 PLASTIC FILM AIR BARRIER
 0725.06 SELF-ADHERING FLEXIBLE SURROUND FLASHING
 0740.03 PREFINISHED METAL WALL / SOFFIT PANEL WITH REVEALS
 0740.05 Z-CLOSURE BY PREFINISHED METAL ROOFING MANUFACTURER
 0740.07 CONCEALED STEEL CLIP BY STANDING SEAM METAL ROOF MANUFACTURER
 0740.08 VALLEY FLASHING BY STANDING SEAM METAL ROOF MANUFACTURER
 0740.09 METAL ROULET W/ SEALANT & COUNTERFLASHING BY PREFINISHED METAL ROOFING MANUFACTURER
 0740.12 PREFINISHED METAL STANDING SEAM ROOFING MANUFACTURER
 0740.48 PREFINISHED HIGH EAVE FLASHING BY METAL ROOFING MANUFACTURER
 0760.01 THROUGH-WALL FLASHING (WITH WEEPS) BY METAL ROOFING MANUFACTURER
 0760.03 PREFINISHED METAL GUTTER
 0760.14 PREFINISHED METAL CLEAT
 0760.29 PREFINISHED RAKEWALL TRIM
 0760.30 PREFINISHED EAVE TRIM
 0760.35 PREFINISHED METAL COUNTERFLASHING
 0770.02 CONTINUOUS CLEAT
 0770.24 VENTED SCREED (F-MOLDING)
 0790.01 SEALANT WITH BACKER ROD AS REQUIRED
 0790.02 CAULKING
- DIVISION 08 - OPENINGS**
 0840.01 ALUMINUM STOREFRONT
 0840.30 .060 ALUMINUM BRAKE METAL; FINISH TO MATCH STOREFRONT
- DIVISION 09 - FINISHES**
 0920.35 CORNER BEAD, TYPICAL
 0920.36 J-MOULD, TYPICAL
 0920.48 1 1/2" NON-STRUCTURAL METAL CHANNEL
 0920.52 5/8" GYPSUM BOARD, MOISTURE RESISTANT (TYPE X)



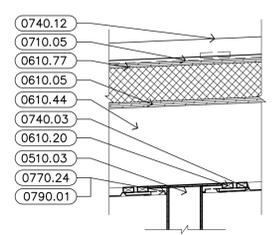
2 ROOF DETAIL
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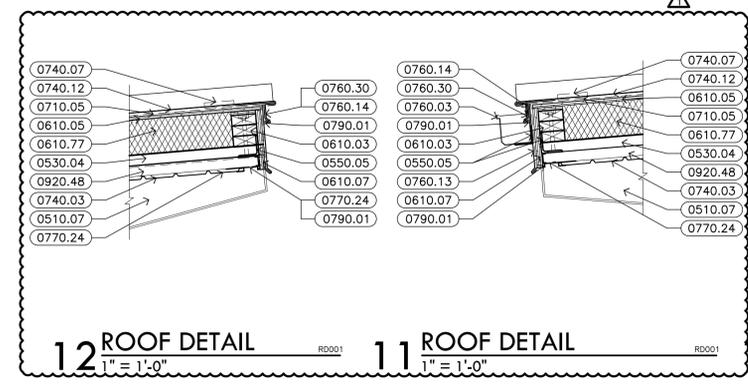
3 ROOF DETAIL
 1" = 1'-0"



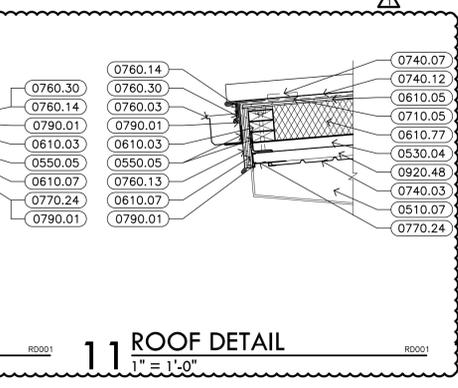
4 ROOF DETAIL
 1" = 1'-0"



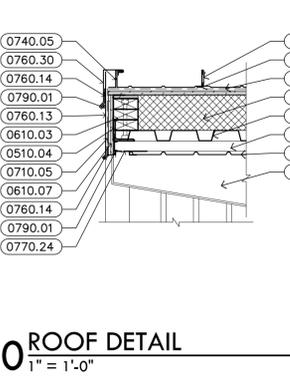
5 ROOF DETAIL
 1" = 1'-0"



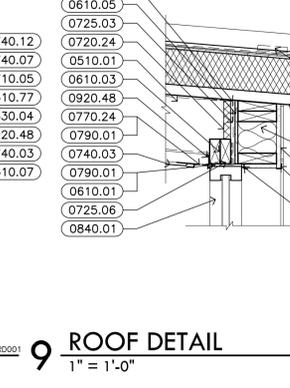
12 ROOF DETAIL
 1" = 1'-0"



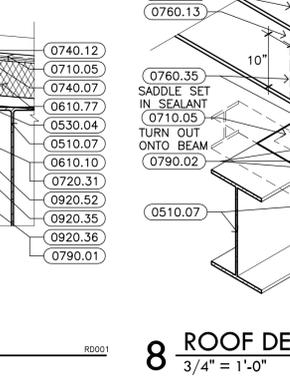
11 ROOF DETAIL
 1" = 1'-0"



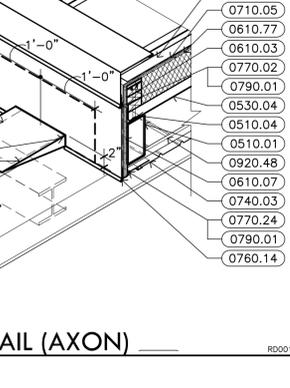
0 ROOF DETAIL
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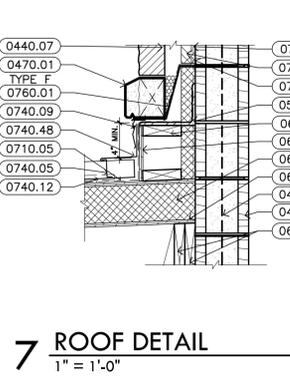
9 ROOF DETAIL
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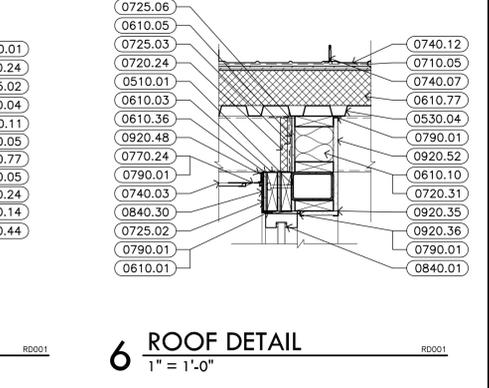
8 ROOF DETAIL (AXON)
 3/4" = 1'-0"



7 ROOF DETAIL
 1" = 1'-0"

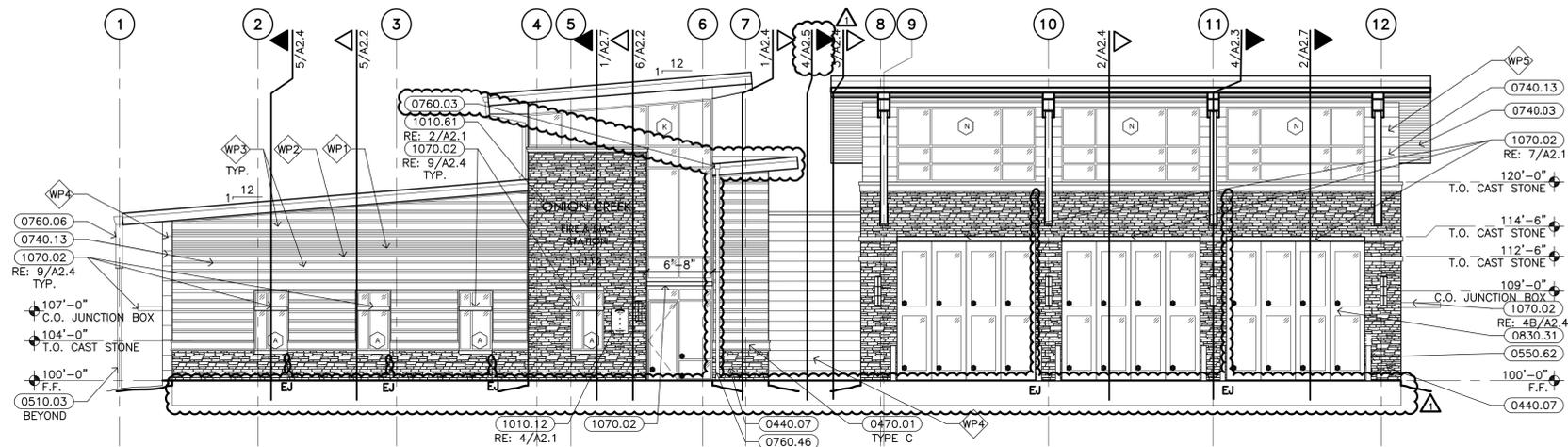
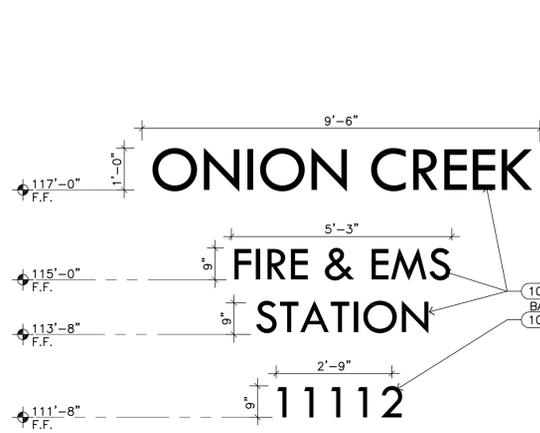


6 ROOF DETAIL
 1" = 1'-0"



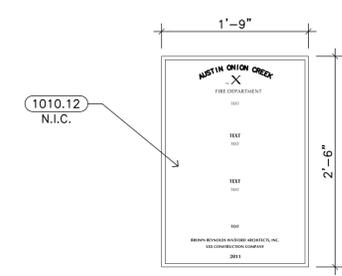
6 ROOF DETAIL
 1" = 1'-0"





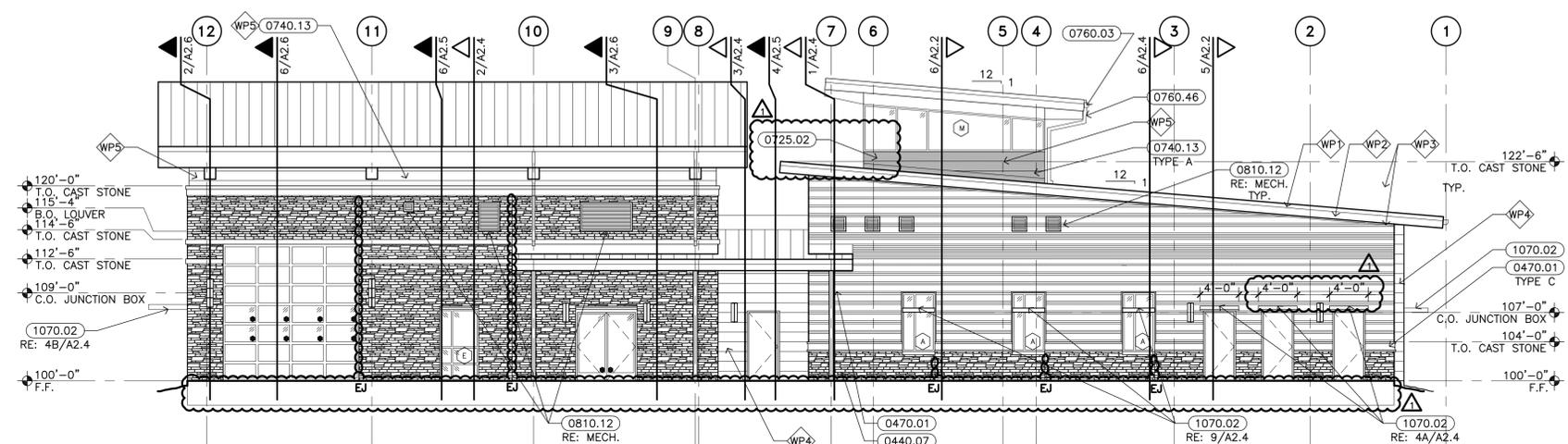
2 SIGNAGE DETAIL
1/2" = 1'-0"

1 EAST ELEVATION
1/8" = 1'-0"

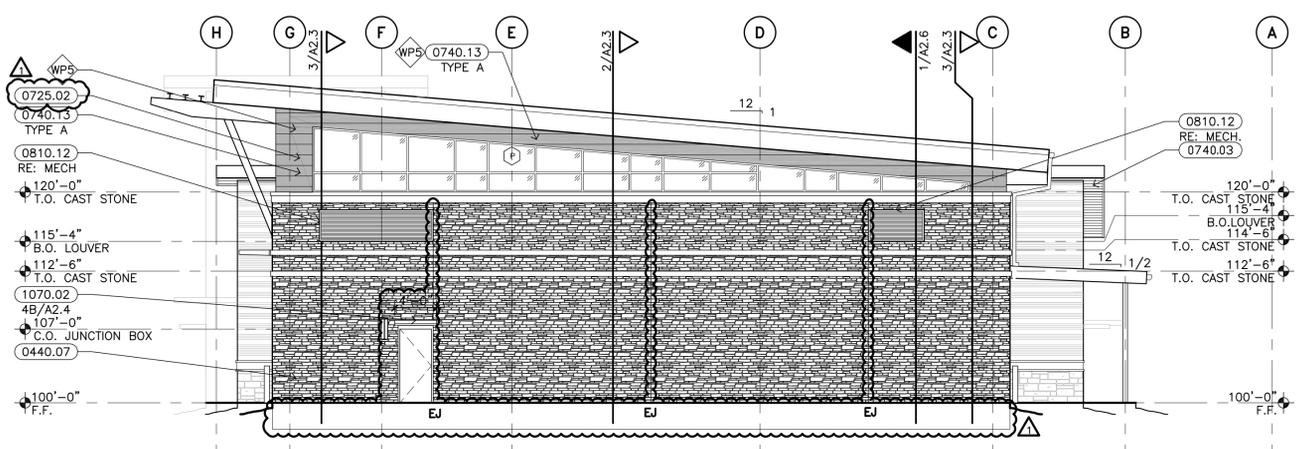


4 PLAQUE DETAIL
1/8" = 1'-0"

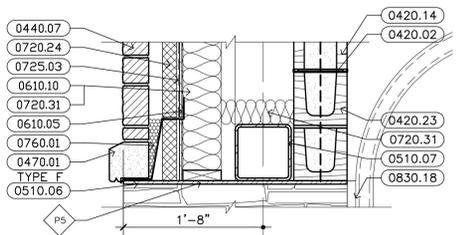
3 WEST ELEVATION
1/8" = 1'-0"



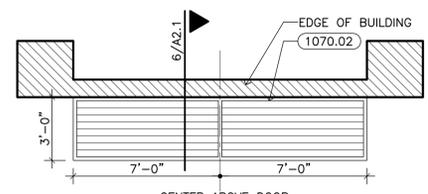
6 DOOR/SHADING DEVICE DETAIL
1" = 1'-0"



5 NORTH ELEVATION
1/8" = 1'-0"



8 SECTIONAL DOOR DETAIL
1" = 1'-0"



7 SHADING DEVICE PLAN
1/4" = 1'-0"

- ### KEYNOTES
- DIVISION 04 - MASONRY**
 - 0420.02 HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
 - 0420.13 6" CONCRETE MASONRY UNITS
 - 0420.14 8" CONCRETE MASONRY UNITS
 - 0420.22 CONCRETE MASONRY UNIT BOND BEAM
 - 0440.07 STONE VENEER
 - 0470.01 CAST STONE
 - DIVISION 05 - METALS**
 - 0510.03 STEEL TUBE COLUMN (RE: STRUCTURAL)
 - 0510.04 STEEL ANGLE (RE: STRUCTURAL)
 - 0510.05 STEEL CHANNEL (RE: STRUCTURAL)
 - 0510.06 STEEL LINTEL / PLATE (RE: STRUCTURAL)
 - 0510.07 STEEL BEAM (RE: STRUCTURAL)
 - 0550.62 6" PIPE BOLLARD, FILL WITH CONCRETE
 - DIVISION 06 - WOOD, PLASTICS, & COMPOSITES**
 - 0610.05 1/2" EXTERIOR GRADE PLYWOOD
 - 0610.10 2x6 WOOD STUDS AT 16" O.C.
 - 0610.28 2x WOOD HEADER (RE: STRUCTURAL)
 - DIVISION 07 - THERMAL & MOISTURE PROTECTION**
 - 0720.24 RIGID INSULATION
 - 0720.31 5 1/2" BATT INSULATION (R=20 MIN.) AT 2'-0" O.C.)
 - 0725.02 SELF-ADHERING SHEET DAMPROOFING
 - 0725.03 PLASTIC FILM BARRIER
 - 0725.05 SELF-ADHERING MEMBRANE FLASHING
 - 0740.03 PREFINISHED METAL WALL / SOFFIT PANEL WITH REVEALS
 - 0740.13 PREFINISHED CONCEALED FASTENER METAL WALL PANELS
 - 0760.01 THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
 - 0760.03 PREFINISHED METAL GUTTER
 - 0760.06 PREFINISHED METAL DOWNSPOUT
 - 0760.46 PREFINISHED DOWNSPOUT
 - 0790.01 SEALANT WITH BACKER ROD AS REQUIRED
 - DIVISION 08 - OPENINGS**
 - 0810.12 PREFINISHED ALUMINUM LOUVER
 - 0830.18 UPWARD-ACTING SECTIONAL DOOR TRACK
 - 0830.28 ELECTRIC OPERATED FOLDING DOORS
 - 0830.31 BIFOLD DOOR
 - DIVISION 10 - SPECIALTIES**
 - 1010.12 CAST BRONZE PLAQUE
 - 1010.18 METAL LETTERING
 - 1010.61 EXTERIOR METAL SIGNAGE
 - 1070.02 PRE-MANUFACTURED EXTERIOR SUN CONTROL DEVICES

