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Bid Bulletin #01

PROJECT: Seward Memorial Library
Lower Level Renovation
Seward, NE

DATE: January 25, 2013

This Bid Bulletin includes items 1-1 through 1-1. Each item shall be fully incorporated into the Bidding/Contract Documents and have the same force and effect as though originally included. Bidders shall acknowledge receipt of this Bid Bulletin on the bid form.

Item 1-1 Attached is Addendum #1 dated 1/25/13 from The Clark Enersen Partners.

END OF BID BULLETIN #01

ADDENDUM NO. 1

The Architect/ Engineer issues this addendum, applicable to the above named project, to all known Contractors before receipt of proposal.

This addendum includes Item Number 1-1 thru 1-40. This addendum item shall be fully incorporated into the Bidding/Contract Documents and have the same force and effect as though originally included.

The Bidder shall acknowledge receipt of this Addendum No. 1 on the Bid Proposal Form in the place provided.

GENERAL

Drawings

Item 1-1: Sheet G0.0 – Title Sheet, Index of Drawings

The Coordinating Professional for the project is the Electrical Engineer, Jennifer A. Klein.

ARCHITECTURAL

Specifications

Item 1-2: Section 012300 – Alternates

This Section has been issued in its entirety as part of this Addendum.

Item 1-3: Section 042000 – Unit Masonry

This Section has been issued in its entirety as part of this Addendum.

Item 1-4: Section 047200 – Dimension Stone

This Section has been issued in its entirety as part of this Addendum.

Item 1-5: Section 095113 – Acoustical Panel Ceilings

See paragraph 2.1.A.1. CertainTeed Ceilings Corporation acoustical panel ceiling product—Symphony® *f* #1342-IOF-1F is an approved equal for Armstrong Optima® Open Plan #3355 with foil backing, noted in the specifications and the drawings as APC-1.

Item 1-6: Section 310000 – Earthwork

This Section has been issued in its entirety as part of this Addendum.

Item 1-7: Section 311000 – Site Clearing

This Section has been issued in its entirety as part of this Addendum.

Item 1-8: Section 312219 – Finish Grading

This Section has been issued in its entirety as part of this Addendum.

Item 1-9: Section 321313 – Concrete Paving

This Section has been issued in its entirety as part of this Addendum.

Item 1-10: Section 329300 – Plant Material

This Section has been issued in its entirety as part of this Addendum.

Drawings

Item 1-11: G1.01 – Code Compliance (Sheet issued in full)

- Genealogy Room 031 on Lower Level Code Plan has increased in size, increasing the occupant load for this floor.
- Egress counts have been updated on both levels.
- Total Occupant Load numbers have been updated on Code Requirements table.

Item 1-12: A0.02 – First Floor Demo Plan (Sheet issued in full)

Updated Demolition Notes and Drawings to include demolition of gate at Trash Enclosure.

Item 1-13: A1.01 – Lower Level Plan (Sheet issued in full)

- Addition of Raised Platform at base of monument stair.
- Storage 030 has been eliminated and replaced by an expansion of Genealogy 031. Wood Frame WD-14 has been updated to show new wood and glass front on east portion of Genealogy 031. Wood Frame WD-12 has been updated to show alternate door location. All walls surrounding Genealogy 031 to be type 1D.

Item 1-14: A1.02 – First Floor Plan (Sheet issued in full)

The following items should be included in their entirety as part of Add Alternate No. M-1: Dehumidification:

- Provide new exterior slab and screen wall with footing. Screen wall construction and materials to match existing transformer/trash screen wall.
- Provide new chase within Women 103 to accommodate new refrigerant and power lines for Dehumidification. Relocate existing Sanitary Napkin dispenser in new location as indicated, patching existing chase wall location.
- Shorten existing lighting cove, grill, and fixture to accommodate new chase wall.

Item 1-15: A1.03 – Lower Level Reflected Ceiling Plan (Sheet issued in full)

New extents of APC ceiling layout in Genealogy 031.

Item 1-16: A4.01 – Wall Sections, Typ. Column Elevation (Sheet issued in full)

- Detail 4: Updated to accommodate ½" clear tempered glass panel front in deepened sculpture recess
- Detail 7: Typical Screen Wall Section, to be included in its entirety as part of Add Alternate No. M-1: Dehumidification.

Item 1-17: A5.01 – Enlarged Stair Section & Floor Plan (Sheet issued in full)

- Detail 1: Revised to show all notes and dimensions previously shown on Detail 2.
- Detail 2: Revised to show extent of new raised platform beneath monument stair.
- Detail 3: Revised to show new raised platform beneath monument stair.
- Detail 4: Added to show edge detail of new raised platform beneath monument stair.

Item 1-18: A6.01 – Interior Elevations (Sheet issued in full)

- Detail 2: Updated Elevation showing new configuration of WD-12 and WD-14 at Genealogy 031.
- Detail 4: Updated to show inclusion of ½" clear tempered glass panel in sculpture recess.

Item 1-19: A6.02 – Interior Elevations

Detail 11, 12, 13: Include the following general note: PROVIDE CYLINDER LOCKS ON ALL CABINET DOORS IN DIE CUT 029, FINISH TO MATCH DOOR HARDWARE.

Item 1-20: A6.03 – Interior Elevations

Detail 3: Include the following general note: PROVIDE CYLINDER LOCKS ON ALL CABINET DOORS IN BUSINESS CENTER 033, FINISH TO MATCH DOOR HARDWARE.

Item 1-21: A6.05 – Enlarged Floor Plans & Interior Elevations

- Detail 2, 3, 5: Include the following general note: PROVIDE CYLINDER LOCKS ON ALL CABINET DOORS IN WARMING KITCHEN 034, FINISH TO MATCH DOOR HARDWARE.
- Reference SDA-001 for changes to Detail 13. Adds tall casework on east end of elevation and includes note referencing cylinder locks on all cabinet doors.

Item 1-22: A6.06 – Door Schedule, Frame Type Elevations, Frame Details (Sheet issued in full)

- Door Schedule: Updated Door No. 030. Change eliminates the requirement for Hardware Set #5.
- Detail 6: Wood Frame Types: Updated Wood Frame Types WD-12 and WD-14 to reflect changes to Genealogy 031. Updated Wood Frame Type WD-3 to include cylinder locks on all 4 cabinet doors, finish to match door hardware.

Item 1-23: A6.08 – Casework Sections and Details

Reference SDA-002. Adds Detail 14, section detail of tall casework in Children's Program Room 120.

Item 1-24: A7.01 – Plan Details

Reference SDA-003. Updates Detail 8 on Sheet A7.01.

Item 1-25: A7.01 – Plan Details

Reference SDA-004. Updates Detail 9 on Sheet A7.01

Item 1-26: A7.02 – Plan Details

Reference SDA-005. Updates Detail 11 on Sheet A7.02. Inclusion of ½" clear tempered glass panel and hardwood glass stop.

Item 1-27: A8.02 – Section Details

Reference SDA-006. Adds Detail 6 on Sheet A8.02. Inclusion of ½" clear tempered glass panel and hardwood glass stop.

Item 1-28: A8.02 – Section Details

Reference SDA-007. Adds Detail 7 on Sheet A8.02. Inclusion of ½" clear tempered glass panel and hardwood glass stop.

Item 1-29: F1.01 – Lower Level Finish Floor Plan (Sheet issued in full)

- Paint East wall of the expanded Genealogy 031 PT-4. Revised room finish schedule for Genealogy 031 finishes accordingly.
- Provide windows shades at Staff Workroom 016 as noted.
- Provide finishes at stair base as noted.

Item 1-30: SDL-001

Site demolition plan for Alternate M-1

Item 1-31: SDL-002

Site development plan for Alternate M-1

MECHANICAL

Specifications

Item 1-32: Section 237413 – Air Cooled Condenser Unit

As part of add alternate M-1, this Section has been issued in its entirety as part of this Addendum.

Drawings

Item 1-33: M0.01 – Lower Level HVAC Demolition Plan

As part of add alternate M-1, remove ductwork as shown on SDM-02 and all associated accessories. In addition existing pipe hangers, electrical conduit, and PVC discharge lines from the sewage ejector will require relocation to facilitate the new ductwork and coil installation in this general area.

Item 1-34: M1.01 – Lower Level HVAC Plan

As part of add alternate M-1 install new 24/24 conditioned outside air ductwork, dehumidification coil package with transitions, access doors, refrigerant line sets, condensate piping to nearest floor sink, and all required accessories for a complete installation as shown on SDM-02. See SDM-01 & SDM-02 for additional details and equipment schedule.