LEGEND

SYMBOL	DESCRIPTION
(Pattern)	SELF-ADHERING SHEET DAMPROOFING AT ALL WALL-ABOVE-ROOF CONDITIONS
(Pattern)	STONE: "LEE VALLEY BLEND 4122" BY QUALITY STONE, LEDGESTONE
WP1	METAL PANEL: "MX 1.0" BY MORIN, 20 GA, DOVE GRAY
WP2	METAL PANEL: "MX 2.0" BY MORIN, 20 GA, DOVE GRAY
WP3	METAL PANEL: "MX 4.0" BY MORIN, 20 GA, DOVE GRAY
WP4	METAL PANEL: "F-12-S" BY MORIN, 20 GA, COLONIAL RED
WP5	METAL PANEL: "F-12-S" BY MORIN, 20 GA, DOVE GRAY



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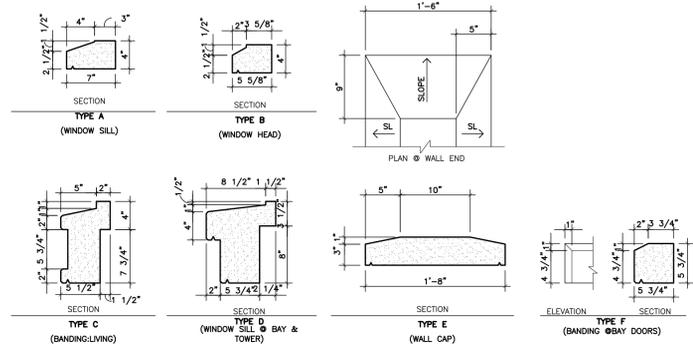
AUSTIN ONION CREEK FIRE & EMS STATION
11112 OLD SAN ANTONIO ROAD
AUSTIN, TEXAS 78748

REVISIONS

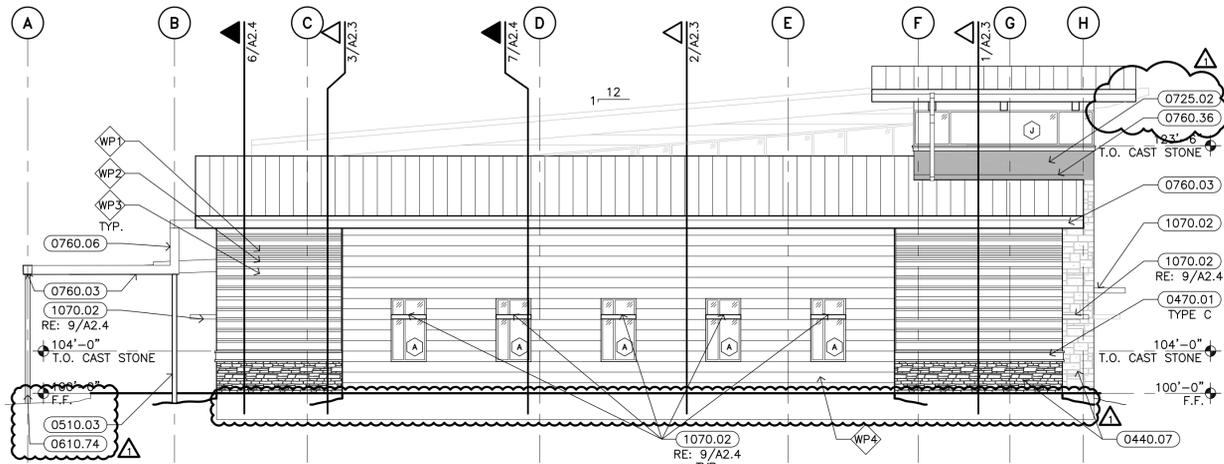
NO.	DATE	DESCRIPTION
1	10/24/16	ADDENDUM #1

DATE: 9/23/2016
DRAWN BY: LA, MW
CHECKED BY: RH
PROJECT NO.: 21-4106.00

A2.1
EXTERIOR ELEVATIONS

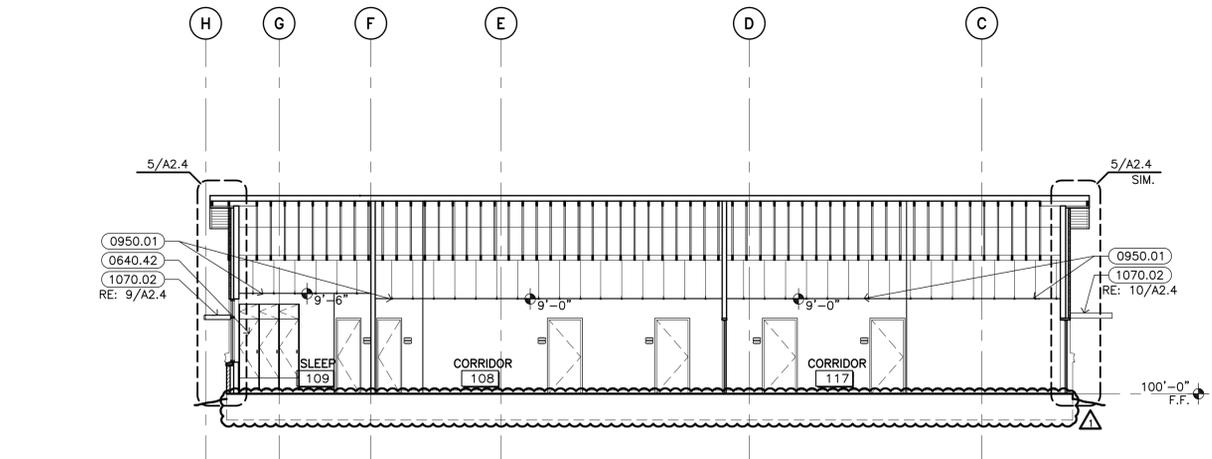
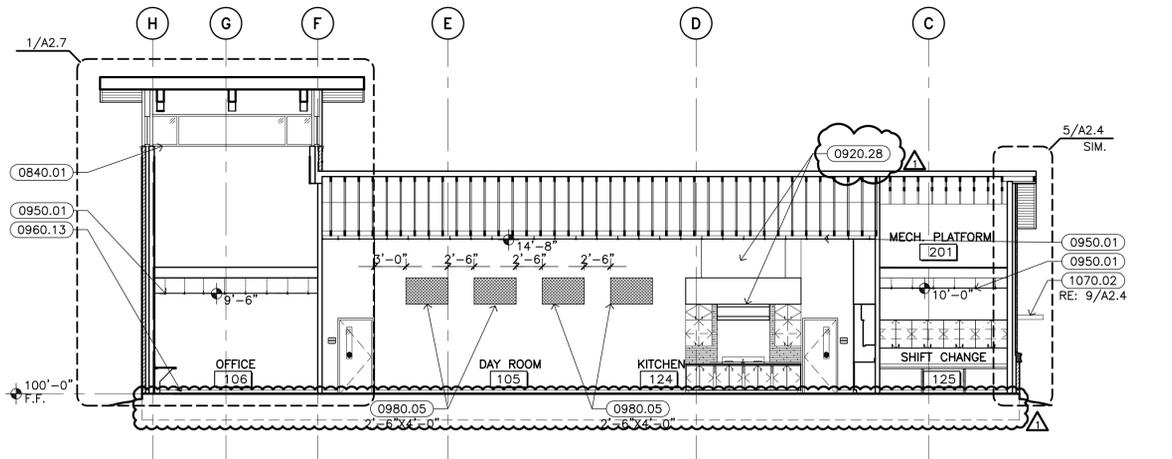
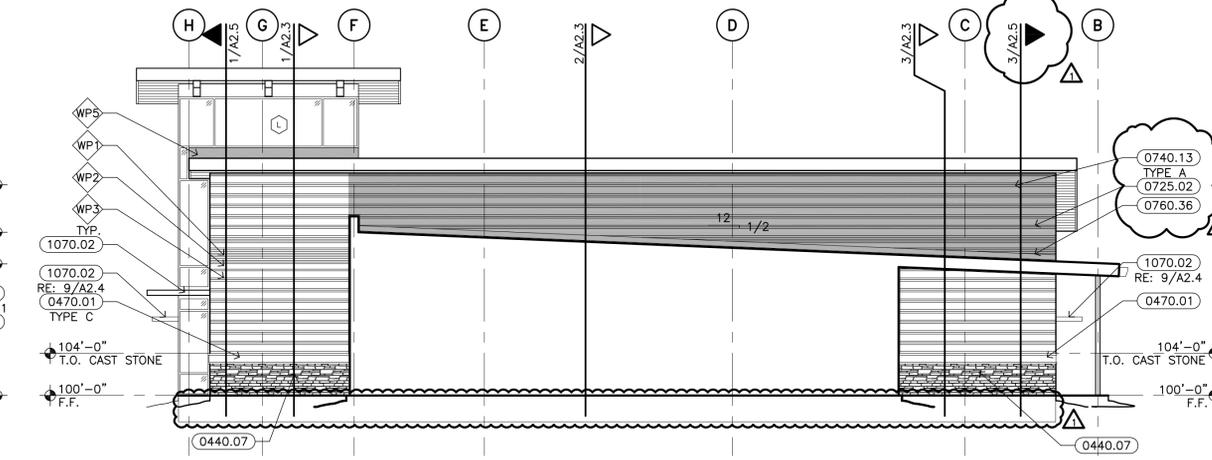
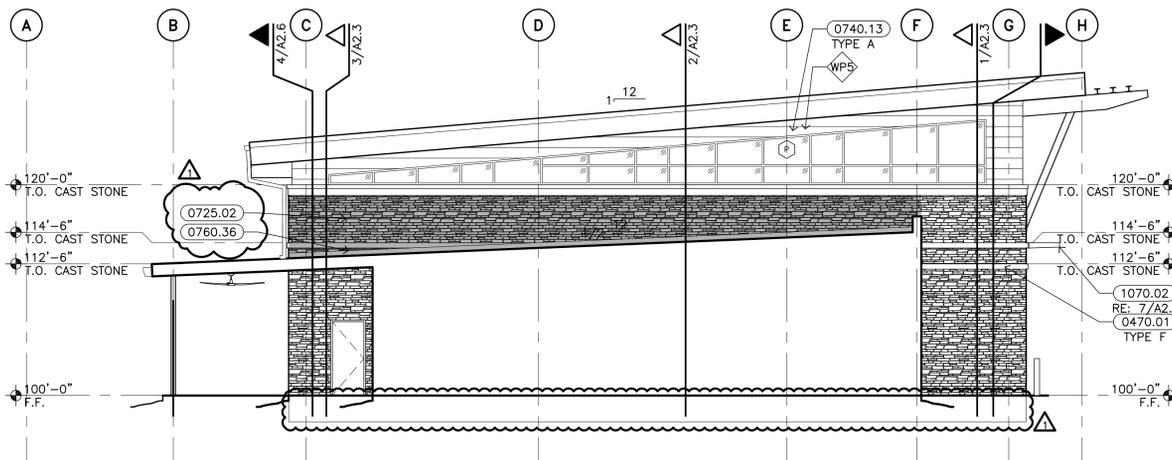


2 EXTERIOR DETAIL
1" = 1'-0"



KEYNOTES

- DIVISION 04 - MASONRY**
 - 0440.07 STONE VENEER
 - 0470.01 CAST STONE
- DIVISION 05 - METALS**
 - 0510.03 STEEL TUBE COLUMN (RE: STRUCTURAL)
- DIVISION 06 - WOOD, PLASTICS, & COMPOSITES**
 - 0610.74 HEAVY TIMBER COLUMN
 - 0640.42 PLASTIC LAMINATE WARDROBE / LOCKER
- DIVISION 07 - THERMAL & MOISTURE PROTECTION**
 - 0725.02 SELF-ADHERING SHEET DAMPROOFING
 - 0740.13 PREFINISHED CONCEALED FASTENER METAL WALL PANELS
 - 0760.03 PREFINISHED METAL GUTTER
 - 0760.06 PREFINISHED METAL DOWNSPOUT
 - 0760.36 PREFINISHED METAL FLASHING
- DIVISION 08 - OPENINGS**
 - 0840.01 ALUMINUM STOREFRONT
- DIVISION 09 - FINISHES**
 - 0920.28 5/8" GYPSUM BOARD (TYPE X)
 - 0950.01 SUSPENDED ACOUSTICAL DAY-IN TILE CEILING (2' X 2')
 - 0960.13 4" RESILIENT BASE
 - 0980.05 2" THICK, FABRIC-WRAPPED ACOUSTICAL WALL PANELS
- DIVISION 10 - SPECIALTIES**
 - 1070.02 PRE-MANUFACTURED EXTERIOR SUN CONTROL DEVICES



LEGEND

SYMBOL	DESCRIPTION
[Pattern]	SELF-ADHERING SHEET DAMPROOFING AT ALL WALL-ABOVE-ROOF CONDITIONS
[Pattern]	STONE: "LEE VALLEY BLEND 4122" BY QUALITY STONE, LEDGESTONE
WP1	METAL PANEL: "MX 1.0" BY MORIN, 20 GA, DOVE GRAY
WP2	METAL PANEL: "MX 2.0" BY MORIN, 20 GA, DOVE GRAY
WP3	METAL PANEL: "MX 4.0" BY MORIN, 20 GA, DOVE GRAY
WP4	METAL PANEL: "F-12-S" BY MORIN, 20 GA, COLONIAL RED
WP5	METAL PANEL: "F-12-S" BY MORIN, 20 GA, DOVE GRAY



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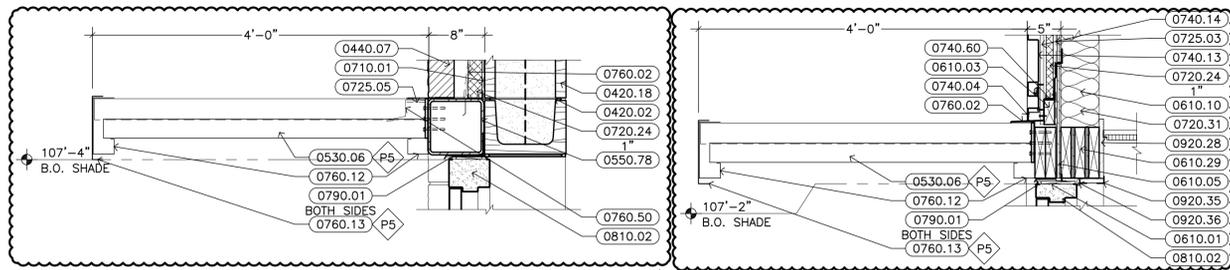
AUSTIN ONION CREEK FIRE & EMS STATION
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AUSTIN, TEXAS 78748

REVISIONS

NO.	DATE	BY	REASON
1	10/24/16		

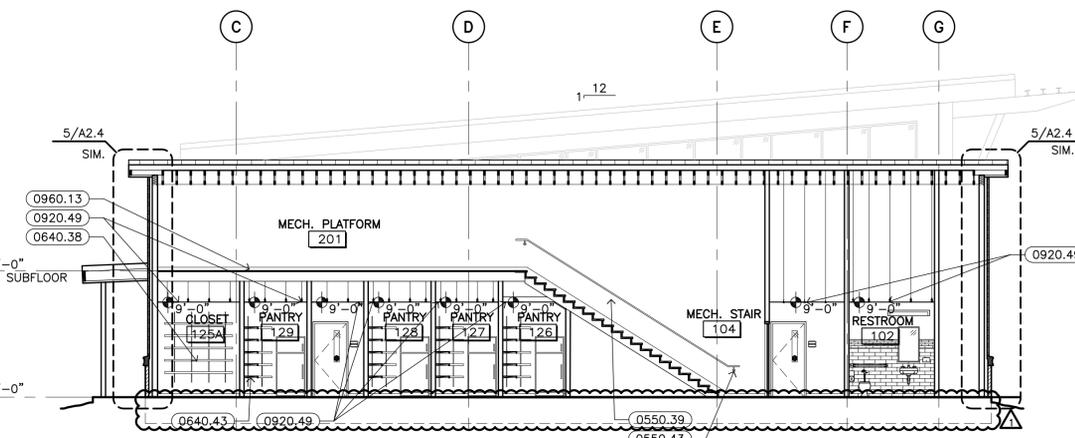
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DRAWN BY: LA, MW
CHECKED BY: RH
PROJECT NO.: 21-4106.00