Item 1-35: M1.02 – First Floor HVAC Plan

As part of add alternate M-1 install ACCU-1 and all detailed accessories per SDM-02. See SDM-01 for equipment schedules and additional equipment details.

Item 1-36: M7.02 – Mechanical Schedules

As part of add alternate M-1, the Air Cooled Condensing Unit, DX Cooling Coil, and Hot Gas Reheat Coil schedule has been added on SDM-01.

ELECTRICAL

Drawings

Item 1-37: E0.02 – First Floor Electrical Demolition Plan, E1.02 – First Floor Lighting Plan

Refer to Women 103. As part of Add Alternate M-1, remove the northern most light fixture in the west wall lighting cove. The existing fixture is a four foot, two lamp fluorescent strip fixture surface mounted in an architectural cove. Replace the fixture with a similar two foot, two T8 lamp strip fixture (Lithonia C217 277 GEB10RS with F017T8, 3500K lamps) and reconnect to the adjacent fixtures after completion of the room modifications.

Item 1-38: E1.01 – Lower Level Lighting Plan

Refer to Storage 030 and Genealogy 031. One 8.5” x 11” portion of this plan has been revised and reissued as part of this Addendum. Refer to supplemental drawing SDE001 for additional information.

Item 1-39: E2.01 – Lower Level Power & Auxiliary Systems Plan

- Refer to Storage 030 and Genealogy 031. One 8.5" x 11" portion of this plan has been revised and reissued as part of this Addendum. Refer to supplemental drawing SDE002 for additional information.
- Refer to Mechanical 001. As part of Add Alternate M-1, provide electrical connections to the new coils installed in ERU-1 by the Mechanical Contractor. Provide two new 30A/3P circuit breakers in existing Panel 'M1' to serve the new units. The circuit breakers shall be fully compatible with the existing panelboard and shall maintain the fault current rating and UL listing of the panel. Clearly label the panelboard directory to reflect the additional circuits and loads served. Route #10 conductors in ¾" conduit throughout the circuits. Provide 30A/3P disconnect switches for each load located near or on the unit. Coordinate the necessary electrical connections to the unit with the Mechanical Contractor.
- Refer to Mechanical 001. As part of Add Alternate M-1, installation of the refrigerant piping and modifications to the ERU-1 may require relocation of a number of existing ½" conduits serving lighting and mechanical loads in the area. Coordination with the Mechanical Contractor will be needed to identify conduits to relocate and available adjacent areas for relocation.

Item 1-40: E3.01 – Electrical One Line Diagram, Lighting Fixture Schedule and Details

Refer to the One Line Diagram. As part of Add Alternate M-1, provide a new 60A/3P circuit breaker in the Main Distribution Panel 'MDP' to serve the new exterior mechanical unit ACCU-1. The circuit breaker shall be fully compatible with the existing panelboard and shall maintain the fault current rating and UL listing of the panel. Clearly label the breaker, with a phenolic label as detailed in the specification, to reflect the load served. Route 3-#6 and 1-#10 GRND in 1" conduit from the breaker to the unit located on grade west of the building. Route the conduit via a new chase in the upper level women's restroom shared with refrigerant piping. Conduit to be routed exposed at grade with the refrigerant piping. Exterior conduit to share curb supports provided by the Mechanical Contractor. Disconnecting means at the unit provided by the Mechanical Contractor. Coordinate conduit installation and electrical equipment connection details with the Mechanical Contractor.

END OF ADDENDUM NO. 1

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Deduct Alternate No. A-1: Staff Workroom as shell space.

1. Base Bid: Finished space complete with casework, carpet, paint, ceiling, mechanical, electrical and telecommunications as detailed in the Drawings and Specifications.
2. Alternate: Unfinished space. Space to remain in existing condition including existing light fixtures and power, exposed floor and structure. Alternate pricing should not include window treatments on the south wall as noted in this addendum and the Specifications. Rough-in for sink not to be included in alternate pricing. Alternate pricing to include modifications to the HVAC design, as detailed in the Drawings, to allow for the five taps tapped three feet beyond the duct and each terminated with a damper. Alternate pricing should include costs to shift the existing chain hung lighting as necessary for the installation of walls; and provide two smoke detectors at structure and necessary connections to the existing fire alarm system.

B. Deduct Alternate No. A-2: Appliances.

1. Base Bid: Warming Kitchen 034 appliances as noted in the Drawings and Specifications.
2. Alternate: Warming Kitchen ready for appliance installation. Installation of sink, garbage disposal and appliance rough-ins to not be included in Alternate pricing. Alternate to remove from base bid the costs of purchase and installation of microwave ovens, warming ovens, washer/dryer, refrigerator, ice maker and dishwashers.

C. Deduct Alternate No. E-1: A/V and Security.

1. Base Bid: Camera security system, motorized projection screens and associated power and cabling to systems as detailed in the Drawings and Specifications.
2. Alternate: Removal of motorized projection screen, associated controls, power and cabling in Business Center 033. Removal of the camera system on the lower and first levels.

D. Add Alternate No. M-1: Dehumidification.

1. Base Bid: HVAC system as detailed in the Drawings and Specifications.
2. Alternate: Add a dehumidification system to the building infrastructure via an exterior unit and interior rework of the energy recovery unit with the addition of a dehumidification coil and all associated landscape, architectural cutting and patching and electrical support as noted in drawings and specifications issued as part of Addendum #1.

END OF SECTION 012300

SECTION 042000 - UNIT MASONRY

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. See Section 007300 “Supplementary Conditions”, if included, for requirements relating to interpretation of the drawings and specifications.

1.2 SUMMARY

A. This Section includes the following:

1. Concrete unit masonry.
2. Clay unit masonry.

1.3 SUBMITTALS

A. Product data for each different type of masonry unit and accessory.

B. Samples: Clay unit masonry showing full range of colors and textures expected in finished construction.

1.4 QUALITY ASSURANCE

A. Unit Masonry Standard: Comply with ACI 530.1/ASCE 6 "Specifications for Masonry Structures," except as otherwise indicated.

1. Revise ACI 530.1/ASCE 6 to exclude Sections 1.4 and 1.7; Parts 2.1.2, 3.1.2, and 4.1.2; and Articles 1.5.1.2, 1.5.1.3, 2.1.1.1, 2.1.1.2, and 2.3.3.9 and to modify Article 2.1.1.4 by deleting requirement for installing vent pipes and conduits built into masonry.

B. Field-Constructed Mock-Ups: Prior to installation of unit masonry, erect sample wall panels. Build Mock-up approximately 4 foot by 4 foot and maintain on site during construction.

C. Mortar/Grout Testing Service: Engage a testing laboratory acceptable to Architect/Engineer to perform material evaluation tests and to design mortar/grout mixes.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver masonry materials to project in undamaged condition.

B. Store and handle masonry units, cementitious materials, and accessories off the ground, under cover, and in a dry location.

1.6 PROJECT CONDITIONS

A. Protection of Masonry: During erection, cover tops of walls with waterproof sheeting at end of each day's work. Prevent grout, mortar, and soil from staining the face of masonry.

B. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit masonry damaged by frost or freezing conditions. Comply with the following requirements:

1. Cold-Weather Construction: When the ambient temperature is within the limits indicated, use the following procedures:

   a. 40 to 32 deg F: Heat mixing water or sand to produce mortar temperatures between 40 and 120 deg F.
   b. 32 to 25 deg F: Heat mixing water and sand to produce mortar temperatures between 40 and 120 deg F. Heat grout materials to produce grout temperatures between 40 and 120 deg F. Maintain mortar and grout above freezing until used in masonry.
   c. 25 to 20 deg F: Heat mixing water and sand to produce mortar temperatures between 40 and 120 deg F. Heat grout materials to produce grout temperatures between 40 and 120 deg F. Maintain mortar and grout above freezing until used in masonry. Heat masonry units to 40 deg F if grouting. Use heat on both sides of walls under construction.
   d. 20 deg F and Below: Heat mixing water and sand to produce mortar temperatures between 40 and 120 deg F. Heat grout materials to produce grout temperatures between 40 and 120 deg F. Maintain mortar and grout above freezing until used in masonry. Heat masonry units to 40 deg F. Provide enclosures and use heat on both sides of walls under construction to maintain temperatures above 32 deg F within the enclosures.