A2.2
EXTERIOR ELEVATIONS

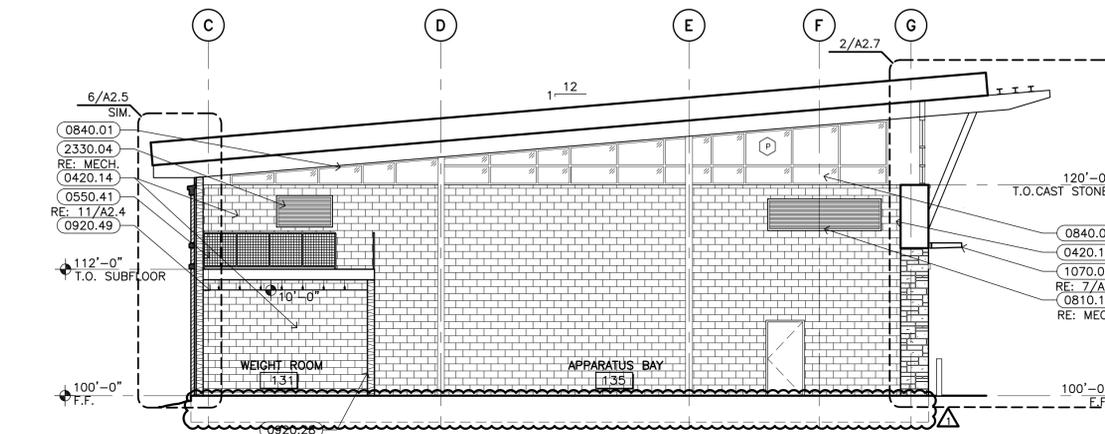


4B OVERHEAD CANOPY DETAIL
1" = 1'-0"

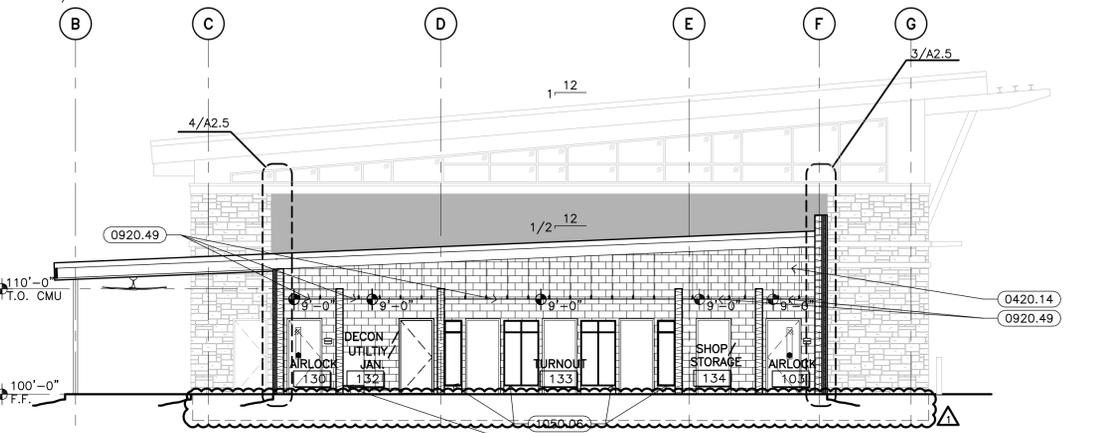
4A OVERHEAD CANOPY DETAIL
1" = 1'-0"



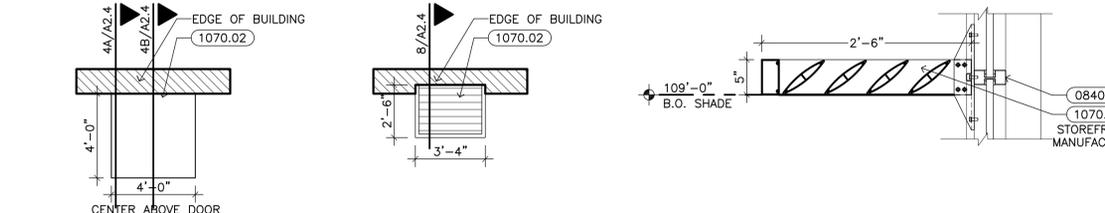
1 BUILDING SECTION
1/8" = 1'-0"



2 BUILDING SECTION
1/8" = 1'-0"



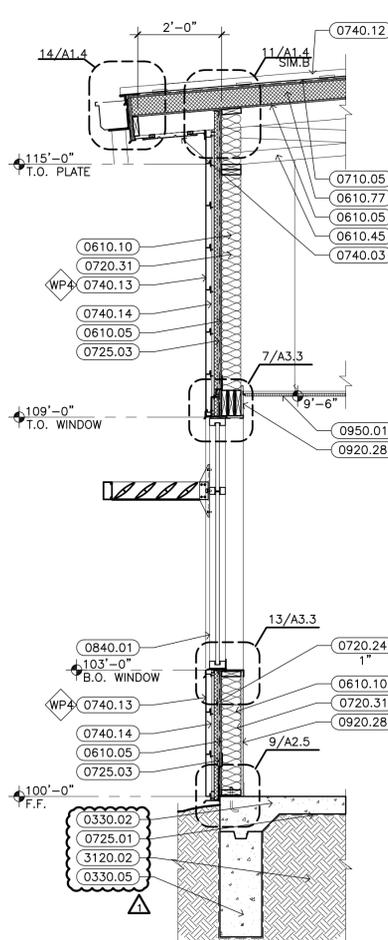
3 BUILDING SECTION
1/8" = 1'-0"



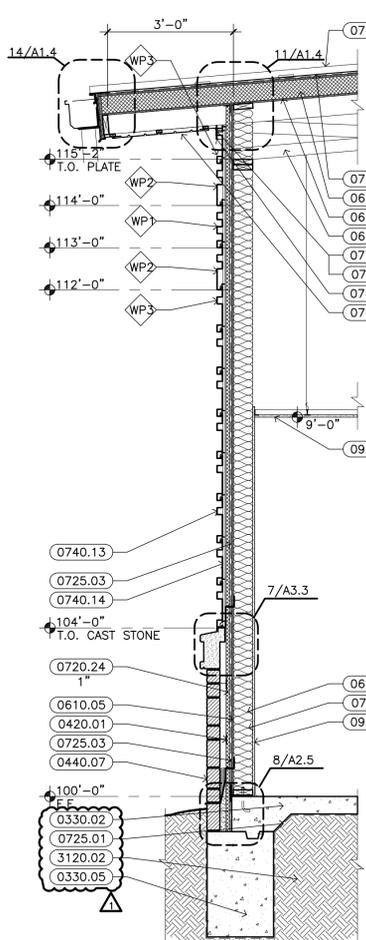
10 SHADING PLAN
1/4" = 1'-0"

9 SHADING PLAN
1/4" = 1'-0"

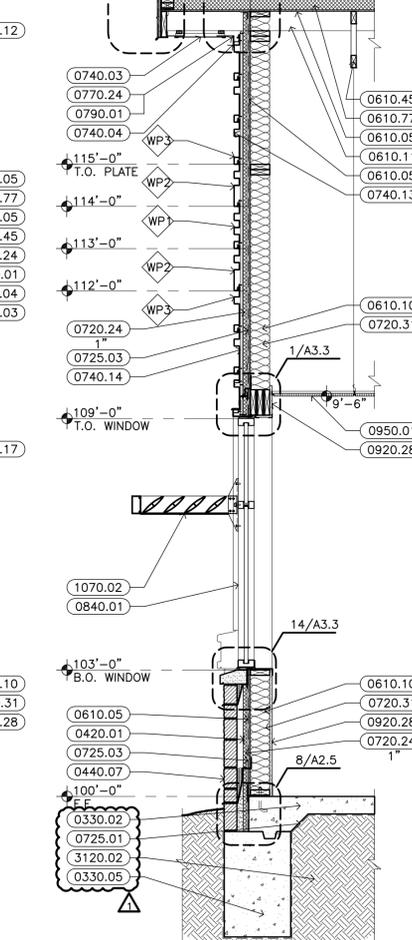
8 SHADING DEVICE DETAIL
1" = 1'-0"



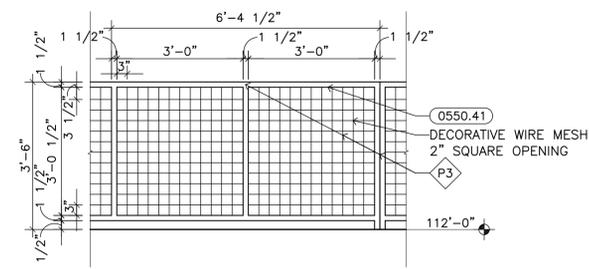
7 WALL SECTION
1/2" = 1'-0"



6 WALL SECTION
1/2" = 1'-0"



5 WALL SECTION
1/2" = 1'-0"



11 METAL RAILING DETAIL
1" = 1'-0"

- KEYNOTES**
- DIVISION 03 - CONCRETE**
 - 0330.02 CONCRETE SLAB (RE: STRUCTURAL)
 - 0330.05 CONCRETE GRADE BEAM (RE: STRUCTURAL)
 - DIVISION 04 - MASONRY**
 - 0420.01 ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
 - 0420.02 HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
 - 0420.14 8" CONCRETE MASONRY UNITS
 - 0420.18 12" CONCRETE MASONRY UNITS
 - 0440.07 STONE VENEER
 - DIVISION 05 - METALS**
 - 0530.06 2 3/4" METAL DECK
 - 0550.39 1 1/4" DIAMETER STANDARD STEEL PIPE
 - 0420.10 HANDRAIL (3'-0" HIGH U.N.O.)
 - 0550.41 1 1/4" STANDARD STEEL PIPE GUARDRAIL (3'-6" HIGH)
 - 0550.43 HANDRAIL BRACKET
 - 0550.78 STEEL TUBE (RE: STRUCTURAL)
 - DIVISION 06 - WOOD, PLASTICS, & COMPOSITES**
 - 0610.01 SHIM AS REQUIRED
 - 0610.03 2X WOOD BLOCKING
 - 0610.05 1/2" EXTERIOR GRADE PLYWOOD
 - 0610.10 2 X 6 WOOD STUDS AT 16" O.C.
 - 0610.11 2 X 6 WOOD FRAMING
 - 0610.29 2X WOOD HEADER (RE: STRUCTURAL)
 - 0610.45 PRE-FABRICATED WOOD TRUSS (RE: STRUCTURAL)
 - 0610.77 COMPOSITE NAIL BASE INSULATED ROOF SHEATHING
 - 0640.38 PLASTIC LAMINATE SHELF
 - 0640.43 PLASTIC LAMINATE SUPPORT BRACKET
 - DIVISION 07 - THERMAL & MOISTURE PROTECTION**
 - 0710.01 BITUMINOUS DAMPPROOFING MASTIC
 - 0710.05 ROOFING UNDERLAYMENT
 - 0720.24 RIGID INSULATION
 - 0720.31 5 1/2" BATT INSULATION (R-20 MIN.)
 - 0725.01 UNDERSLAB VAPOR BARRIER
 - 0725.03 PLASTIC FILM AIR BARRIER
 - 0725.05 SELF-ADHERING MEMBRANE FLASHING
 - 0740.03 PREFINISHED METAL WALL / SOFFIT PANEL WITH REVEALS
 - 0740.04 PREFINISHED METAL WALL PANEL TRIM
 - 0740.12 PREFINISHED METAL STANDING SEAM ROOFING
 - 0740.13 PREFINISHED CONCEALED FASTENER METAL WALL PANELS
 - 0740.14 METAL WALL PANEL SUB-GIRT
 - 0740.60 CONTINUOUS J-MOULDING
 - 0760.02 THROUGH-WALL FLASHING
 - 0760.12 PREFINISHED METAL CANOPY GUTTER / FASCIA
 - 0760.13 PREFINISHED METAL FASCIA
 - 0760.50 PREFINISHED METAL HEAD FLASHING
 - 0770.24 VENTED SCREED (F-MOLDING)
 - 0790.01 SEALANT WITH BACKER ROD AS REQUIRED
 - DIVISION 08 - OPENINGS**
 - 0810.02 HOLLOW METAL FRAME
 - 0810.12 PREFINISHED ALUMINUM LOUVER
 - 0840.01 ALUMINUM STOREFRONT
 - DIVISION 09 - FINISHES**
 - 0920.17 SUSPENDED GYPSUM BOARD ON METAL SUSPENSION SYSTEM
 - 0920.28 5/8" GYPSUM BOARD (TYPE X)
 - 0920.35 CORNER BEAD, TYPICAL
 - 0920.36 J-MOULD, TYPICAL
 - 0920.49 5/8" GYPSUM BOARD ON METAL SUSPENSION SYSTEM
 - 0950.01 SUSPENDED ACOUSTICAL LAY-IN TILE CEILING (2' X 2')
 - 0960.13 4" RESILIENT BASE
 - DIVISION 10 - SPECIALTIES**
 - 1050.06 BUNKER GEAR RACK
 - 1070.02 PRE-MANUFACTURED EXTERIOR SUN CONTROL DEVICES
 - DIVISION 22 - PLUMBING (RE: PLUMBING)**
 - 2240.11 MOP SINK
 - DIVISION 23 - HEATING, VENTILATING, & AIR-CONDITIONING (HVAC) (RE: MECHANICAL)**
 - 2330.04 EXHAUST FAN
 - DIVISION 31 - EARTHWORK**
 - 3120.02 COMPACTED SELECT FILL



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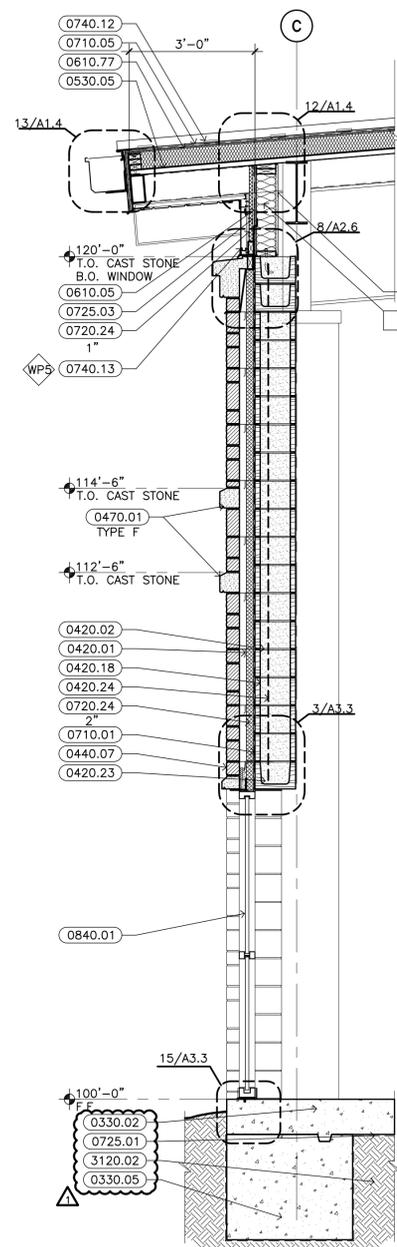
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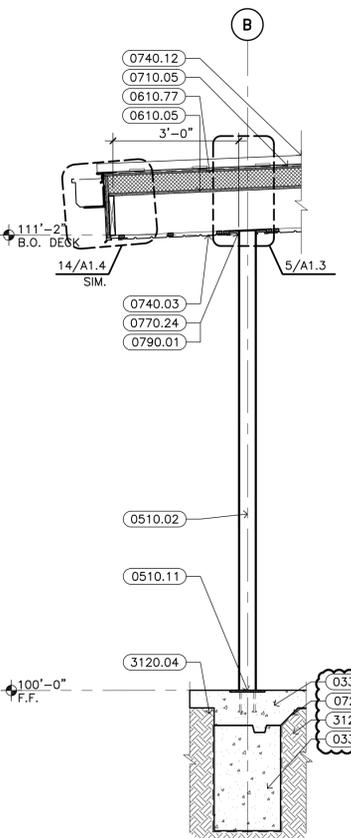
REVISIONS	DATE	BY	REASON
1	10/24/16		

DATE: 9/25/2016
DRAWN BY: L.A. MW
CHECKED BY: RH
PROJECT NO.: 21-4106-00

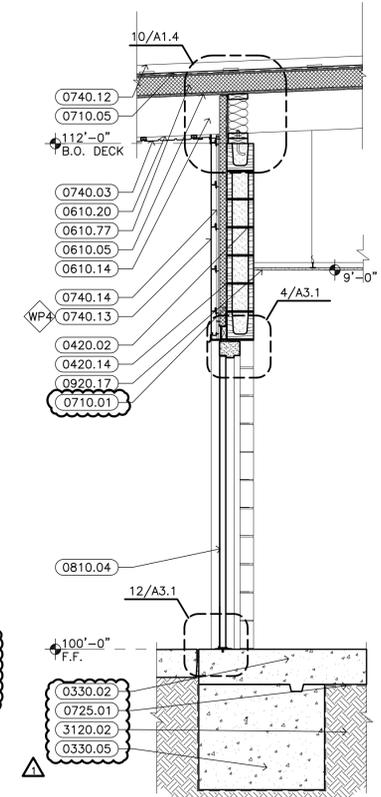
A2.4
BUILDING SECTIONS



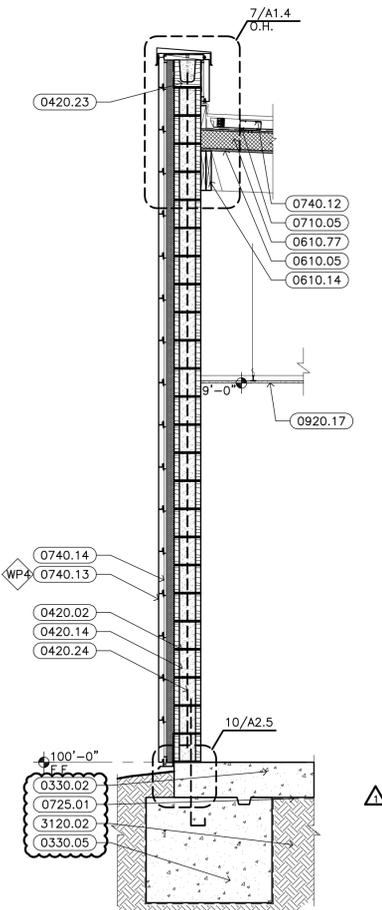
6 WALL SECTION
1/2" = 1'-0"



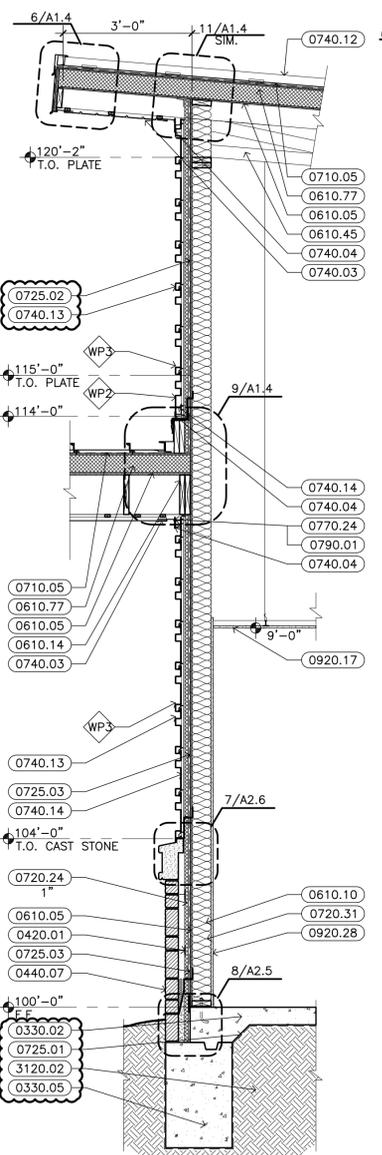
5 WALL SECTION
1/2" = 1'-0"



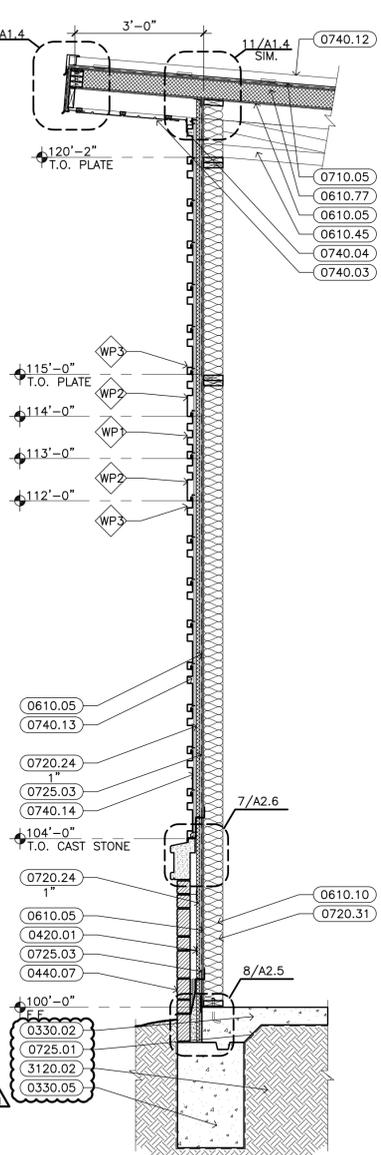
4 WALL SECTION
1/2" = 1'-0"



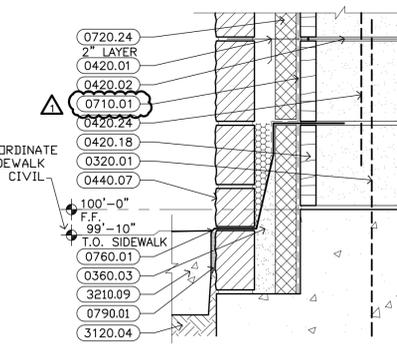
3 WALL SECTION
1/2" = 1'-0"



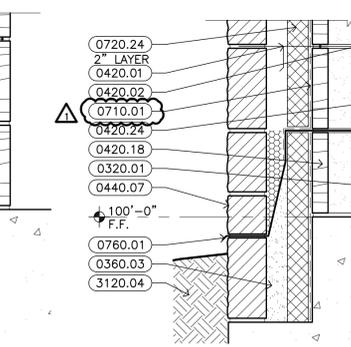
2 WALL SECTION
1/2" = 1'-0"



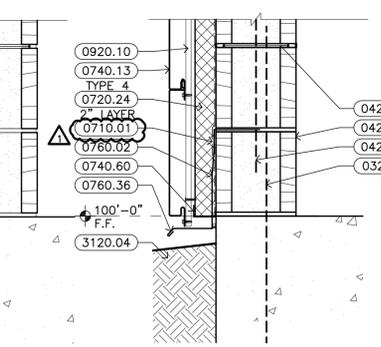
1 WALL SECTION
1/2" = 1'-0"



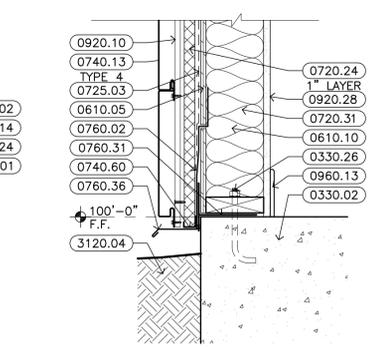
12 SECTION DETAIL
1 1/2" = 1'-0"



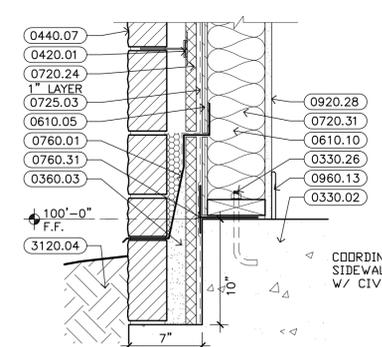
11 SECTION DETAIL
1 1/2" = 1'-0"



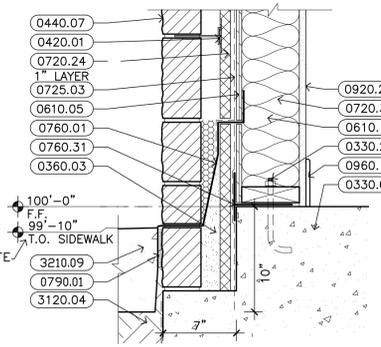
10 SECTION DETAIL
1 1/2" = 1'-0"



9 SECTION DETAIL
1 1/2" = 1'-0"



8 SECTION DETAIL
1 1/2" = 1'-0"



7 SECTION DETAIL
1 1/2" = 1'-0"

- ### KEYNOTES
- DIVISION 03 - CONCRETE**
 - 0320.01 DOWEL INTO CONCRETE SLAB
 - 0330.02 CONCRETE SLAB (RE: STRUCTURAL)
 - 0330.05 CONCRETE GRADE BEAM (RE: STRUCTURAL)
 - 0330.28 ANCHOR BOLT
 - 0360.03 FILL WITH GROUT
 - DIVISION 04 - MASONRY**
 - 0420.01 ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
 - 0420.02 HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
 - 0420.14 8" CONCRETE MASONRY UNITS
 - 0420.18 12" CONCRETE MASONRY UNITS
 - 0420.23 CONCRETE MASONRY UNIT BOND BEAM
 - 0420.24 VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
 - 0440.07 STONE VENEER
 - 0470.01 CAST STONE
 - DIVISION 05 - METALS**
 - 0510.02 STEEL COLUMN (RE: STRUCTURAL)
 - 0510.11 METAL EMBED (RE: STRUCTURAL)
 - 0530.05 ACOUSTICAL METAL DECK (RE: STRUCTURAL)
 - DIVISION 06 - WOOD, PLASTICS, & COMPOSITES**
 - 0610.05 1/2" EXTERIOR GRADE PLYWOOD
 - 0610.10 2 X 6 WOOD STUDS AT 16" O.C.
 - 0610.14 2 X 12 WOOD FRAMING
 - 0610.20 1X WOOD FURRING STRIP
 - 0610.45 PRE-FABRICATED WOOD TRUSS (RE: STRUCTURAL)
 - 0610.77 COMPOSITE NAIL BASE INSULATED ROOF SHEATHING
 - DIVISION 07 - THERMAL & MOISTURE PROTECTION**
 - 0710.01 BITUMINOUS DAMPPROOFING MASTIC
 - 0710.05 ROOFING UNDERLAYMENT
 - 0720.24 RIGID INSULATION
 - 0720.31 5/8" BATT INSULATION (R=20 MIN)
 - 0725.01 UNDERSLAB VAPOR BARRIER
 - 0725.02 SELF-ADHERING SHEET DAMPPROOFING
 - 0725.03 PLASTIC FILM AIR BARRIER
 - 0740.03 PREFINISHED METAL WALL / SOFFIT PANEL WITH REVEALS
 - 0740.04 PREFINISHED METAL WALL PANEL TRIM
 - 0740.12 PREFINISHED METAL STANDING SEAM ROOFING
 - 0740.13 PREFINISHED CONCEALED FASTENER METAL WALL PANELS
 - 0740.14 METAL WALL PANEL SUB-GIRT
 - 0740.60 CONTINUOUS J-MOULDING
 - 0760.01 THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
 - 0760.02 THROUGH-WALL FLASHING
 - 0760.31 SILL SEALER
 - 0760.36 PREFINISHED METAL FLASHING
 - 0770.24 VENTED SCREED (F-MOLDING)
 - 0790.01 SEALANT WITH BACKER ROD AS REQUIRED
 - DIVISION 08 - OPENINGS**
 - 0810.04 HOLLOW METAL DOOR AND FRAME
 - 0840.01 ALUMINUM STOREFRONT
 - DIVISION 09 - FINISHES**
 - 0920.10 7/8" FURRING CHANNELS AT 16" O.C.
 - 0920.17 SUSPENDED GYPSUM BOARD ON METAL SUSPENSION SYSTEM
 - 0920.28 5/8" GYPSUM BOARD (TYPE X)
 - 0920.52 5/8" GYPSUM BOARD, MOISTURE RESISTANT (TYPE X)
 - 0960.13 4" RESILIENT BASE
 - DIVISION 31 - EARTHWORK**
 - 3120.02 COMPACTED SELECT FILL
 - DIVISION 32 - EXTERIOR IMPROVEMENTS**
 - 3210.09 4" CONCRETE SIDEWALK WITH #3'S AT 18" O.C.E.W.



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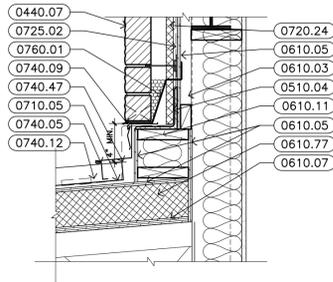
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AUSTIN, TEXAS 78748



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1	10/24/16		

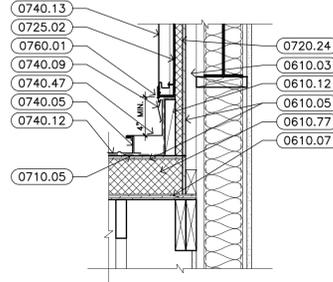
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PROJECT NO.: 214106.00

A2.5
WALL SECTIONS



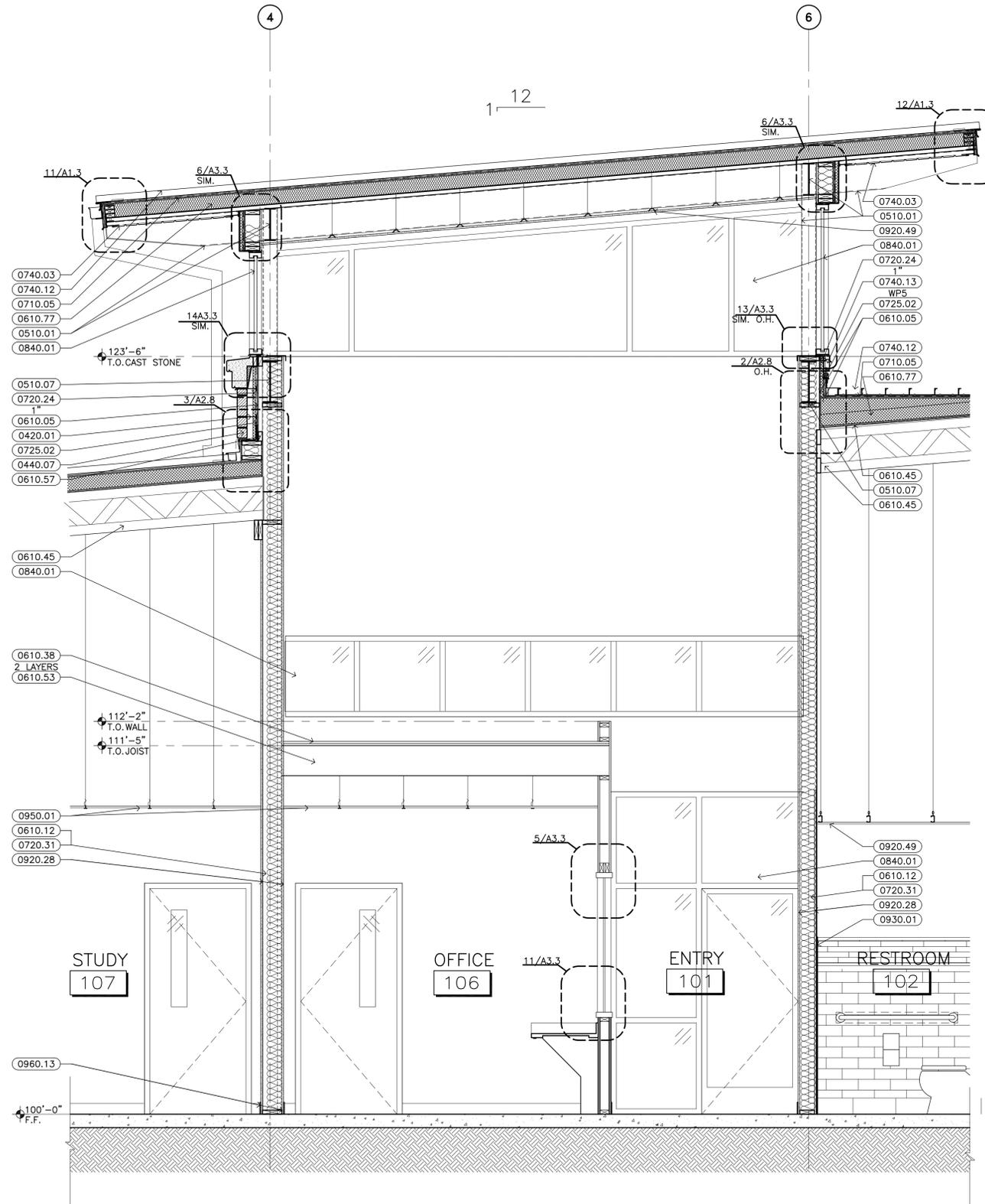
3 ROOF DETAIL
1" = 1'-0"

R0001



2 ROOF DETAIL
1" = 1'-0"

R0001



1 TOWER SECTION
1/2" = 1'-0"

WS001

KEYNOTES

DIVISION 04 - MASONRY

- 0420.01 ADJUSTABLE MASONRY WALL TIES AT 16" O.C. E.W.
- 0440.07 STONE VENEER

DIVISION 05 - METALS

- 0510.01 STEEL STRUCTURE (RE: STRUCTURAL)

- 0510.04 STEEL ANGLE (RE: STRUCTURAL)
- 0510.07 STEEL BEAM (RE: STRUCTURAL)

DIVISION 06 - WOOD, PLASTICS, & COMPOSITES

- 0610.03 2X WOOD BLOCKING
- 0610.05 1/2" EXTERIOR GRADE PLYWOOD
- 0610.07 3/4" EXTERIOR GRADE PLYWOOD
- 0610.11 2 X 6 WOOD FRAMING
- 0610.12 2 X 8 WOOD FRAMING
- 0610.38 3/4" PLYWOOD
- 0610.45 PRE-FABRICATED WOOD TRUSS (RE: STRUCTURAL)

- 0610.53 2 X 12 CEILING JOISTS @ 16" O.C.

- 0610.57 2X WOOD FURRING STRIPS
- 0610.77 COMPOSITE NAIL BASE INSULATED ROOF SHEATHING

DIVISION 07 - THERMAL & MOISTURE PROTECTION

- 0710.05 ROOFING UNDERLAYMENT
- 0720.24 RIGID INSULATION
- 0720.31 5 1/2" BATT INSULATION (R=20 MIN.)