2. Cold-Weather Protection: When the mean daily temperature is within the limits indicated, provide the following protection:

   a. 40 to 25 deg F: Cover masonry with a weather-resistant membrane for 48 hours after construction.
   b. 25 to 20 deg F: Cover masonry with insulating blankets or provide enclosure and heat for 48 hours after construction to prevent freezing. Install wind breaks when wind velocity exceeds 15 mi./h.
   c. 20 deg F and Below: Provide enclosure and heat to maintain temperatures above 32 deg F within the enclosure for 48 hours after construction.

3. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried out, but not less than 7 days after completion of cleaning.

C. Hot-Weather Requirements: Protect unit masonry work when temperature and humidity conditions produce excessive evaporation of water from mortar and grout. Provide artificial shade and wind breaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 100 deg F and above.

2. PRODUCTS

2.1 CLAY MASONRY UNITS

A. Face Brick: Submit samples prior to fabrication.

B. Face Brick Standard: ASTM C 216 and as follows:

1. Grade: SW.
2. Type: FBX.
3. Size: Manufactured to specified dimensions within tolerances specified in the applicable referenced ASTM specification as follows:

   a. Modular: 3-5/8 inches (92 mm) thick by 2-1/4 inches (57 mm) high by 7-5/8 inches (194 mm) long.

4. Color: Yankee Hill Maroon Smooth or approved equal.

C. Provide units without cores or frogs where cores would be exposed.

2.2 CONCRETE MASONRY UNITS

A. CMU Standard: ASTM C90 and as follows:

1. Weight: Normal weight.
2. Type: Type I, moisture-controlled units.
3. Exposed Faces: Manufacturer's standard.

   a. Where CMU's are exposed at interior walls, provide bullnose units at all outside corners. This shall include but is not limited to: locations where walls change in direction, door jambs and window jambs.

4. Size: Standard, unless otherwise indicated.

2.3 MORTAR AND GROUT MIXES

A. General: Do not add admixtures unless otherwise indicated. Do not use calcium chloride in mortar or grout.

B. Mortar for Unit Masonry: ASTM C 270, portland cement and lime blend, Type S unless otherwise indicated.

C. Colored Mortar: At exterior face brick, provide SPEC MIX IWR Masonry Cement Mortar, ASTM C91, Type S.

1. Color: To match existing mortar/brick. Color must be approved by Architect prior to construction.

D. Grout for Unit Masonry: ASTM C 476.

2.4 PROPORTIONING AND DESIGN OF MIXES

A. Prepare design mixes for each type and strength of concrete by laboratory trial batch as specified in ACI 301. Use an independent testing facility acceptable to the Architect/Engineer for preparing and reporting proposed mix designs.

B. Submit written reports to Architect of proposed mix. Do not begin concrete production until proposed mix designs have been approved by Architect/Engineer.

C. Design mixes to provide normal weight concrete with the following properties, unless otherwise indicated on drawings and schedules:

1. All grout shall have a 28 day F'c = 2000 psi, unless otherwise indicated on the structural drawings.
2. All mortar shall have a 28 day F'c = 1800 psi, unless otherwise indicated on the structural drawings.

a. Minimum Water Retention Percentage = 75
b. Maximum Air Content Percentage = 12

D. Slump Limits: Proportion and design mixes to result in grout slump at point of placement as follows:

1. Between 8 and 10 inches.

2.5 JOINT REINFORCEMENT AND ANCHORS

A. Continuous Joint Reinforcement: Provide manufacturer's standard welded-wire units prefabricated from galvanized carbon steel wire, minimum 0.1483 inch (9 gage) diameter with 3/16" diameter pintle and eyes. Provide prefabricated corner and tee units at corners and wall intersections.

1. Single-Wythe Masonry: Truss design.

2. Multi-Wythe Masonry: Adjustable tie system: truss design reinforcement for back-up CMU wythe with rectangular eye sections welded on 16" centers; provide rectangular pintle sections for face brick wythe.

B. Screw-Attached, Masonry Veneer Anchors: Units consisting of a wire tie section and a metal anchor section complying with the following requirements:

1. Wire Tie: Manufacturer's standard triangular shape.
2. Anchor Section: Prefabricated, sheet metal plate with screw holes top and bottom and adjustable slot to allow horizontal and vertical movement.

a. Provide Dur-O-Wal D/A 210/W Tri-Tie or equal.

C. Adjustable Anchors for Connecting Masonry to Structural Framework: Pre-fabricated, two-piece assemblies designed to allow vertical or horizontal differential movement between wall and structural framework. Provide manufacturer's standard anchors for welding to steel with triangular-shaped wire tie sections.

1. Provide Dur-O-Wal D/A 207/W Tri-Tie or equal.

D. Manufacturers: Subject to compliance with requirements, provide joint reinforcement and anchors by one of the following:

1. AA Wire Products, Co.
2. Dur-O-Wal, Inc.
3. Hohmann & Barnard, Inc.

2.6 EMBEDDED FLASHING MATERIALS

A. Copper-Fabric Laminate Flashing: 3 oz. copper sheet bonded with asphalt between 2 layers of glass fiber cloth.

B. Rubber Membrane Flashing: Manufacturer's standard elastomeric rubber membrane with an overall thickness of 40 mils (1.02 mm).

1. Attachment: Flashing manufacturer's standard attachment method for attaching flashing sheets to masonry and concrete.
2. Product: Subject to compliance with requirements, provide "Flashgard" by Firestone Building Products or approved equal.

2.7 MISCELLANEOUS MASONRY ACCESSORIES

A. Expansion Joint Strips: ASTM D 1056, Type 2, Class A, Grade 1 , compressible up to 35 percent.

B. Control Joint Gaskets: Styrene-butadiene, ASTM D 2000, Designation 2AA-805.

C. Bond Breaker Strips: ASTM D 226, Type I, No. 30 asphalt felt.

D. Weep Holes: Cotton sash cord, 2" exposure exterior, 18" inches in cavity.

E. Dampproofing for Limestone: Provide cementitious or bituminous formulations that are recommended by ILI and that are nonstaining to stone, compatible with joint sealants, and noncorrosive to anchors and attachments.

F. Cavity Drainage Material: Reticulated, nonabsorbent mesh, made from polyethylene strands and shaped to maintain drainage at weep holes without being clogged by mortar droppings. Install per manufacturers written instructions.

1. Product: Subject to compliance with requirements, provide "Green Mortar Net" by Mortar Net USA, Ltd.
2. Thickness: Match cavity width. See drawings.

2.8 MASONRY CLEANERS

A. Job-Mixed Detergent Solution: Solution of 1/2-cup trisodium phosphate and 1/2-cup laundry detergent dissolved in one gallon of water.

3. EXECUTION

3.1 EXAMINATION

A. Examine work area for conditions affecting performance of unit masonry. Examine rough-in and built-in construction to verify locations of piping connections.

3.2 INSTALLATION, GENERAL

A. Comply with referenced unit masonry standards and other requirements indicated.

B. Cut masonry units where required with motor-driven saws.

C. Coursing: Running Bond, unless otherwise indicated.

3.3 CONSTRUCTION TOLERANCES

A. Variation from Plumb: For vertical lines and surfaces of columns, walls, and arises, do not exceed 1/4 inch in 10 feet , nor 3/8 inch in 20 feet, nor 1/2 inch in 40 feet or more. For external corners, expansion joints, control joints, and other conspicuous lines, do not exceed 1/4 inch in 20 feet , nor 1/2 inch in 40 feet or more. For vertical alignment of head joints, do not exceed plus or minus 1/4 inch in 10 feet, nor 1/2 inch maximum.

B. Variation from Level: For bed joints and lines of exposed lintels, sills, parapets, horizontal grooves, and other conspicuous lines, do not exceed 1/4 inch in 20 feet, nor 1/2 inch in 40 feet or more. For top surface of bearing walls, do not exceed 1/8 inch in 10 feet, nor 1/16 inch within width of a single unit.

C. Variation of Linear Building Line: For position shown in plan and related portion of columns, walls, and partitions, do not exceed 1/2 inch in 20 feet, nor 3/4 inch in 40 feet or more.

D. Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus 1/4 inch nor plus 1/2 inch.

E. Variation in Mortar-Joint Thickness: Do not vary from bed-joint thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not vary bed-joint thickness from bed-joint thickness of adjacent course by more than 1/8 inch. Do not vary from head-joint thickness indicated by more than plus or minus 1/8 inch. Do not vary head-joint thickness from adjacent head-joint thickness by more than 1/8 inch. Do not vary from collar-joint thickness indicated by more than minus 1/4 inch or plus 3/8 inch.

3.4 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing and locations of openings and offsets. Avoid the use of less-than-half-size units.