- 0725.02 SELF-ADHERING SHEET DAMPPROOFING

- 0740.03 PREFINISHED METAL WALL / SOFFIT PANEL WITH REVEALS

- 0740.05 Z-CLOSURE BY PREFINISHED METAL ROOFING MANUFACTURER

- 0740.09 METAL REGLET W/ SEALANT & COUNTERFLASHING BY PREFINISHED METAL ROOFING MANUFACTURER

- 0740.12 PREFINISHED METAL STANDING SEAM ROOFING

- 0740.13 PREFINISHED CONCEALED FASTENER METAL WALL PANELS

- 0740.47 PREFINISHED CONTINUOUS RAKE FLASHING BY METAL ROOFING MANUFACTURER

- 0760.01 THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET

DIVISION 08 - OPENINGS

- 0840.01 ALUMINUM STOREFRONT

DIVISION 09 - FINISHES

- 0920.28 5/8" GYPSUM BOARD (TYPE X)
- 0920.49 5/8" GYPSUM BOARD ON METAL SUSPENSION SYSTEM

- 0930.01 CERAMIC TILE

- 0950.01 SUSPENDED ACOUSTICAL LAY-IN TILE CEILING (2' X 2')

- 0960.13 4" RESILIENT BASE



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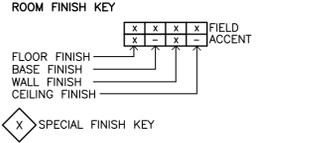
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A2.8
WALL SECTIONS

KEYNOTES

- DIVISION 06 - WOOD, PLASTICS, & COMPOSITES**
 0610.09 2 X 4 WOOD STUDS AT 16" O.C.
- DIVISION 09 - FINISHES**
 0920.26 5/8" CEMENTITIOUS BACKER BOARD
 0920.28 5/8" GYPSUM BOARD (TYPE X)
 0920.52 5/8" GYPSUM BOARD, MOISTURE RESISTANT (TYPE X)
 0920.63 ALUMINUM REVEAL
 0930.01 CERAMIC TILE
 0930.02 COVED CERAMIC TILE BASE
 0930.12 FLUID-APPLIED, FABRIC-REINFORCED WATERPROOFING MEMBRANE
 0980.01 2" SOUND ATTENUATION INSULATION
- DIVISION 10 - SPECIALTIES**
 1010.17 VINYL / ACRYLIC GRAPHICS (RE: SIGNAGE CATALOG)
 1010.30 RAISED LETTERS AND SYMBOLS
 1010.31 RAISED BRAILLE LETTERING
 1010.55 INTERIOR ROOM SIGNAGE

FINISH LEGEND

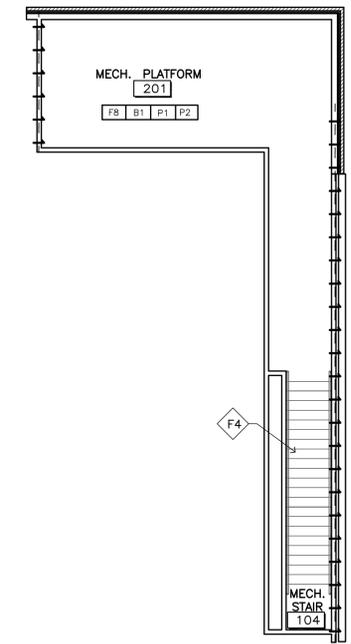


- FINISHES**
- AC 2 X 2 ACOUSTICAL TILE, NON-DIRECTIONAL
 - B1 RUBBER BASE
ROPPE, 193 BLACK BROWN
 - B2 CERAMIC TILE BUILT-UP COVE BASE 4X12
DAL TILE, MODERN DIMENSIONS A-34C1, 0190 ARCTIC WHITE (GLOSS)
 - CG1 CORNER GUARD
ALUMINUM
 - CT1 CERAMIC WALL TILE 4X12
DAL TILE, MODERN DIMENSIONS, 0190 ARCTIC WHITE (GLOSS)
 - CT2 CERAMIC WALL TILE ACCENT 2X8
DAL TILE, MODERN DIMENSIONS, X114 DESERT GRAY (GLOSS)
 - CT3 CERAMIC WALL TILE TRIM 1X8-1/2
A-108 QUARTER ROUND, DAL TILE, MODERN DIMENSIONS, X114 DESERT GRAY (GLOSS)
 - F1 SPECIAL CONCRETE FLOOR FINISH
EXPOSED AGGREGATE
 - F2 RUBBER FLOOR
ECO SURFACES, 910 JAILHOUSE ROCK (ROOM 131)
 - F3 PORCELAIN TILE 2X2
ARIZONA TILE, REGIS, BIANCO
 - F4 RESILIENT RUBBER STAIR TREAD, RISER, & 10" STRINGER
ROPPE RAISED CIRCULAR, 193 BLACK BROWN
 - F5 RUBBER TILE
ROPPE, 193 BLACK BROWN
 - F6 SEALED CONCRETE
(ROOMS 103, 130, 132, 133, 134)
 - F7 SPECIAL CONCRETE FLOOR FINISH
(ROOMS 135)
 - F8 PLYWOOD FLOOR
 - P1 PAINT (BASE WALLS)
SHERWIN WILLIAMS SW7532, URBAN PUTTY
 - P2 PAINT (CEILINGS)
SHERWIN WILLIAMS SW7010, WHITE DUCK
 - P3 PAINT (ACCENT WALLS)
SHERWIN WILLIAMS SW7592, CRABBY APPLE
 - P4 PAINT (ACCENT WALLS)
SHERWIN WILLIAMS SW0032, NEEDLEPOINT NAVY
 - P5 PAINT (H.M. FRAMES & H.M. DOORS)
SHERWIN WILLIAMS SW7020, BLACK FOX
 - RG1 REGLET
FRY REGLET, REVEAL REGLET 1", ALUMINUM
INSTALL 3'-0" A.F.F. (REFER TO DETAIL 3/A4.2)
 - SS1 QUARTZ SURFACE: DAL TILE - ^{REG001}
MICRO FLECKS, NQ60 BRUSHED FLANNEL
 - SS2 QUARTZ SURFACE: DAL TILE - ^{REG001}
MICRO FLECKS, NQ53 SEA SALTS
 - ST1 STAIN (MILLWORK, TRIM AND WOOD DOORS)
SHERWIN WILLIAMS SW3115-0 BISTRO WALNUT

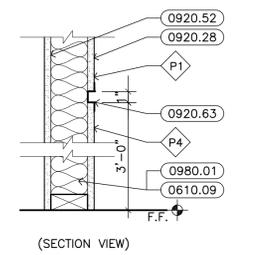
- NOTES:**
- RE: SHEET A3.1 DOOR SCHEDULE FOR DOOR FINISHES
 - RE: SHEET A3.2 FOR INTERIOR ELEVATIONS
 - RE: SHEET A2.1 FOR EXTERIOR ELEVATIONS

NOTE

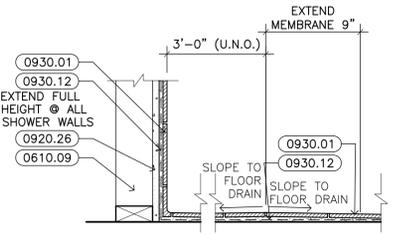
- WATERPROOFING MEMBRANE SHALL BE INSTALLED BEHIND TILE IN ALL AREAS.
- EXTEND CERAMIC TILE UNDER CABINETS TO WALL TYPICAL.



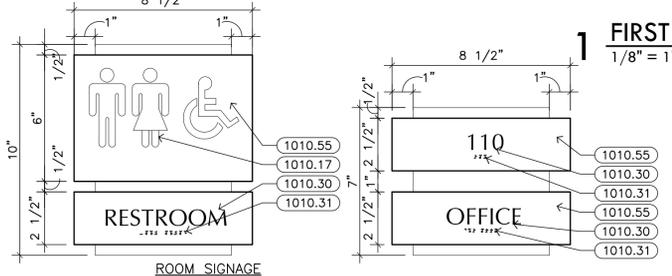
2 SECOND FLOOR FINISH PLAN
 1/8" = 1'-0"



3 REGLET DETAIL
 1 1/2" = 1'-0"



4 SHOWER DETAIL
 1 1/2" = 1'-0"

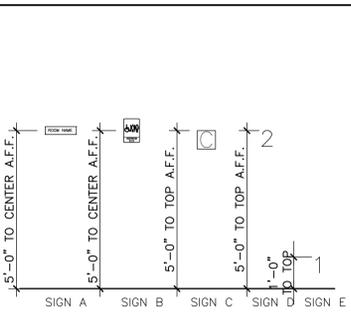


- BACKGROUND (COLORS TO BE SELECTED BY ARCHITECT). USE 1/4" RAISED LETTERS. USE GRADE 2 BRAILLE POSITIONED DIRECTLY BELOW TEXT. LOCATE ON WALL NEXT TO ROOM ENTRY. SIGNAGE MOUNTED ON GLASS SHALL HAVE A COORDINATED LAMINATE BACK.
- EXIT/EGRESS SIGNAGE: PROVIDE INTERIOR TACTILE ROOM SIGNAGE AT ALL DOORS ALONG PASSAGEWAYS, EXIT STAIWAYS, AND EXIT DISCHARGE LEADING TO ACCESSIBLE MEANS OF EGRESS. REFER TO LIFE SAFETY PLAN.

9 PLAN DETAIL
 1" = 1'-0"

SIGN #	SIGNAGE TEXT	SIGN TYPE	QTY.
1	1	E	2
3	3	D	1
7	7	D	1
8	8	D	1
9	9	D	1
10	10	D	2
11	11	D	1
12	12	D	1
13	13	D	1
14	14	D	1
15	15	D	2
16	16	D	1

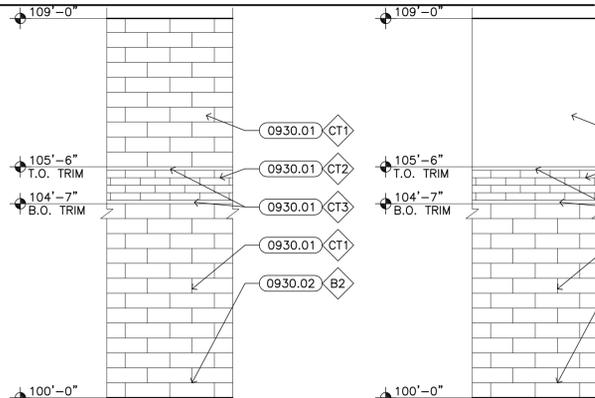
NOTE:
 1. REF. X/A4.2 FOR TYPICAL MOUNTING HEIGHTS
 2. FIELD VERIFY MOUNTING LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION



*BACKGROUND FOR SIGNS A, B & C (COLORS TO BE SELECTED BY ARCHITECT). USE GRADE 2 BRAILLE POSITIONED DIRECTLY BELOW TEXT.

8 SCHEDULE
 NOT TO SCALE

7 TYPICAL MOUNTING HEIGHTS
 NOT TO SCALE



6 TILE DETAIL
 1/2" = 1'-0"

5 TILE DETAIL
 1/2" = 1'-0"



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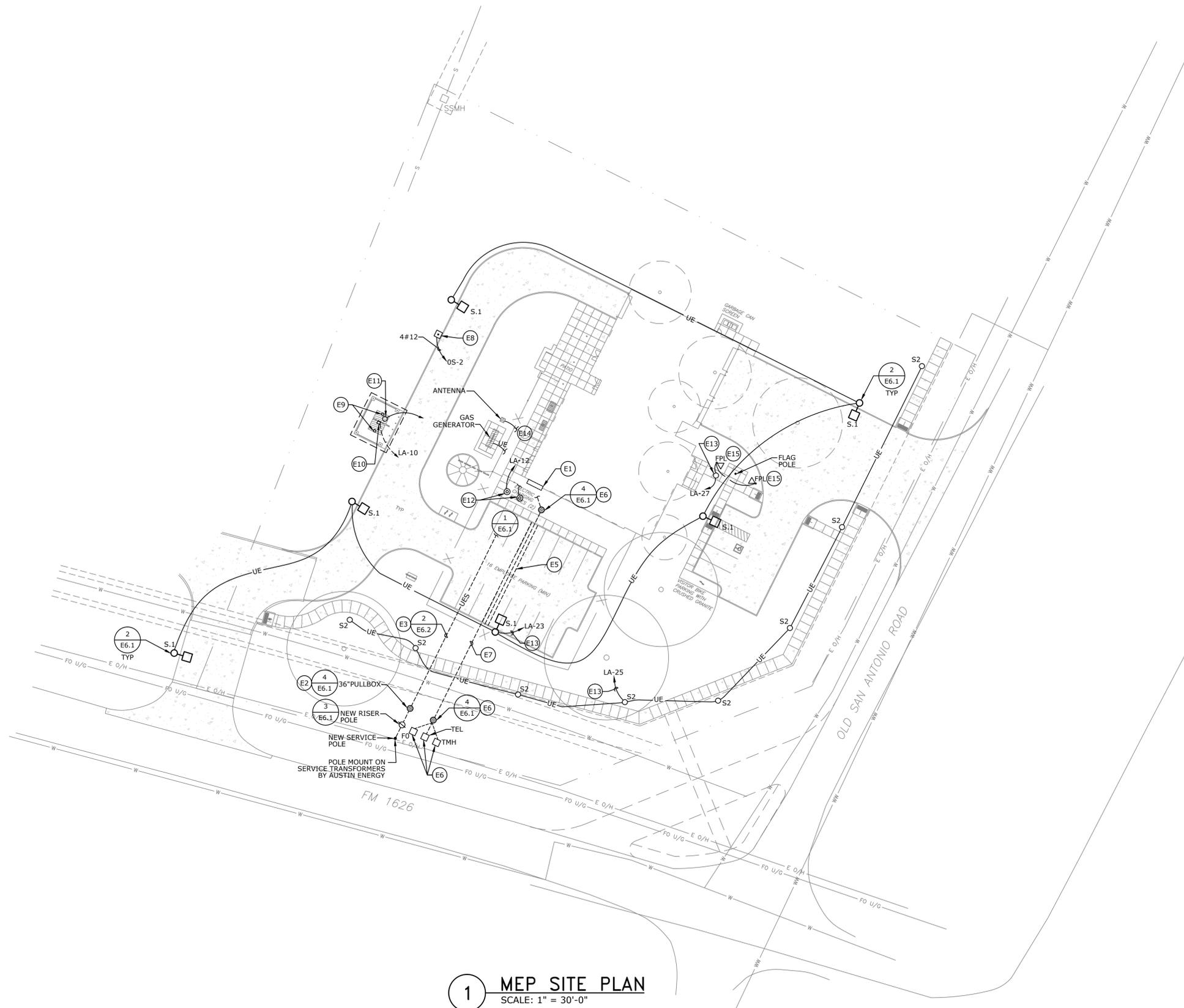
A4.2
 FINISH PLAN

GENERAL NOTES:

- DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF DUCTWORK, PIPING, CONDUIT, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.
- PIPING AND CONDUITS ROUGH-IN AND FINAL CONNECTIONS TO/FROM OWNER PROVIDED EQUIPMENT SHALL BE COORDINATED AND PROVIDED BY THIS CONTRACTOR.

KEYED NOTES:

- (E1) LOCATION FOR SERVICE METER, CT CABINET. MOUNT ON GALVANIZED STEEL C-CHANNEL SUPPORTED INDEPENDENTLY OF WALL.
- (E2) ELECTRICAL SERVICE CONNECTION POINT. NEW PULL BOX AT BASE OF AE POLE.
- (E3) SECONDARY SERVICE FEEDER ROUTED UNDERGROUND TO FUSED MAIN SERVICE DISCONNECT SWITCH.
- (E4) REFER TO DETAIL 3 SHEET E2.1 FOR LOCATION OF NEW COMMUNICATION CONDUIT STUB-UP LOCATION IN COMM 123.
- (E5) TRANSITION FROM PVC CONDUIT TO WRAPPED RGS CONDUIT WHERE ROUTED BELOW PARKING LOT.
- (E6) PROVIDE COMMUNICATION PULL BOX FOR EXTENSION TO UTILITY SERVICE POINT. COORDINATE THESE SERVICE POINTS AND RACEWAY REQUIREMENTS WITH SERVICE PROVIDER.
- (E7) TELEPHONE(S), CATV AND FUTURE GAATN CONDUIT, PROVIDE AS FOLLOWS:
TELEPHONE- ONE 4" PVC-40 CONDUITS
FUTURE GAATN - 2-4" PVC-40 CONDUIT, ONE WITH INNER-DUCT (CATV)
ROUTE ALL CONDUITS IN COMMON TRENCH FROM PULLBOX TO COMMUNICATION ROOM. PROVIDE EMPTY CONDUITS WITH LABELS AT BOTH ENDS AND NYLON PULL STRING.
- (E8) EMERGENCY FUEL SHUT-OFF MUSHROOM BUTTON-VERIFY COMPATIBILITY WITH PUMPING SYSTEM AND SHUNT-TRIP EQUIPMENT. PROVIDE ENGRAVED/LAMINATED (WHITE LETTERS ON RED BACKGROUND) NAME PLATE "EMERGENCY FUEL PUMP SHUT-OFF". INTERFACE WITH SHUNT-TRIP PUMP POWER SUPPLY CIRCUIT BREAKERS. REFER TO ARCHITECTURAL DETAIL OF PEDESTAL.
- (E9) COORDINATE GAS PUMP POWER TERMINATION WITH OWNER'S REPRESENTATIVE AND PUMPING EQUIPMENT. PROVIDE CONDUIT ROUTING AND SEALING FITTINGS PER NEC ART 514.
- (E10) TYPE "Z" LIGHTING FIXTURE MOUNT DIRECTLY BELOW METAL DECK. COORDINATE WITH ARCHITECT AND FUEL DISPENSING EQUIPMENT FROM EXACT LOCATION. PROVIDE 2 #10, 1" C RGS CONDUIT TO PANEL "LA". PROVIDE CONDUIT AND SEAL FITTINGS IN COMPLIANCE WITH NEC ART. 514.
- (E11) VEEDER ROOT PANEL, MOUNT IN WEATHERPROOF ENCLOSURE. EXTEND 2-2" TO COMM ROOM. PROVIDE 1" RIGID CONDUIT FROM PEDESTAL TO VEEDER ROOT. COORDINATE LOCATION ON SITE.
- (E12) EXTEND ONE 1" CONDUIT TO PANEL LA FOR POWER AND ONE 1" CONDUIT TO COMM ROOM FOR POWER AND DATA RESPECTIVELY FOR ELECTRIC VEHICLE CHARGING STATIONS.
- (E13) ROUTE BRANCH CIRCUIT THROUGH EXTERIOR LIGHTING CONTROL PANEL.
- (E14) REFER TO SHEET E2.1 AND E4.1 FOR CONDUIT REQUIREMENTS. FOR ANTENNA AND GENERATOR.
- (E15) INSTALL AT 15.0' FROM BASE OF FLAG POLE.



1 MEP SITE PLAN
SCALE: 1" = 30'-0"



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REVISIONS	DATE	DESCRIPTION
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DATE: 9/25/2016
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PROJECT NO.: 214106.00

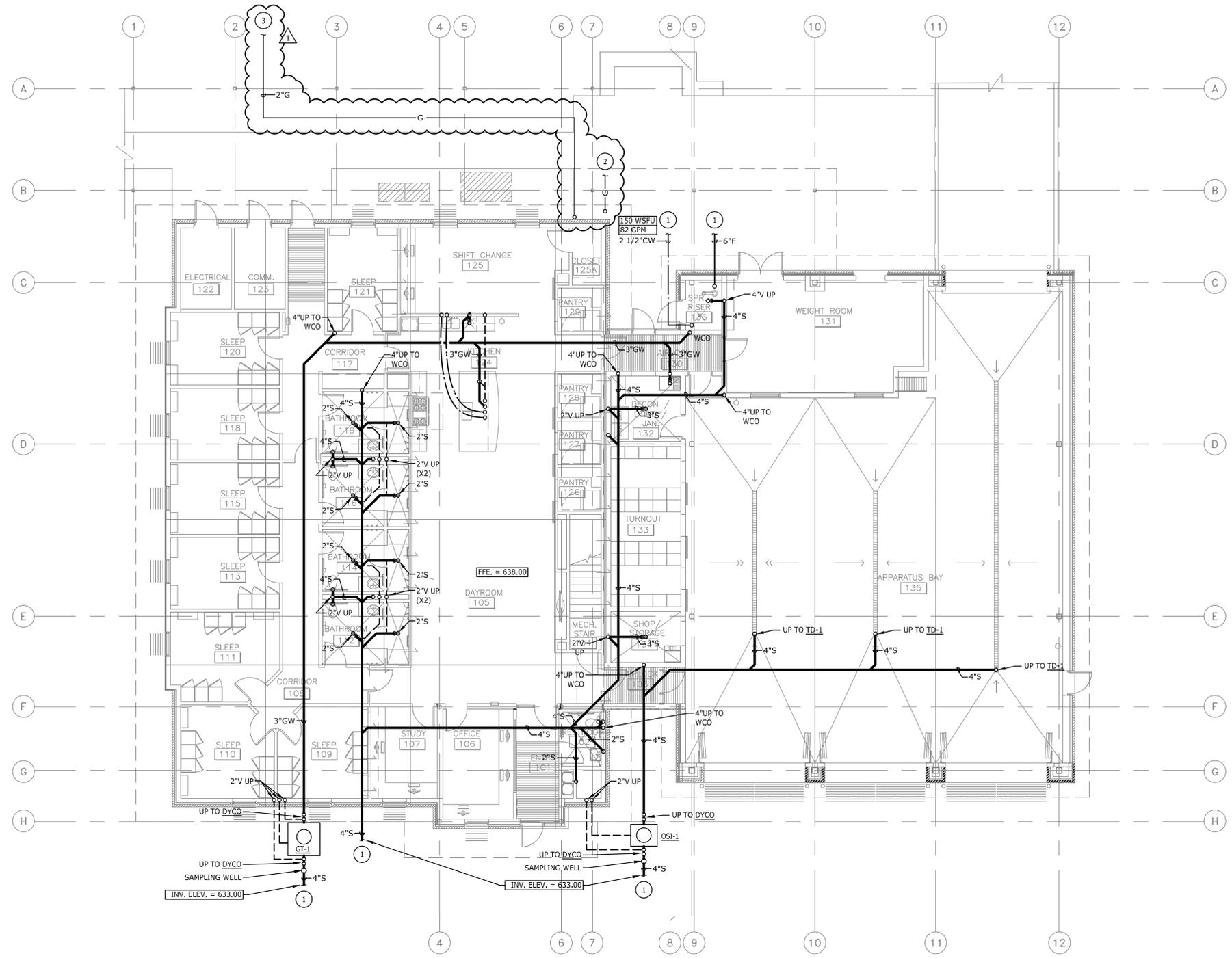


GENERAL NOTES:

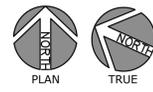
1. DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.
2. FOR PIPE SIZES, VALVES, AND SPECIALTY FITTINGS NOT INDICATED ON DRAWING; SEE PLUMBING FIXTURE SCHEDULE, RISER DIAGRAMS, AND SPECIFICATIONS.
3. MINIMUM SIZE OF ANY DOMESTIC WATER PIPING SHALL BE 3/4" UNLESS NOTED OTHERWISE.
4. EVERY FLOOR DRAIN OR HUB DRAIN SHALL BE PROVIDED WITH A TRAP GUARD BY PREVENT SYSTEMS.
5. FLOOR DRAINS IN FINISHED AREAS SHALL BE LOCATED PER THE ARCHITECTURAL DRAWINGS.

KEYED NOTES:

- 1 CONTINUATION BY CIVIL.
- 2 GAS LINE TO AND INCLUDING THE METER IS BY TEXAS GAS SERVICE. COORDINATE AS REQUIRED.
- 3 NATURAL GAS LINE TO GENERATOR. REFER TO CIVIL DOCUMENTS FOR TRENCHING AND BACKFILLING REQUIREMENTS, AND FOR COORDINATING WITH OTHER UTILITIES ON SITE.



1 PLUMBING UNDERFLOOR PLAN - FIRST FLOOR
SCALE: 1/8" = 1'-0"



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1	10/24/2016	ADDENDUM 1

DATE: 9/23/2016
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PROJECT NO.: 214106.00

P1.1
PLUMBING
UNDERFLOOR PLAN

GENERAL NOTES:

1. DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.
2. FOR PIPE SIZES, VALVES, AND SPECIALTY FITTINGS NOT INDICATED ON DRAWING; SEE PLUMBING FIXTURE SCHEDULE, RISER DIAGRAMS, AND SPECIFICATIONS.
3. MINIMUM SIZE OF ANY DOMESTIC WATER PIPING SHALL BE 3/4" UNLESS NOTED OTHERWISE.
4. PROVIDE EXTENDED VALVE STEMS ON DOMESTIC WATER PIPING, AND INSULATE OVER VALVES. REFER TO PLUMBING SPECIFICATIONS FOR FURTHER REQUIREMENTS.
5. EVERY FLOOR DRAIN OR HUB DRAIN SHALL BE PROVIDED WITH A TRAP PRIMER.
6. FLOOR DRAINS IN FINISHED AREAS SHALL BE LOCATED PER THE ARCHITECTURAL DRAWINGS.

KEYED NOTES:

- 1 GAS METER & 2 PSIG OUTLET REGULATOR BY TEXAS GAS SERVICE. CONTRACTOR TO PROVIDE REGULATOR TO 11"WC ON DOWNSTREAM SIDE OF METER.
- 2 NFPA 24 COMPLIANT 6" FIRE-SUPPRESSION WATER SUPPLY STUB-UP THROUGH FLOOR BY PLUMBING CONTRACTOR. CONTINUATION TO FIRE-RISER ASSEMBLY BY FIRE-SPRINKLER CONTRACTOR.
- 3 PROVIDE REDUCED PRESSURE ZONE (RPZ) TYPE BACKFLOW PREVENTER, FOLLOWED BY A PRESSURE REDUCING VALVE STATION, AT WATER ENTRY TO BLDG. SPILL RPZ DISCHARGE TO FLOOR SINK.
- 4 DIRECT VENT WITH 3" SCH. 80 PVC INTAKE AND EXHAUST WITH VERTICAL CONCENTRIC VENT TERMINATION KIT THROUGH ROOF (TYP). INSTALL PER MANUFACTURER'S INSTRUCTIONS.
- 5 3/4"HW & CW FROM BELOW. PROVIDE ISLAND VENTING OF SINK P-TRAP WITH 2"V. RISE 6"MIN ABOVE FLOOR LEVEL RIM OF SINK BEFORE TURNING DOWN.
- 6 TO GAS UNIT HEATER. COORDINATE WITH MECHANICAL CONTRACTOR.
- 7 PROVIDE TAILPIECE TYPE TRAP PRIMER AT LAVATORY AND ROUTE TO NEARBY FLOOR DRAIN.
- 8 IN ACCORDANCE WITH CITY OF AUSTIN UTILITIES CRITERIA MANUAL, SECTION 2.3.4, PROVIDE SIGN AT EXTERIOR WALL HYDRANTS STATING "NON-POTABLE CITY WATER - DO NOT DRINK". PIPING TO EXTERIOR WALL HYDRANTS SHALL BE SEPARATED FROM THE DOMESTIC WATER SYSTEM THROUGH AN RPZ TYPE BACKFLOW PREVENTER LOCATED IN THE WATER ENTRY.



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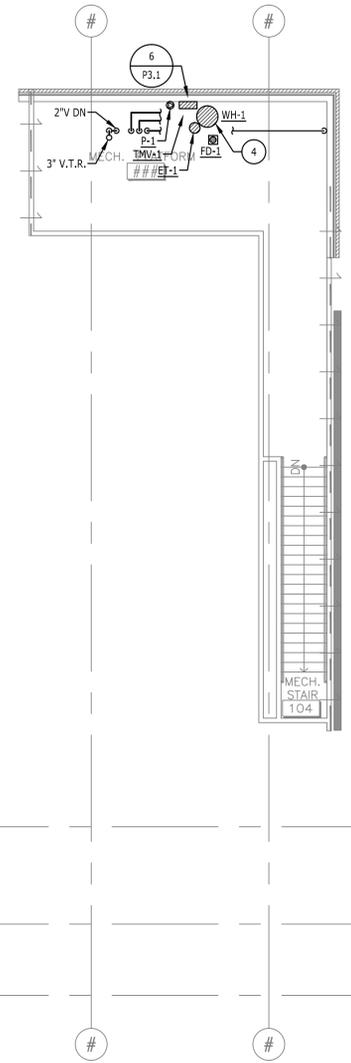
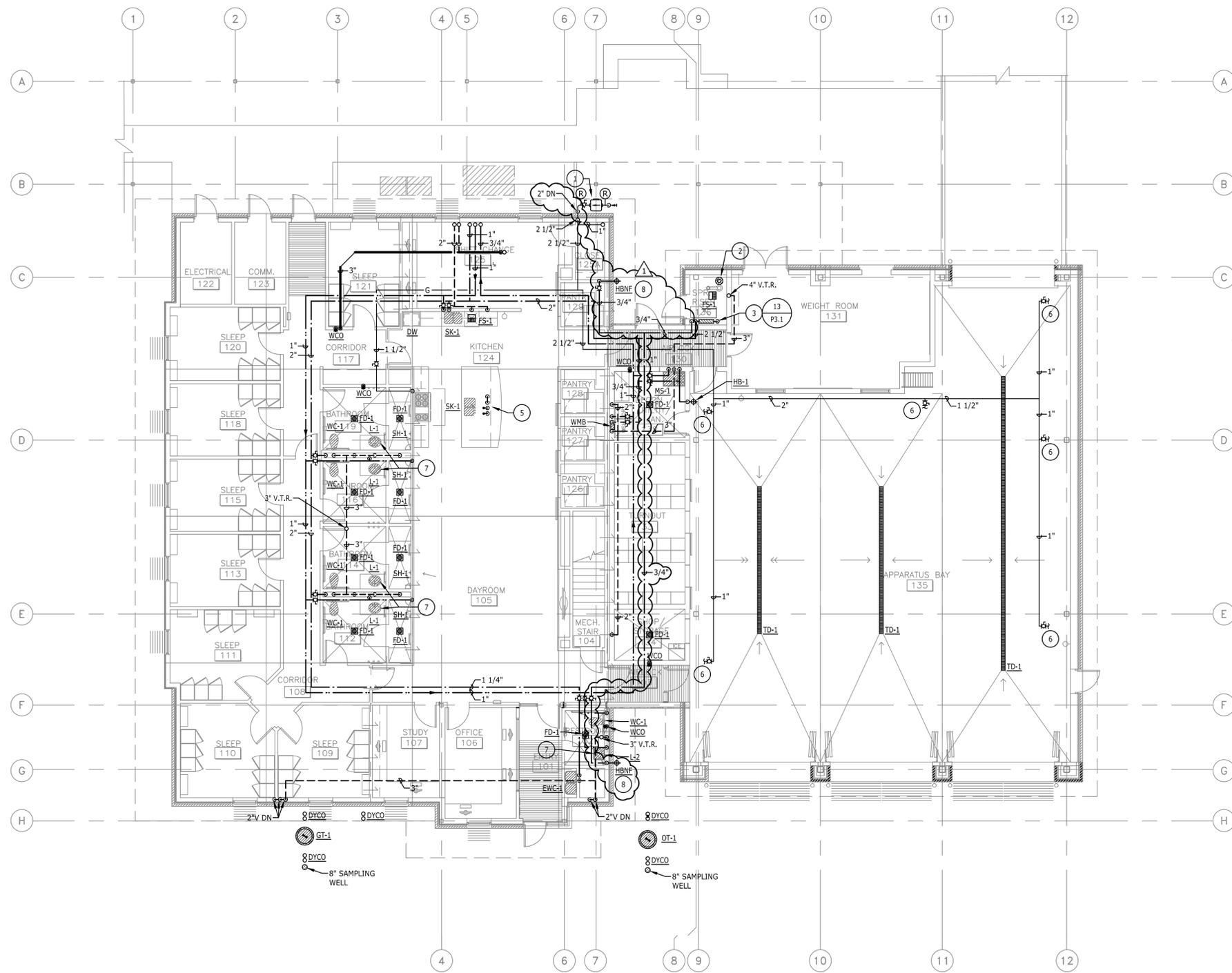
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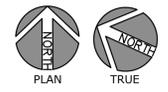
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1	10/24/2016		ADDENDUM 1

DATE: 9/25/2016
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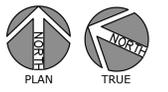
P1.2
 PLUMBING
 FLOOR PLANS