B. Bond Pattern for Exposed Masonry: Running Bond unless otherwise noted.

C. Stopping and Resuming Work: In each course, rack back 1/2-unit length; do not tooth.

D. Built-In Work: Fill in solidly with masonry around built-in items.

E. Hollow Metal Frames: Fill space between hollow metal frames and masonry solid with mortar. At exterior frames insert extruded polystyrene board insulation around perimeter of frame.

1. Where built in items are to be embedded in cores of hollow masonry units, place a layer of metal lath in the joint below and rod mortar or grout into core.
2. Fill CMU cores with grout not less than 3 courses (24”) under bearing plates, beams, lintels, posts and similar members unless otherwise indicated.

3.5 MORTAR BEDDING AND JOINTING

A. Lay concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar all courses of pilasters and columns. Spread out full mortar bed for starting courses.

B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.

C. Cut joints flush for masonry walls to be concealed or to be covered by other materials, unless otherwise indicated.

D. Keep cavities/air spaces clean of mortar droppings and other materials. Strike flush joints facing cavities/air spaces.

3.6 HORIZONTAL JOINT REINFORCEMENT AND ANCHORS

A. Provide continuous horizontal joint reinforcement at locations and spacing as indicated or if not indicated as recommended in referenced standards. Lap reinforcing 6" minimum.

B. Use continuous horizontal joint reinforcement with adjustable 2-piece ties for bond tie between wythes.

C. Anchor masonry to structural members using adjustable 2-piece anchors where masonry abuts or faces structural members.

D. Anchor brick veneer to steel stud backup with a minimum of one brick veneer tie for every 2-2/3 sq. ft. of wall area and a maximum spacing of 24 inches on center. Attach ties to steel studs with corrosion-resistant screws. Embed ties 2 inches minimum into bed joints of veneer and completely surround with mortar.

3.7 MOVEMENT (CONTROL AND EXPANSION) JOINTS

A. Install control and expansion joints in unit masonry where indicated. If not indicated, provide joints at 16' o. c. Interrupt horizontal joint reinforcement through movement joints.

3.8 LINTELS

A. Install steel lintels where indicated with minimum 8" bearing at each jamb.

3.9 FLASHING/WEEP HOLES

A. Install flashing and weep holes at shelf angles, lintels, ledges, and other obstructions to the downward flow of water in the wall, and where indicated.

B. Prepare masonry surfaces so that they are smooth and free from projections that could puncture flashing. Place through-wall flashing on sloping bed of mortar and cover with mortar. Seal penetrations in flashing with adhesive/sealant/tape as recommended by flashing manufacturer before covering with mortar.

C. At lintels and shelf angles, extend flashing a minimum of 4 inches into masonry at each end. At heads and sills, extend flashing as specified above but turn up ends not less than 2 inches to form a pan.

D. Cut off flashing flush with face of wall after masonry wall construction is completed.

E. Install weep holes at 24 inches o. c. in the head joints in exterior wythes of the first course of masonry immediately above embedded flashing.

3.10 QUALITY CONTROL TESTING DURING CONSTRUCTION

A. General: The Contractor will employ a testing laboratory to perform tests and to submit test reports to the Architect/Engineer for review.

B. Testing Frequency: Tests and Evaluations listed in this Article will be performed during construction for each 5000 sq. ft. (460 sq. m) of wall area or portion thereof. In no case, no fewer than 2 tests shall be performed.

C. Mortar properties will be tested per property specification of ASTM C 270.

D. Mortar composition and properties will be evaluated per ASTM C 780.

E. Grout will be sampled and tested for compressive strength per ASTM C 1019.

F. Evaluation of Quality-Control Tests: In the absence of other indications of noncompliance with requirements, masonry will be considered satisfactory if results from construction quality-control tests comply with minimum requirements indicated.

3.11 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or if units do not match adjoining units. Install new units to match adjoining units, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge any voids or holes and completely fill with mortar. Point-up all joints including corners, openings, and adjacent construction to provide a neat, uniform appearance.

C. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry by means of bucket and brush hand-cleaning method described in BIA "Technical Note No. 20 Revised." Use job-mixed detergent solution. Protect all dissimilar adjoining materials during and after cleaning process. Repair or replace any materials that are damaged during cleaning.

D. Protection: Provide final protection in a manner that insures unit masonry is without damage and deterioration at time of Substantial Completion.

END OF SECTION 042000

SECTION 047200 - DIMENSION STONE

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. See Section 007300 “Supplementary Conditions”, if included, for requirements relating to interpretation of the drawings and specifications.
2. See Section 012300 “Alternates”.

1.2 SUMMARY

A. This Section includes the following:

1. Dimension stonework with mortar joints.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. See Section 042000 “Unit Masonry” for additional masonry requirements.
2. See Section 079200 “Joint Sealants” for joint sealants at joints of dimension stone.

1.3 SYSTEM PERFORMANCE REQUIREMENTS

A. General: Fabricate and install dimension stonework to withstand loads from wind, gravity, movement of building structure, and thermally induced movement as well as to resist deterioration without failure.

B. Provide dimension stonework that is engineered and installed based on the following safety factors:

1. Limestone: As indicated in "Technote on Safety Factors" by the Indiana Limestone Institute of America.

C. For metal components: without exceeding allowable stresses established by the following:

1. Structural Steel Anchors: AISC "Specification for Design, Fabrication and Erection of Structural Steel for Buildings."
2. Stainless Steel: 54 percent of yield stress.
3. Aluminum: AA "Aluminum Construction Manual, Specifications for Aluminum Structures."
4. Cast-in-Place and Post-Installed Anchors in Concrete: 4 times loads imposed by stone cladding.
5. Post-Installed Anchors in Grouted CMU: 6 times loads imposed by stone cladding system.

D. Provide stone cladding system in form either of prefabricated stone panel system or of field-installed stone over mechanical grid system, complying with the following minimum performance requirements:

1. Temperature Change: 120 deg F ambient; 180 deg F material surfaces.
2. Deflection: In each panel assembly limit deflection to the following maximums:

a. 1/16 inch, measured in the plane of the wall.
b. 1/360 of panel's clear span but not more than 3/4 inch, deflection measured perpendicular to the wall.

3. Control of Corrosion and Staining: Prevent galvanic and other forms of corrosion as well as staining by insulating metals and other materials from direct contact with incompatible materials.

1.4 SUBMITTALS

A. Product data for each type of stone, stonework accessory, and other manufactured products required.

B. Shop drawings detailing fabrication and installation of stone cladding.

C. Samples for verification purposes of stone including mortar and grout samples.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed stone cladding similar in material, design, and extent to that indicated for this Project.

B. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store and handle stone and related materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, breakage, chipping, or other causes.

B. Store cementitious materials off the ground, under cover, and in dry location.

1.7 PROJECT CONDITIONS

A. Cold Weather Protection: Comply with the following requirements:

1. Remove ice or snow formed on stonework by carefully applying heat until top surface is dry to the touch.

2. Mortar: At 40 deg F and below, produce mortar temperatures between 40 deg F and 120 deg F by heating mixing water and, at temperatures of 32 deg F and below, sand as well. Always maintain temperature of mortar on boards above freezing.

    a. At 25 deg F to 20 deg F, heat both sides of walls under construction and use windbreaks or enclosures when wind is in excess of 15 mph.

        1) At 20 deg F and below, provide enclosure and auxiliary heat to maintain an air temperature of at least 40 deg F for 24 hours after setting dimension stonework, and heat stones so that they are above 20 deg F at time of installation.

3. Protect dimension stonework both in place and in progress to comply with the following requirements:

    a. At 40 deg F to 32 deg F, protect dimension stonework from rain or snow at least 24 hours by covering with nonstaining weather-resistive membrane.
    b. At 32 deg F to 25 deg F, cover dimension stonework completely with nonstaining weather-resistive membrane.
    c. At 25 deg F to 20 deg F, cover dimension stonework completely with nonstaining weather-resistive insulating blankets or similar protection for at least 24 hours.
    d. At 20 deg F and below, maintain dimension stonework temperatures above 32 deg F for 24 hours.

2. PRODUCTS

2.1 MATERIALS, GENERAL

A. Provide matched blocks from a single quarry for each type, variety, color, and quality of stone required. Extract blocks from a single bed of quarry stratum especially reserved for Project.

2.2 LIMESTONE

A. Limestone Building Stone Standard: ASTM C 568.

B. Finish of Exterior Limestone Cladding: To Match Existing

C. Limestone Grade and Color: Buff – To Match Existing

D. Limestone Sources: Subject to compliance with requirements, provide limestone of one of the following:

1. Top-Ledge Cottonwood Limestone quarried by Bayer Stone Inc., St. Mary, KS

2.3 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold weather construction.