3 PLUMBING PLAN - MECH. PLATFORM
 SCALE: 1/8" = 1'-0"

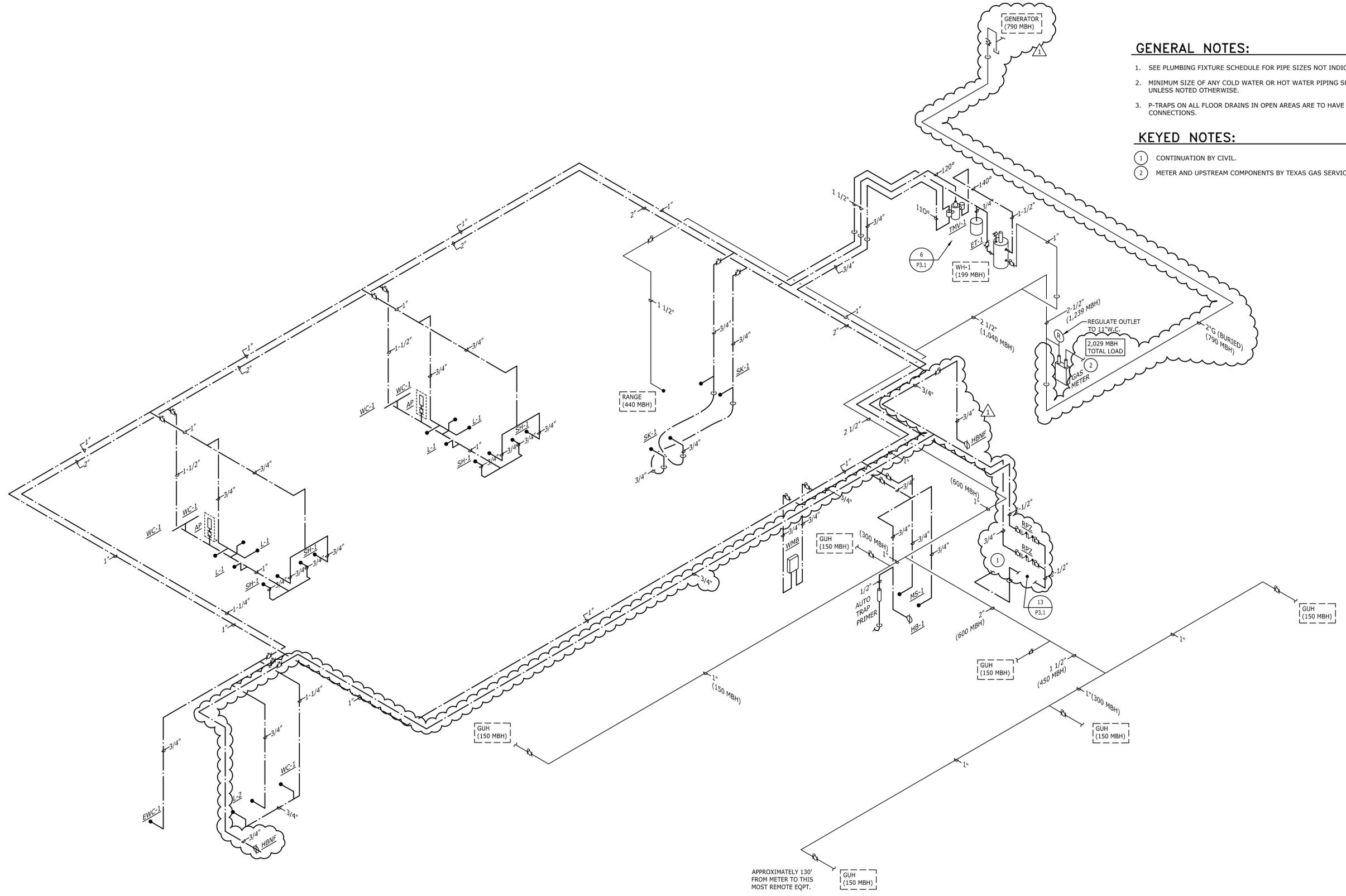


2 PLUMBING PLAN - FIRST FLOOR
 SCALE: 1/8" = 1'-0"



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GENERAL NOTES:

1. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES NOT INDICATED.
2. MINIMUM SIZE OF ANY COLD WATER OR HOT WATER PIPING SHALL BE 3/4" UNLESS NOTED OTHERWISE.
3. P-TRAPS ON ALL FLOOR DRAINS IN OPEN AREAS ARE TO HAVE TRAP PRIMER CONNECTIONS.

KEYED NOTES:

- 1 CONTINUATION BY CIVIL.
- 2 METER AND UPSTREAM COMPONENTS BY TEXAS GAS SERVICE.

1 PLUMBING RISER DIAGRAM
NO SCALE



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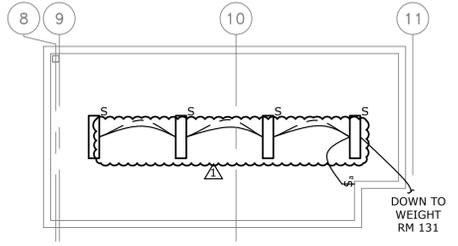
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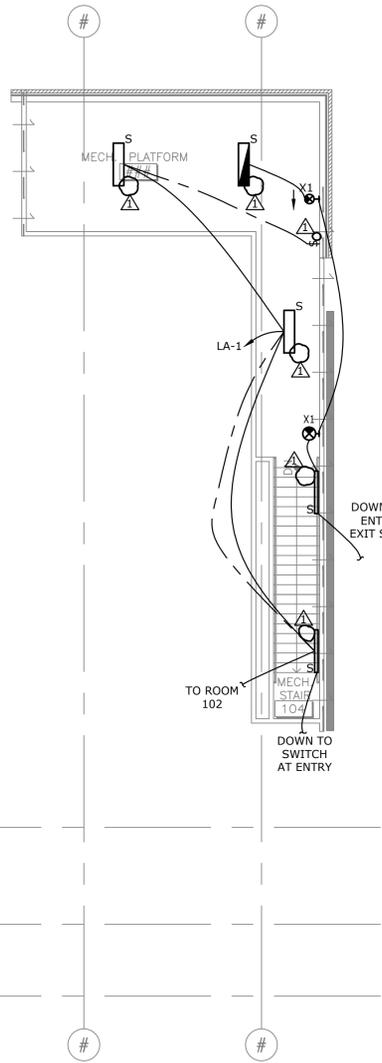
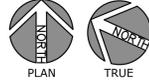
REVISIONS	DATE	DESCRIPTION
1	10/24/2016	ADDENDUM 1

DATE: 9/25/2016
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CHECKED BY: BR
PROJECT NO.: 214106.00

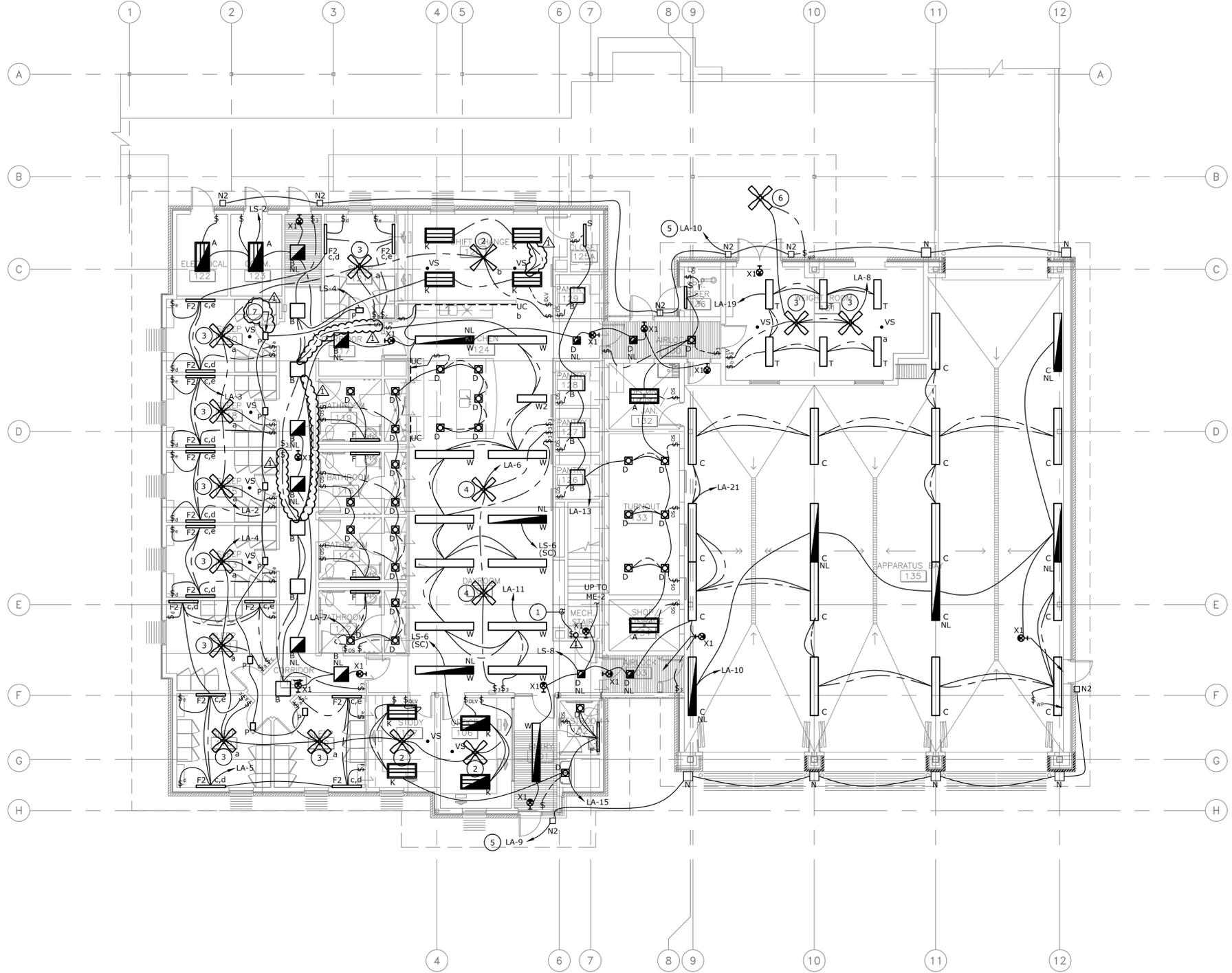
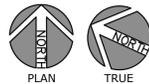
P2.1



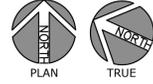
3 ELECTRICAL LIGHTING PLAN – STOR. PLATFORM
SCALE: 1/8" = 1'-0"



2 ELECTRICAL LIGHTING PLAN – MECH. PLATFORM
SCALE: 1/8" = 1'-0"



1 ELECTRICAL LIGHTING PLAN – FIRST FLOOR
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

1. DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF CONDUIT, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.
2. SHARED NEUTRALS ARE NOT PERMISSIBLE.
3. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR AND CONDUIT SIZE AS REQUIRED TO LIMIT VOLTAGE DROP TO 2% MAXIMUM AT DESIGN LOAD FOR FEEDERS AND 3% MAXIMUM AT DESIGN LOAD FOR BRANCH CIRCUITS.

KEYED NOTES:

- 1 SWITCH LCG UP TO TYPE "S" LIGHTING FIXTURE AT STAIR TO MECHANICAL PLATFORM.
- 2 PROVIDE BAF HAIKO CEILING FAN EQUAL TO MODEL S3127-A2-BCS-04-02-C-01 WITH INTEGRAL INFARED OCCUPANCY SENSOR.
- 3 PROVIDE BAF HAIKO CEILING FAN EQUAL TO MODEL L3127-X5-FW-00-00-F VERIFY COLOR WITH ARCHITECT.
- 4 PROVIDE BAF HAIKO CEILING FAN EQUAL TO MODEL B3213-X4-AW-04-02-D VERIFY COLOR WITH ARCHITECT.
- 5 ROUTE CIRCUIT THROUGH EXTERIOR LIGHTING CONTROL PANEL.
- 6 PROVIDE BAE 1515 FAN OR EQUAL TO MODEL 15083.
- 7 COORDINATE REQUIREMENTS OF LED LIGHT WITH ALERTING SYSTEM REPRESENTATIVE. TYPICAL FOR ALL TYPE "P" FIXTURES.



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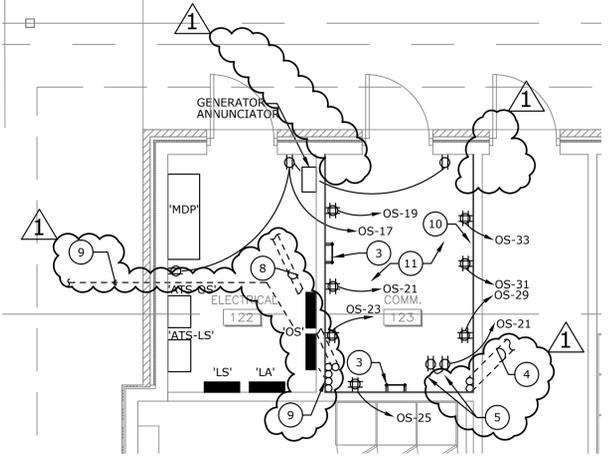
**AUSTIN ONION CREEK
FIRE & EMS STATION**
1112 OLD SAN ANTONIO ROAD
AUSTIN, TEXAS 78748



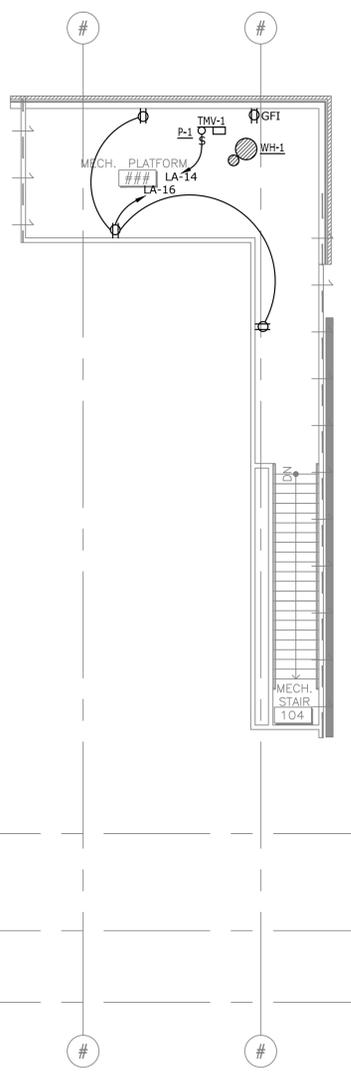
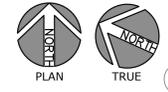
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PROJECT NO.: 214106.00

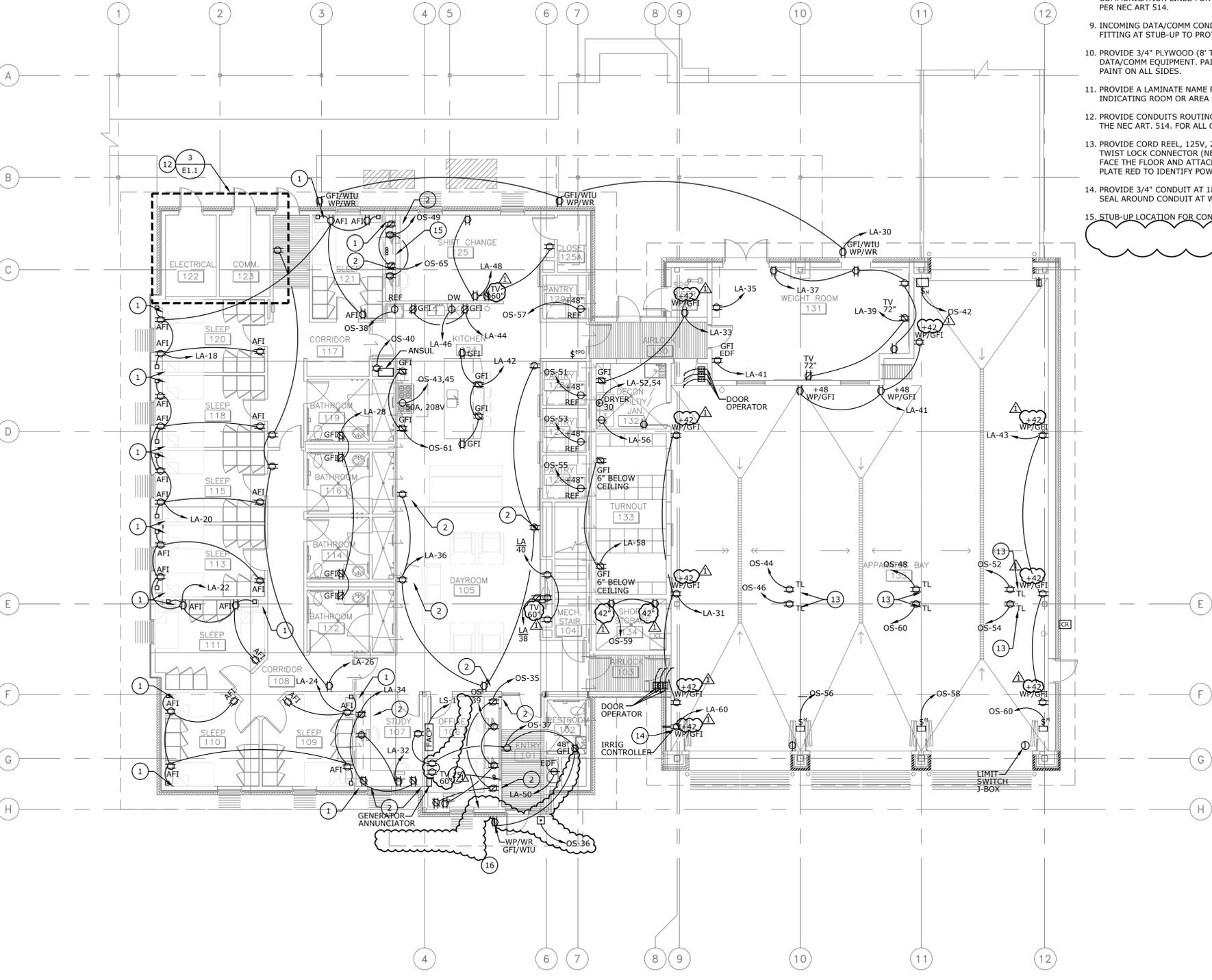
E1.2
ELECTRICAL
LIGHTING PLANS



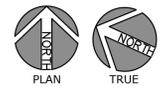
3 ENLARGED ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"



2 ELECTRICAL POWER PLAN - MECH. PLATFORM
SCALE: 1/8" = 1'-0"



1 ELECTRICAL POWER PLAN - FIRST FLOOR
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

- DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF CONDUIT, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.
- SHARED NEUTRALS ARE NOT PERMISSIBLE.
- CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR AND CONDUIT SIZE AS REQUIRED TO LIMIT VOLTAGE DROP TO 2% MAXIMUM AT DESIGN LOAD FOR FEEDERS AND 3% MAXIMUM AT DESIGN LOAD FOR BRANCH CIRCUITS.