B. Hydrated Lime: ASTM C 207, Type S.

C. Aggregate: ASTM C 144 and as indicated below:

1. For joints narrower than 1/4 inch use aggregate graded with 100 percent passing the No. 8 sieve and 95 percent the No. 16 sieve.
2. For pointing mortar, use aggregate graded with 100 percent passing the No. 16 sieve.
3. White Mortar Aggregates: Natural white sand or ground white stone.
4. Colored Mortar Aggregates: Ground marble, granite, or other sound stone, as required to match Architect's sample.

D. Water: Clean, nonalkaline, and potable.

E. Latex Type: Acrylic in factory prediluted or concentrated form.

2.4 DIMENSION STONE ANCHORS AND ATTACHMENTS

A. Provide anchors and attachments of type and size required to support dimension stonework and fabricated from the following metals for conditions and anchors indicated below:

1. Stainless Steel: ASTM A 666, AISI Type 304, temper as required, for anchors in direct contact with stone and the fasteners connecting them to other anchors and to building structure.
2. Malleable iron for adjustable inserts embedded in concrete and not in direct contact with stone.
3. Hot-dip galvanized steel:

a. Fasteners for Hot-Dip Galvanized Steel Anchors: ASTM A 36 for materials and ASTM A 123 for galvanizing. For anchors not in direct contact with stone and not connecting stainless steel to galvanized steel anchors, provide zinc-coated fasteners complying with ASTM A 307, Grade A, for bolts and washers; ASTM A 563, Grade A, for nuts; and ASTM B 695, Type 1, Class 50, for mechanically deposited zinc coating. Provide bolt threads with UNC Class 2A tolerance after coating.

4. Steel Relieving Angles: ASTM A 36.
5. Cast-In-Place and Post-Installed Anchors in Concrete: ASTM E 488.

2.5 DIMENSION STONE ACCESSORIES

A. Setting Buttons: Lead or resilient plastic buttons, nonstaining to stone, sized to suit joint thicknesses.

2.6 DIMENSION STONE FABRICATION

A. General: Fabricate dimension stonework in sizes and shapes required to comply with requirements indicated, including details on Drawings and final shop drawings.

1. For limestone comply with recommendations of the Indiana Limestone Institute of America, Inc. (ILI) as published in the "Indiana Limestone Handbook."

B. Cut and drill sinkages and holes in stones for anchors, fasteners, supports, and lifting devices as indicated or needed to set dimension stonework securely in place; shape beds to fit supports.

C. Contiguous Work: Provide chases, reveals, reglets, openings, and similar features as required to accommodate contiguous work.

D. Fabricate molded work, including washes and drips, to produce stone shapes having a uniform profile throughout their entire length and with precisely formed arises slightly eased to prevent snipping, and matched at joints between units.

2.7 MORTAR AND GROUT MIXES

A. General: Comply with referenced standards and with manufacturers' instructions relative to mix proportions, mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures needed to produce mortars and grouts of uniform quality and with optimum performance characteristics.

1. Do not add admixtures including coloring pigments, air-entraining agents, accelerators, retarders, water repellent agents, antifreeze compounds, or calcium chloride unless otherwise indicated.

2. Mixing: Combine and thoroughly mix cementitious materials, water, and aggregates in a mechanical batch mixer unless otherwise indicated. Discard mortars and grout when they have reached their initial set.

B. Latex-Modified Portland Cement Setting-Bed Mortar: Proportion and mix portland cement, aggregate, and latex additive for setting bed to comply with directions of latex additive manufacturer and as necessary to produce stiff mixture with a moist surface at time stone is set.

C. Pointing Mortar: Provide pointing mortar mixed to match Architect's sample and complying with requirements indicated above for setting mortar.

3. EXECUTION

3.1 EXAMINATION

A. Examine surfaces to receive dimension stonework, and conditions under which dimension stonework will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of dimension stonework. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Advise Installers of other work about specific requirements relating to placement of inserts, flashing reglets, and similar items to be used by Stonework Installer for anchoring, supporting, and flashing of dimension stonework. Furnish Installers of other work with drawings or templates showing locations of these items.

B. Protect dimension stonework during erection as follows:

1. Prevent staining of stone from mortar, grout, sealants and other sources. Immediately remove such materials from stone without damage to latter.
2. Protect base of walls from rain-splashed mud and mortar splatter by means of coverings spread on ground and over wall surface.
3. Protect sills, ledges, and projections from droppings of mortar and sealants.

C. Clean stone surfaces that have become dirty or stained prior to setting to remove soil, stains, and foreign materials. Clean stones by thoroughly scrubbing stones with fiber brushes followed by a thorough drenching with clear water. Use only mild cleaning compounds that contain no caustic or harsh filler or abrasives.

3.3 SETTING DIMENSION STONE, GENERAL

A. Execute dimension stonework by skilled mechanics, and employ skilled stone fitters at the site to do necessary field cutting as stones are set.

1. Use power saws to cut stones; for exposed edges, produce edges that are cut straight and true.

B. Contiguous Work: Provide chases, reveals, reglets, openings, and other spaces as indicated for accommodating contiguous construction. Close-up openings in dimension stonework after other construction is in place with dimension stonework that matches that already set.

C. Set stones to comply with requirements indicated on Drawings and final shop drawings. Install anchors, supports, fasteners, and other attachments indicated or necessary to secure dimension stonework in place.

D. Shim and adjust anchors, supports, and accessories to set stones accurately in locations indicated with uniform joints of widths indicated and with edges and faces aligned according to established relationships and indicated tolerances.

E. Install concealed flashing at continuous shelf angles, lintels, ledges, and similar obstructions to downward flow of water to divert water to exterior.

F. Keep cavities open where unfilled space is indicated between back of dimension stone cladding and back-up wall; do not fill cavities with mortar or grout.

3.4 CONSTRUCTION TOLERANCES

A. Construction Tolerances: Set stones to comply with the following tolerances:

1. Variation from Plumb: For lines and surfaces of columns, walls, and arrises, do not exceed 1/4 inch in 10 feet, 3/8 inch in a story height or 20 feet maximum, or 1/2 inch in 40 feet or more. For external corners, expansion joints and other conspicuous lines, do not exceed 1/4 inch in any story or 20 feet maximum, or 1/2 inch in 40 feet or more.

2. Variation from Level: For grades indicated for exposed lintels, sills, parapets, horizontal grooves, and other conspicuous lines, do not exceed 1/2 inch in any bay or 20 feet maximum, or 3/4 inch in 40 feet or more.
3. Variation of Linear Building Line: For position shown in plan and related portion of columns, walls, and partitions, do not exceed 1/2 inch in any bay or 20 feet maximum, or 3/4 inch in 40 feet or more.
4. Variation in Cross-Sectional Dimensions: For columns and thickness of walls from dimensions indicated, do not exceed minus 1/4 inch, or plus 1/2 inch.

3.5 SETTING DIMENSION STONEWORK WITH MORTAR

A. Set stones in full bed of mortar with vertical joints slushed full, unless otherwise indicated.

1. Place setting buttons of adequate size, in sufficient quantity, and of same thickness as indicated joint width, to prevent mortar from squeezing out and to maintain uniform joint widths. Hold buttons at least one joint width back from face of stones.
2. Do not set heavy stones or projecting courses until mortar in courses below has hardened sufficiently to resist being squeezed out of joint.
3. Fill anchor holes with mortar.

B. Support projecting stones by props or anchors until wall above is set.

C. Embed ends of lugged sills in mortar; leave balance of joint open until final pointing.

D. Rake out mortar from joints to depths of not less than 1/2 inch nor less than that required to expose sound mortar for joints pointed with mortar.

E. Prepare stone joint surfaces for pointing with mortar by removing dust and mortar particles. Where setting mortar was removed to depths greater than surrounding areas, apply first layer of pointing mortar in layers not greater than 3/8 inch until a uniform depth is formed; compact each layer thoroughly and allow to become thumbprint hard before applying next layer.

F. Point stone joints by placing and compacting pointing mortar in layers not greater than 3/8 inch.

G. Tool joints with a round joiner having a diameter 1/8 inch larger than width of joint, when pointing mortar is thumbprint hard.

3.6 ADJUSTING AND CLEANING

A. Remove and replace or repair broken, chipped, stained, or otherwise damaged stones. Replace in manner that results in dimension stonework's showing no evidence of replacement.

B. Clean dimension stonework not less than 6 days after completion of work, using clean water and stiff bristle fiber brushes. Do not use wire brushes, acid-type cleaning agents, cleaning compounds with caustic or harsh fillers, or other materials or methods that could damage stone.

3.7 PROTECTION

A. Provide final protection and maintain conditions in a manner acceptable to Fabricator and Installer ensures dimension stonework's being without damage or deterioration at time of Substantial Completion.

END OF SECTION 047200

SECTION 237413 –AIR COOLED CONDENSER UNIT

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.

B. Specification section 230500.

1.2 SUMMARY

A. This Section includes:

1. Air cooled condensing unit and cooling units.

B. Related Sections include the following:

1. Division 230900 Section "Digital Control Equipment".

1.3 SUBMITTALS

A. Product Data: Include manufacturer's technical data for each model indicated, including rated capacities of selected model clearly indicated; dimensions; required clearances; shipping, installed, and operating weights; furnished specialties; accessories; and installation and startup instructions.

B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loadings, required clearances, method of field assembly, components, and location and size of each field connection.

1. Wiring Diagrams: Detail wiring for power, signal, and control systems and differentiate between manufacturer-installed and field-installed wiring.

C. Commissioning Reports: Indicate results of startup and testing commissioning requirements. Submit copies of completed checklists.

D. Maintenance Data: Maintenance manuals specified in 230500.

E. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

A. Fabricate and label refrigeration system to comply with ASHRAE 15, "Safety Code for Mechanical Refrigeration."

B. Energy Efficiency Ratio: Equal to or greater than prescribed by ASHRAE 90.1, "Energy Efficient Design of New Buildings except Low-Rise Residential Buildings."

C. Listing and Labeling: Provide electrically operated components specified in this Section that are listed and labeled.

1. The unit(s) shall be certified in accordance with UL Standard 1995 and ANSI Standard Z21.47.
2. The unit(s) shall be safety certified by an accredited testing laboratory and the nameplate shall carry the label of the certification agency.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver condensing unit as factory-assembled units with protective crating and covering as recommended by the manufacturer.

B. Coordinate delivery of units in sufficient time to allow movement into building.

C. Handle condensing unit to comply with manufacturer's written rigging and installation instructions for unloading and moving to final location.

1.6 COORDINATION

A. Coordinate installation of equipment curb, equipment supports, and wall penetrations.

1.7 WARRANTY

A. General Warranty

B. Special Warranty: A written warranty, executed by the manufacturer and signed by the Contractor, agreeing to replace components that fail in materials or workmanship, within the specified warranty period, provided manufacturer's written instructions for installation, operation, and maintenance have been followed.

2. PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to strict compliance with the requirements of this specification, provide products by one of the following:

1. Air Cooled Condensing Unit:

a. AAON, Inc.
b. Trane
c. Valent
d. McQuay

2.2 AIR COOLED CONDENSING UNIT

A. Description: Factory assembled and tested; designed for slab installation; and consisting of compressors, condensers, condenser fans, refrigeration and temperature controls, hot gas reheat, DX cooling coil.

B. Construction:

1. Unit shall be completely factory assembled, piped and wired and shipped in one section.
2. Unit shall be specifically designed for outdoor application with a fully weatherproof cabinet.
3. Cabinet shall be constructed entirely of G90 galvanized steel with the exterior constructed of 20 gauge or heavier material.
4. Paint finish shall be capable of withstanding at least 1000 hours, with no visible corrosive effects, when tested in a salt spray and fog atmosphere in accordance with ASTM B 117 test procedure.
5. The unit roof shall be sloped or cross-broken to assure drainage.
6. Unit specific color coded wiring diagrams shall match the unit color coded wiring and will be provided in both point-to-point and ladder form.
7. Diagrams shall also be laminated in plastic and permanently affixed inside the control compartment.
8. Access to condensers fans, compressors, and other items needing periodic checking or maintenance shall be through hinged access doors with quarter turn latches. Door fastening screws are not acceptable.
9. Access doors shall have stainless steel hinges and full perimeter gasketing.
10. Access Panels: Water- and air-tight panels with handles shall provide access to filters, heating section, return air fan section, supply air fan section, evaporator coil section, and unit control section
11. Unit construction shall be with G90 galvanized steel with weather proof baked enamel exterior coating or equivalent.
12. Unit shall have decals and tags to indicate unit lifting and rigging, service areas and caution areas. Installation and maintenance manuals shall be supplied with each unit.

C. Air Cooled Condenser Section:

1. The condensing section shall be equipped with vertical discharge axial flow direct drive fans. Direct drive fans shall be directly connected to and supported by the motor shaft.
2. The condenser coils shall be sloped at least 30 degrees to protect the coils from damage.
3. Condenser coils shall be copper tubes with aluminum fins mechanically bonded to the tubes.
4. Condenser coils to be sized for a minimum of 10°F of refrigerant sub-cooling.

D. DX Cooling Coil:

1. Evaporator coils shall be copper tube with aluminum fins mechanically bonded to the tubes.
2. Evaporator coils shall have galvanized steel end casings.
3. Evaporator coils shall have equalizing type vertical tube headers.
4. Evaporator coils shall be furnished with a thermostatic expansion valve.
5. Evaporator coils shall be furnished with a 304 stainless steel double sloped drain pan for the positive drainage of condensate.

E. Refrigeration System:

1. Unit shall include a variable capacity scroll compressor on the refrigeration circuit which shall be capable of modulation from 10-100% of its capacity.
2. Refrigeration circuit shall be provided with modulating hot gas reheat coil, modulating valves, electronic controller, supply air temperature sensor and a dehumidification control signal terminal which allow the unit to have a dehumidification mode of operation, which includes supply air temperature control to prevent supply air temperature swings and overcooling of the space
3. All units over 7 tons shall be multiple stage and shall have a minimum of 2 stages of capacity control.
4. Compressors shall be mounted in an isolated compartment to permit operation of the unit without affecting air flow when the door to the compartment is open.
5. System shall be equipped with thermostatic expansion valve type refrigerant flow control.
6. System shall be equipped with automatic reset low pressure and manual reset high pressure refrigerant controls.
7. Unit shall be equipped with Schrader type service fittings on both the high side and low pressure sides of the system.
8. Unit shall be equipped with refrigerant liquid line driers.
9. Unit shall be fully factory charged with refrigerant.

    a. All circuits shall be equipped with liquid line sight glasses.
    b. Unit shall operate on R-410A refrigerant.

F. Controls:

1. Provided by equipment Manufacturer

    a. <u>Under Base Bid</u>:

        1) 1. Provide microprocessor unit-mounted DDC controller which when used with an entering coil and leaving coil (air temperature/relative humidity sensor by equipment manufacturer) provides proportional discharge air control. This UCM shall perform all unit functions by making all cooling, and dehumidification decisions through the stand-alone unit controls.
        2) Provide an anti-cycle timing and minimum on/off between stages timing in the microprocessor

2. See sequence of operations and controls specifications for additional requirements.

G. POWER OPTION:

1. Unit shall be provided with a factory installed and wired internal disconnect with single point electrical connection.
2. Unit shall be provided with phase and brown-out protection to shut down all motors in the unit if the phases are more than 10% out of balance on voltage, or the voltage is more than 10% under design voltage or on phase reversal.
3. Unit shall be provided with a factory installed and wired 115 volt, 15 amp ground fault service receptacle powered by a 1.5 KVA transformer.

3. EXECUTION

3.1 EXAMINATION

A. Verification of existing conditions prior to beginning work.

B. Verify that unit location is prepared for unit installation.

C. Verify that proper power supply is available.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install in accordance with NFPA 90A.

C. Mount unit on equipment housekeeping pad.

3.3 MANUFACTURER'S FIELD SERVICES

A. Provide initial start-up and shut-down during first year of operation, including routine servicing and check-out.

1. Provide services of factory trained representative for start-up, leak test, refrigerant pressure test, evacuate, dehydrate, charge, start-up, calibrate controls, and instruct Owner on operation and maintenance.

END OF SECTION 237413

SECTION 310000 - EARTHWORK

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 the following:

1. Subgrade preparation for structures, slabs, trenches, walks, paving and turf areas
2. Excavating and backfilling for footings and foundations.
3. Backfilling and compacting for utilities outside the building to utility main connections.
4. Redistribution of topsoil

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. See Section 321313 “Concrete Paving”, if included, for placement of concrete on prepared subgrade.
2. See Section 033000 “Cast-in-Place Concrete” for placement of concrete for foundations.

1.3 DEFINITIONS

A. “Excavation” consists of the removal of material encountered to subgrade elevations or dimensions indicated and the subsequent disposal of the materials removed.