KEY NOTES:

- PROVIDE 1-4" PVC CONDUITS (SCHEDULE 80) TO ANTENNA LOCATION. STUB UP AT PAD LOCATION INTO A NEMA 3R ENCLOSURE FOR FUTURE CABLING BY OWNER. PROVIDE BELL FITTING AT STUB-UP. PROVIDE WITH 45 DEG RADIUS BENDS.
- REFER TO DROP CORD DETAIL-SHEET E6.2 COORDINATE LOCATION WITH OWNER.
- PROVIDE 1-4" PVC CONDUITS TO ENTRY 101 WITH NYLON PULL STRINGS TO FACILITATE CABLING BY OWNER. PROVIDE BELL FITTINGS AT STUB-UP TO PROTECT CABLING. VERIFY STUB-UP LOCATION WITH OWNER.
- PROVIDE 1-4" PVC CONDUITS TO OFFICE 106 WITH NYLON PULL STRING TO FACILITATE CABLING BY OWNER. PROVIDE BELL FITTINGS AT STUB-UP TO PROTECT CABLING. VERIFY STUB-UP LOCATION WITH OWNER.
- PROVIDE 2-1" CONDUITS STUBBED UP FROM FUEL ISLAND FOR DATA/ COMMUNICATION LINES FOR FUEL CONTROL TERMINAL. PROVIDE CONDUIT SEALS PER NEC ART 514.
- INCOMING DATA/COMM CONDUITS AS REQUIRED ON SHEET MEPO. PROVIDE BELL FITTING AT STUB-UP TO PROTECT CABLING.
- PROVIDE 3/4" PLYWOOD (8' TALL) ON DRYWALL TO FACILITATE MOUNTING OF DATA/COMM EQUIPMENT. PAINT WHITE WITH TWO COATS OF FIRE RETARDANT PAINT ON ALL SIDES.
- PROVIDE A LAMINATE NAME PLATE FOR EACH CONDUIT STUBBED UP IN ROOM. INDICATING ROOM OR AREA SERVED AND PURPOSE FOR CONDUIT.
- PROVIDE CONDUITS ROUTING AND SEALING FITTINGS IN COMPLIANCE WITH THE NEC ART. 514. FOR ALL CONDUITS ROUTED TO FUEL DISPENSING AREA.
- PROVIDE CORD REEL, 125V, 20A, 35 FOOT LENGTH WITH SINGLE 20 AMP TWIST LOCK CONNECTOR (NEMA L5-20R). PROVIDE RECEPTACLE ORIENTED TO FACE THE FLOOR AND ATTACHED TO BOTTOM OF STRUCTURE. PAINT COVER PLATE RED TO IDENTIFY POWER SOURCE.
- PROVIDE 3/4" CONDUIT AT 18" AFF. WITH PULL STRING. PROVIDE WEATHER TIGHT SEAL AROUND CONDUIT AT WALL AND PROVIDE CAP FOR CONDUIT AT EXTERIOR.
- STUB-UP LOCATION FOR CONDUITS EXTENDED FROM COMMUNICATION ROOM 123.



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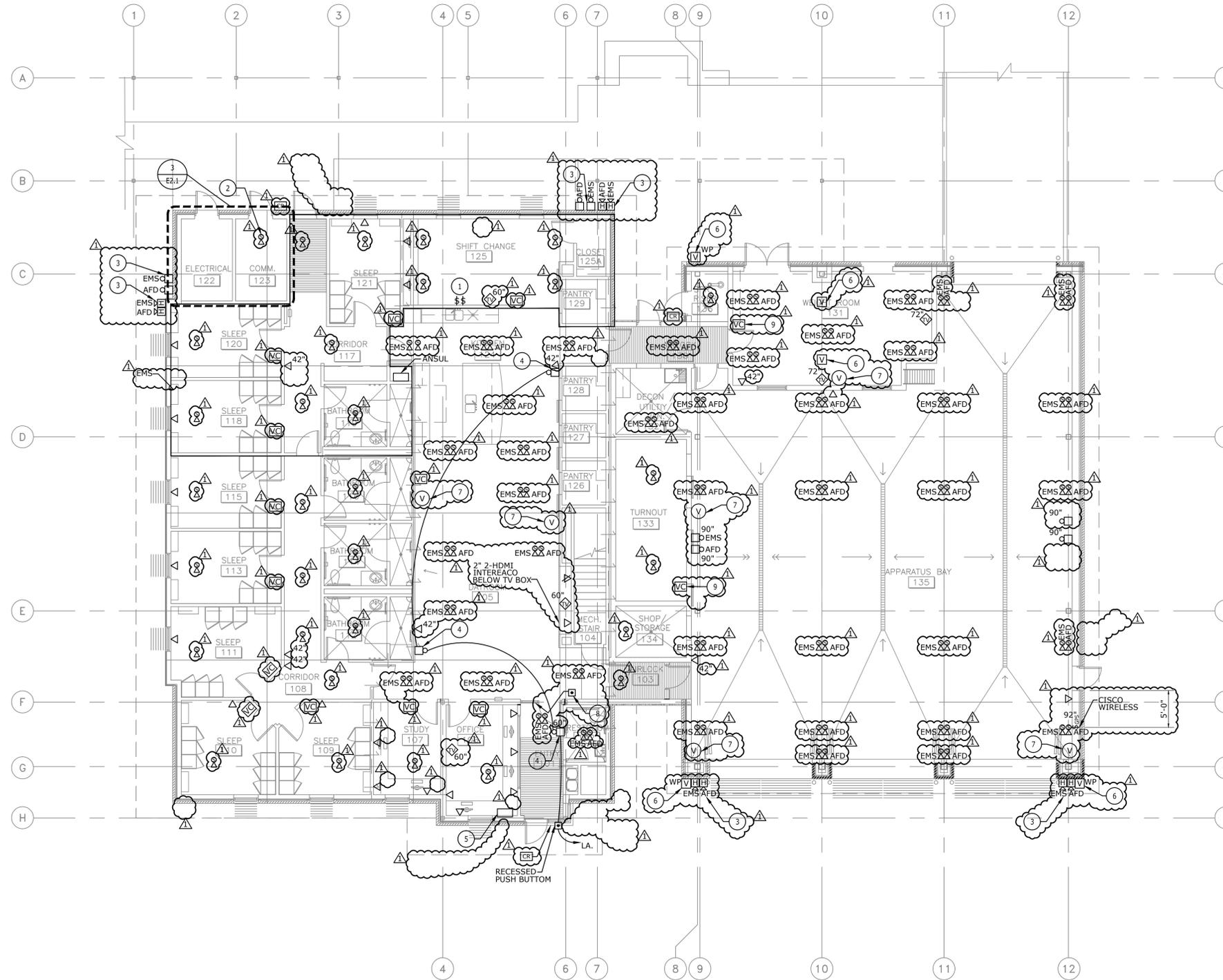
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GENERAL NOTES:

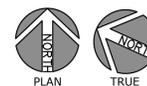
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- SHARED NEUTRALS ARE NOT PERMISSIBLE.
- CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR AND CONDUIT SIZE AS REQUIRED TO LIMIT VOLTAGE DROP TO 2% MAXIMUM AT DESIGN LOAD FOR FEEDERS AND 3% MAXIMUM AT DESIGN LOAD FOR BRANCH CIRCUITS.
- COORDINATE ROUGH-IN REQUIREMENTS FOR ALERTING SYSTEM EQUIPMENT TO INCLUDE ROUGH-IN LOCATIONS, HEIGHTS, RACEWAYS, WITH OWNER/ARCHITECT. ALL REQUIREMENTS NOT SHOWN ON THESE DRAWINGS.

KEYED NOTES:

- PROVIDE 2-TOGGLE SWITCHES FOR CONTROL OF ALL EXTERIOR HORNS AND TELEPHONE RINGERS. PROVIDE AN ENGRAVED LAMINATED COVER PLATE FOR IDENTIFICATION.
- PAGING SPEAKER FOR SYSTEM TESTING.
- EXTERIOR TELEPHONE RINGER AND VOLUME CONTROL AT 108" AFF.
- PROVIDE DOOR BELL WITH VOLUME ADJUSTMENT MOUNTED AT 84" AT DOOR BELL.
- REFER TO MEPO FOR CONDUIT REQUIREMENTS.
- ALERTING SYSTEM STROBE.
- WALL MOUNTED ALERTING SYSTEM EQUIPMENT. COORDINATE ROUGH-IN REQUIREMENTS WITH SYSTEM MANUFACTURER.
- WALL MOUNTED ASSIST BUTTON. COORDINATE ROUGH-IN REQUIREMENTS WITH ALERTING SYSTEM MANUFACTURER.
- WALL MOUNTED VOLUME CONTROL. VERIFY ROUGH-IN REQUIREMENTS WITH ALERTING SYSTEM MANUFACTURER. TYPICAL



1 SPECIAL SYSTEMS PLAN - FIRST FLOOR
SCALE: 1/8" = 1'-0"



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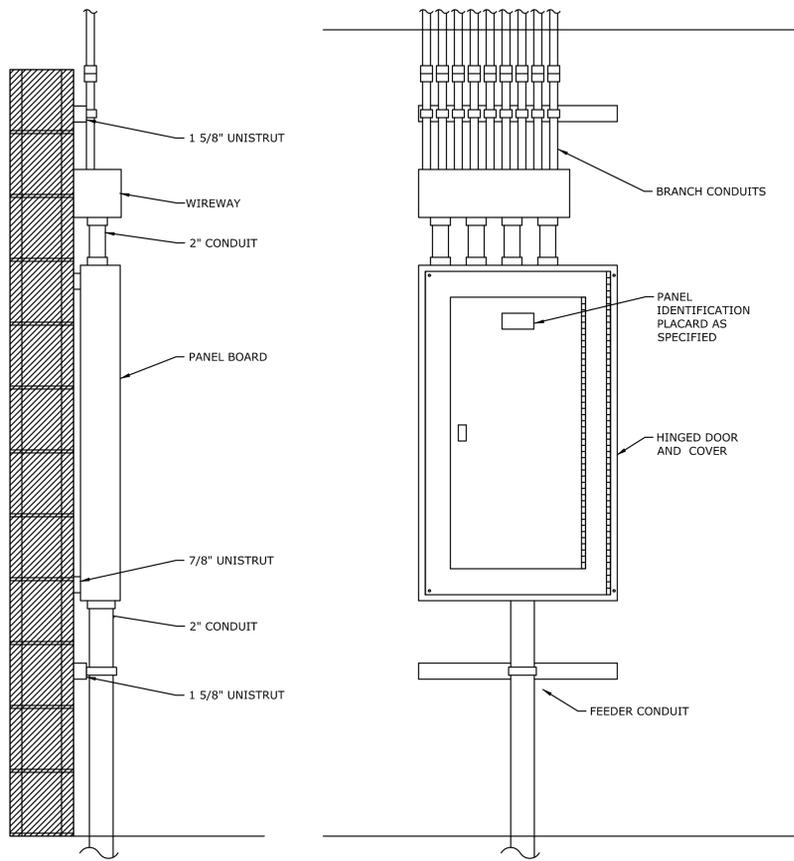
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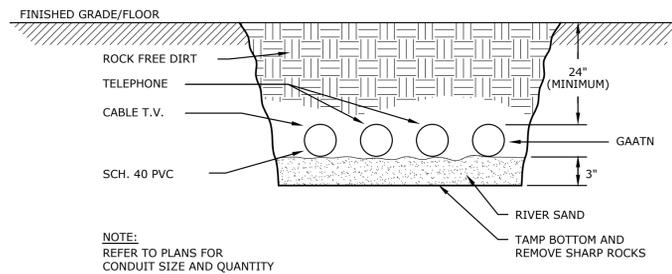
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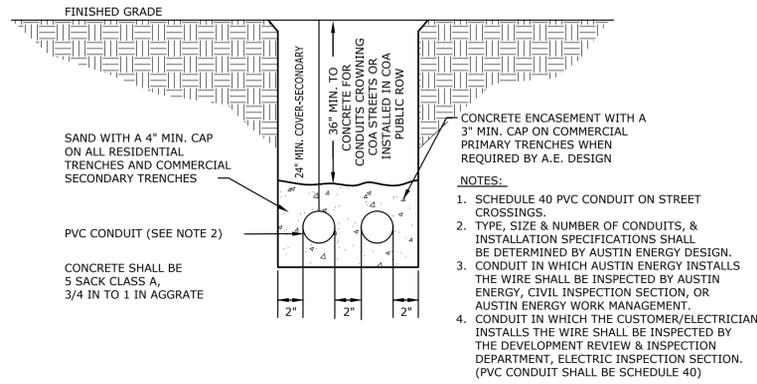
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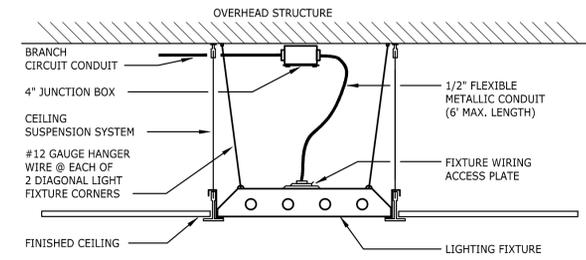
3 TYPICAL SURFACE MOUNTED PANELBOARD DETAIL
NO SCALE



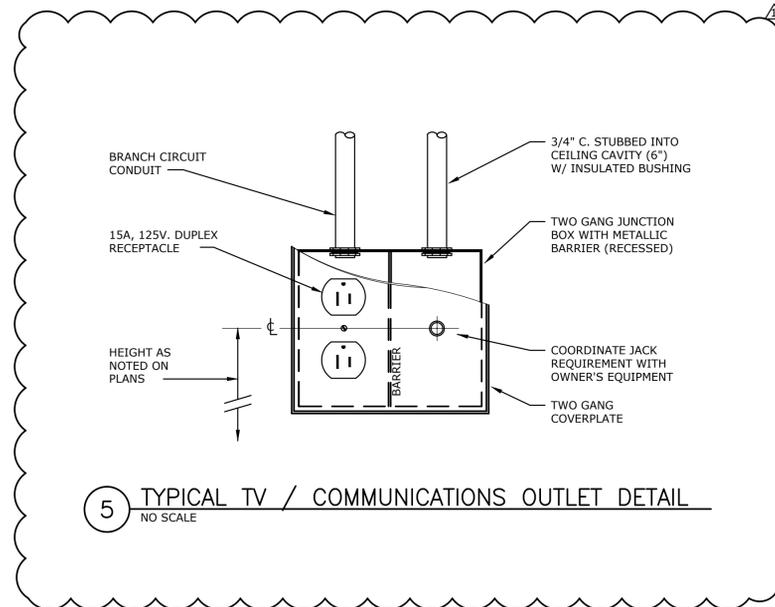
6 COMMUNICATIONS DUCTBANK DETAIL
NO SCALE



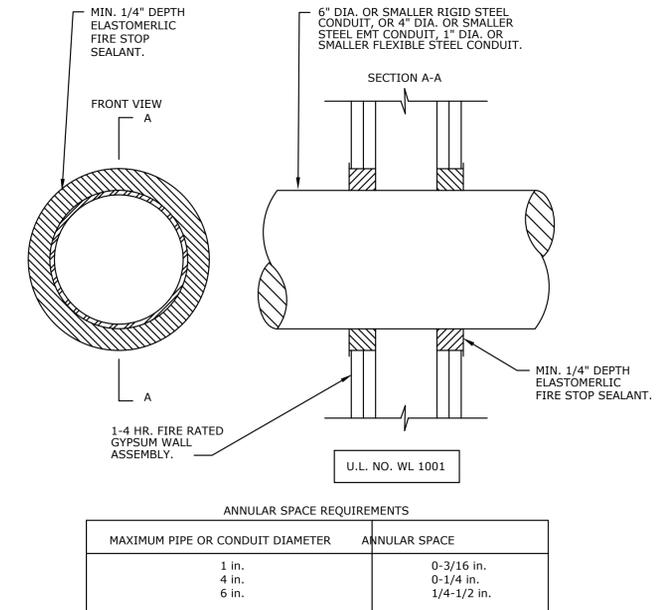
2 ELECTRICAL SERVICE DUCTBANK DETAIL
NO SCALE



1 TYPICAL LAY-IN LIGHTING FIXTURE MOUNTING DETAIL
NO SCALE



5 TYPICAL TV / COMMUNICATIONS OUTLET DETAIL
NO SCALE



ANNULAR SPACE REQUIREMENTS	
MAXIMUM PIPE OR CONDUIT DIAMETER	ANNULAR SPACE
1 in.	0-3/16 in.
4 in.	0-1/4 in.
6 in.	1/4-1/2 in.

- INSTALL THE FIRESTOP SYMMETRICALLY ON BOTH SIDES OF THE WALL ASSEMBLY.
- CAULK IS TO BE FORCED INTO THE ANNULAR SPACE TO THE MAXIMUM EXTENT POSSIBLE WITH A MINIMUM 1/4-in. DIAMETER BEAD OF CAULK APPLIED TO THE PERIMETER OF THE CONDUIT AT ITS EGRESS FROM THE WALL.

4 CONDUIT FIRE STOP DETAIL
NO SCALE



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E6.2