B. “Unauthorized excavation” consists of the removal of materials beyond or below indicated subgrade elevations or dimensions without specific direction from the Architect/Engineer.

1.4 SUBMITTALS

A. Submit reports for the following:

1. Fill and Backfill Materials: Gradation and moisture-density relationship for each material proposed for use as fill or backfill.
2. Compaction test results.
3. Underpinning Procedures: Proposed Plan and procedures for supporting existing structure during construction of new elements adjacent to or beneath existing structure.

1.5 QUALITY ASSURANCE

A. Codes and Standards: Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction and with the provisions of the following codes, specifications and standards, except where more stringent requirements are shown or specified.

1. American Society for Testing and Materials (ASTM):

a. ASTM C33 – Concrete Aggregates
b. ASTM D422 – Particle Size Analysis of Soils
c. ASTM D1556 – Density of Soil in Place by the Sand-Cone Method
d. ASTM D1557 – Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort
e. ASTM D3017 – Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
f. ASTM D4318 – Liquid Limit, Plastic Limit and Plasticity Index of Soils

2. 1997 Uniform Building Code (UBC)

a. Chapter 29 – Excavations, Foundations and Retaining Walls

3. 2009 International Building Code (IBC)

B. Testing and Inspection Service: Employ at Contractor's expense, testing laboratory acceptable to Architect. During earthwork operations the testing laboratory shall perform soil testing and inspection services.

1.6 JOB CONDITIONS

A. Bench Marks: Protect bench marks on or adjacent to site from damage. If bench marks are damaged, restore as required by authorities having jurisdiction.

B. Unexpected Conditions: Notify Architect/Engineer of unexpected subsurface conditions. Discontinue affected work in area until notified to resume work.

C. Existing Utilities:

1. Before starting grading and excavation, establish the location and extent of underground utilities in the work area. Exercise care to protect existing utilities during earthwork operations. Perform excavation work near utilities by hand and provide necessary shoring and supports as the work progresses.
2. If uncharted, or incorrectly charted piping or other utilities are encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.

3. Do not interrupt existing utilities serving facilities occupied and used by Owner or others except when permitted in writing by Owner and then only after acceptable temporary utility services have been provided. Provide minimum of 48-hour notice to Owner and obtain written notice to proceed without interrupting any utility.
4. Maintain, protect, relocate, or extend as required existing utility lines to remain which pass through the work area. Pay costs for this work, except as covered by the applicable utility companies.
5. Remove abandoned utility service lines from areas of excavation. Cap, plug or seal abandoned lines and identify termination points at grade level with markers. Coordinate with utility companies for shut-off of services if lines are active.
6. Accurately locate and record abandoned and active utility lines rerouted or extended on project record documents.

D. Protection of Persons and Property:

1. Perform all excavations in accordance with the requirements of Occupational Safety and Health Administration (OSHA) 29 CFR, Part 1926, Subpart P, “Excavations and Trenches”. Excavation safety is the responsibility of the Contractor.
2. Protect excavations by shoring, bracing, sheeting, underpinning or other methods as required to prevent cave-ins or loose dirt from entering excavations. Barricade open excavations occurring as part of this work and post with warning lights.
3. Provide, install, operate and maintain warning lights as required by authorities having jurisdiction.
4. Protect structures, utilities, sidewalks, pavements and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.
5. Promptly repair damage to adjacent facilities caused by earthwork operations. Cost of repair at Contractor's expense.
6. Perform excavation within drip-line of large trees to remain by hand, and protect the root system from damage or dryout to the greatest extent possible. Maintain moist condition for root system and cover exposed roots within burlap. Paint root cuts of 1 inch diameter and larger with emulsified asphalt tree paint.

2. PRODUCTS

2.1 MATERIALS

A. Structural Backfill and Fill Materials: Clean, inorganic lean clay free of debris, waste, frozen materials, vegetation, and other deleterious materials having a maximum liquid limit and plasticity index. Proposed fill material shall be inspected, tested and laboratory report issued prior to use in the work. Provide imported fill material as required to complete the work. Obtain rights and pay all cost for imported materials.

B. Sand Fill: Clean, free draining sand conforming to the requirements for fine aggregate contained in ASTM C33 with 100% passing a 3/8” sieve, 95 to 100% passing a No. 4 sieve, 80 to 100% passing a No. 8 sieve, 50 to 85% passing a No. 16 sieve, 25 to 60% passing No. 30 sieve, 5 to 30% passing a No. 50 sieve and 0 to 10% passing a No. 100 sieve.

C. Granular Base: Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D448; coarse-aggregate grading size 56 with 100% passing a 1-1/2 inch sieve and 0 to 5 percent passing a No. 8 sieve.

D. Turf Area Topsoil: New topsoil that is fertile, friable, natural loam, dark in color, free of subsoil, clay lumps, brush, weeds, and other debris; and free of roots, stumps, stones larger than one inch in any dimension; and free of other extraneous or toxic matter harmful to plant growth. Topsoil should be obtained from local sources. It should have an acidity range (pH) of 5.5 - 7.5, and an organic matter content between 2 and 8 percent.

E. Planting Bed Topsoil: New topsoil that is fertile, friable, natural loam, dark in color, free of subsoil, clay lumps, brush, weeds, and other debris; and free of roots, stumps, stones larger than one inch in any dimension; and free of other extraneous or toxic matter harmful to plant growth. Topsoil should be obtained from local sources. It should have an acidity range (pH) of 5.5 - 7.5, and an organic matter content between 2 and 8 percent. Loam topsoil must have 7 to 40 percent clay, 28 to 60 percent silt, and less than 52 percent sand particles. Not more than 10 percent of topsoil weight can be gravel or stones.

1. Particle Size: provide topsoil which conforms with the following categories:

   a. Clay: 0.002 mm and smaller.
   b. Silt: 0.002 to 0.02 mm.
   c. Sand: 0.02 to 0.2 mm.

2. Proposed topsoil material shall be inspected and approved by the Architect.

3. EXECUTION

3.1 PREPARATION

A. Establish extent of grading and excavation by area and elevation. Designate and identify datum elevation and project engineering reference points. Set required lines, levels, and elevations.

B. Identify known underground utilities. Stake and flag location.

C. Identify and flag surface and aerial utilities.

D. Notify utility companies to remove or relocate utilities as necessary.

E. Maintain and protect existing utilities which pass through the site.

F. Completely remove and dispose off-site of any existing pavements and sand base or structures in areas to be graded.

G. Strip and stockpile the upper 6” of existing organic topsoil, including surface vegetation and the root crown.

H. Do not begin earthwork until all unsatisfactory conditions have been corrected and do not continue earthwork if unsatisfactory conditions develop. Beginning of earthwork or any phase of earthwork shall be considered to be the Contractor's certification that he has examined the conditions under which earthwork will be performed and has found them to be satisfactory.

3.2 DEWATERING

A. Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.

3.3 EXCAVATION, GENERAL

A. Excavate to subgrade elevations indicated.

B. Unauthorized excavation, as well as remedial work directed by Architect/Engineer, shall be at Contractor's expense.

C. Under footings, foundation bases, or retaining walls backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by Architect/Engineer.

D. Provide necessary pumps and drainage lines and maintain excavations, including footings and pits, free from water, ice and snow during excavating and subsequent work operations.

E. The Geotechnical Engineer shall inspect the building area and areas to be paved to verify that all unsuitable and unstable soils have been either removed and replaced or reworked.

3.4 EXCAVATION FOR STRUCTURES

A. Excavate for structures to elevations and dimensions shown. Extend excavation a sufficient distance from foundations to permit placing and removal of formwork, installation of materials, services and inspection. Hand trim foundation excavations to final grade just before concrete is placed. Remove loose, soft materials and all organic matter. Footings shall bear on approved undisturbed bearing soil unless otherwise indicated.

B. When excavation has reached required subgrade elevations, require Testing Laboratory to make an inspection of conditions.

C. If unsuitable bearing materials are encountered at required subgrade elevations, carry excavations deeper and replace excavated material as directed by Geotechnical Engineer.

D. Removal of unsuitable material and its replacement as directed will be paid on the basis of contract conditions relative to changes in work.

3.5 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated cross-section, elevations and grades. Allow for base material.

3.6 EXCAVATION FOR UTILITY TRENCHES

A. Trench as required to install the utilities shown and as specified in other sections of the Specification.

B. Coordinate locations of trenches to prevent construction of footings over utility lines. Where utility lines pass beneath footings around perimeter of building, orient lines to be as nearly perpendicular as possible to the footing except as otherwise shown.

C. Installation of Underground Utilities

1. Consider boring first when placing utility lines under trees large than 6” in diameter.
2. When trenching must occur, locate trench beyond the drip line of the tree.
3. Soil removed during trenching and tunneling should be used as backfill material (if approved by Geotechnical Engineer) and should be replaced to a minimum compaction standards.
4. All arbor work should be done by UNL Landscape Services.

D. Excavate trenches to indicated gradients, lines, depths and elevations.

E. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.

1. Clearance: 12 inches each side of pipe or conduit.

F. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduit. Remove projecting stones and sharp objects along trench subgrade.

1. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material, 4 inches deeper elsewhere, to allow for bedding course.

G. Trenches in Tree – and Plant – Protection Zones:

1. Hand-excavate to indicated lines, cross sections, elevations, and subgrades. Use narrow- tined spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
2. Do not cut lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.

3.7 EXCAVATION STABILITY

1. Slope sides of excavations to comply with local codes and ordinances having jurisdiction and as required for slope stability. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated.
2. Maintain sides and slopes of excavations in safe condition until completion of backfilling.

3.8 MATERIAL STORAGE

1. Stockpile satisfactory excavated materials where directed, until required for backfill or fill. Place, grade and shape stockpiles for proper drainage.
2. Locate and retain soil materials away from edge of excavations. Do not store within drip lines of trees indicated to remain.
3. Dispose of excess soil material and waste materials off site in accordance with local codes and ordinances.

3.9 COLD WEATHER PROTECTION

A. Protect excavations against freezing.

B. Do not excavate footings or slabs to the full depth when freezing temperature may be expected, unless footings or slabs are placed immediately after the excavation has been completed. Protect excavation bottoms when freezing or when the placing of concrete is delayed.

C. Foundations and slabs which heave from improper protection shall be replaced by the Contractor at no additional cost to the Owner.

3.10 FILL AND BACKFILL

A. General. Begin fill and backfill operations as promptly as work permits, but not until completion of the following:

1. Acceptance of construction below finish grade including, where applicable, dampproofing, waterproofing and perimeter insulation.
2. Inspection, testing, approval and recording of locations of underground utilities.
3. Removal of concrete formwork.
4. Removal of trash, debris, vegetation, unsatisfactory soil materials, obstructions and deleterious materials.
5. Permanent or temporary horizontal bracing is in place on horizontally supported walls.

B. General Subgrade Preparation: After excavations have been completed and/or surface has been cleaned and grubbed, scarify, disc or otherwise loosen the top 8 inches of the subgrade to eliminate a plane of weakness along the contact surface.

C. Placement:

1. Place backfill and fill materials in uniform layers not more than 8 inches in loose depth for material to be compacted by heavy compaction equipment, and not more than 6 inches in loose depth for material to be compacted by hand-operated tampers. Granular bases beneath slabs shall be compacted by means of a vibratory compactor.
2. Do not place backfill or fill material on surfaces that are muddy or frozen.
3. Do not place materials which contain frost or ice.

4. Place backfill and fill materials evenly adjacent to structures, piping or conduit to required elevations. Take care to prevent wedging action of backfill against structures or displacement of piping or conduit by carrying material uniformly around structure, piping or conduit to approximately same elevation in each lift.

D. Compaction:

1. General. Compact subgrade and each layer of fill/backfill to provide soil mass with densities not less than the values specified below. Perform compaction using equipment and methods as needed to produce a soil mass with the specified densities without damage to existing structures. Use hand tampers or vibrating equipment at retaining walls and similar locations. Do not use large rolling equipment adjacent to retaining walls.
2. Moisture Control:

    a. Before compaction, moisten or aerate subgrade and each layer of fill/backfill as necessary to bring the moisture content of the soil to be compacted to with –1 to +3 percentage points of its optimum moisture content. Determine optimum moisture content in accordance with ASTM D698.
    b. If moisture content of subgrade or layer of soil material must be increased before compaction, apply water to surface of subgrade or layer of soil material. Mix water and material to be compacted as necessary to achieve uniform moisture content throughout the soil mass.
    c. If moisture content of subgrade or layer of soil material must be reduced before compaction, remove and replace, or scarify and air dry, until moisture content of material to be compacted is within specified limits.

3. Density Requirements: Determine maximum dry density of soil in accordance with ASTM D698. Compact soil to not less than the percentages of maximum dry density given below. Determine density of in-place material in accordance with ASTM D1556 or D2922.

    a. Below footings and within trenches under structures: Compact to not less that 95% of maximum dry density.
    b. Above footings and within or adjacent to buildings and structures: Compact to not less than 95% of maximum dry density.
    c. Below slabs-on-grade: Rework and compact top 12 inches of subgrade to not less than 98% of maximum dry density.
    d. Lawn or unpaved Areas: Compact top 6 inches of subgrade and each layer of backfill or fill material to 90% of maximum dry density.

e. Paved Areas: Rework and compact top 12 inches of subgrade to a minimum of 98% of maximum dry density. Immediately prior to placement of the pavement structure, the subgrade in cut and fill sections shall be scarified to a minimum depth of 6 inches and reworked to a uniform condition conforming to the moisture content and compaction requirements specified.

E. Trenches under Footings: Backfill trenches excavated under footings and within 18 inches of bottom of footings with satisfactory soil; fill with concrete to elevation and bottom of footings.

F. Trenches under Roadways: Provide 4 inch thick, concrete base slab support for piping or conduit less than 30 inches below surface of roadways. After installing and testing, completely encase piping or conduit in a min. of 4 inches of concrete before backfilling or placing roadway subbase course.

G. Around Pipe: Carefully compact suitable backfill under the haunches of the pipe in 6 inch layers and thoroughly compact. Backfill to at least 90 percent of maximum density at optimum moisture content of the soil at time of compaction shall be not more than 3 percent above or 3 percent below the optimum. Do not disturb the pipe. Carry backfilling on simultaneously on both sides of the pipe to eliminate the possibility of lateral displacement. Coordinate backfilling with utilities testing.

H. Install warning tape directly above utilities, 18 inches below finished grade. The tape shall be acid- and alkali-resistant polyethylene film, 6 inches wide with minimum thickness of 0.004 inch and shall have a minimum strength of 1750 psi lengthwise and 1500 psi crosswise with an elongation factor of 350 percent. Tape color shall be as specified in Table I and shall bear a continuous printed inscription describing the specific utility.

Table I. Tape Color

Red: Electric

Blue: Water Systems

Green: Sewer Systems

Tape for all non-metallic utility lines shall have integral wires, foil backing, or other means to enable detection by a metal detector when the tape is buried up to 3 feet deep. The metallic core shall be encased in a protective jacket or provided with other means to protect it from corrosion.

3.11 ROUGH GRADING

A. Perform grading within contract limits, including adjacent transition areas, to new elevations, levels, profiles and contours indicated.

1. Tolerance: Grade surfaces to plus or minus 0.1 foot as measured with a 10 ft. straightedge.

B. Grade surfaces to assure areas drain away from structures and to prevent ponding and pockets of surface drainage.

C. Provide subgrade surfaces free of stones exceeding 4" in greatest dimension and irregular surface changes.

D. For turf areas, leave grade down 6” from existing elevations to receive new top soil.

3.12 FINE GRADING / TOP SOIL REDISTRUBUTION

A. Prior to fine grading, loosen topsoil to a depth of 6”.

B. Grade surfaces accurately to elevations indicated on plan to within a tolerance of ½ inch when measured with a 10 foot straightedge and to assure areas drain away from structures and to prevent ponding and pockets. Provide subgrade surfaces free of stones 4 inches in greatest dimension.

1. Provide ½” edge against sidewalks to allow sod to sit flush with pavement edge unless otherwise noted on the drawings

C. Maintenance: Protect final graded areas from traffic and erosion. Keep free of trash and debris.

D. When completed areas are disturbed by construction operations or adverse weather, scarify, re-shape and compact to required density.

3.13 PAVEMENT SUBGRADES

A. Proof roll final subgrade immediately prior to placement of concrete in presence of soils engineer to locate unstable materials. Rework unstable areas to provide a uniform subgrade or replace with controlled earth fill.

B. Backfill curbs as soon as possible after construction of pavement. Compact backfill and slope to prevent water from ponding and infiltrating under the pavement. All pavement joints shall be caulked and any cracks promptly sealed to prevent moisture intrusion into subgrade.

3.14 UNDERPINNING AND BRACING

A. Underpin, brace, shore or otherwise support as necessary existing structure where new construction will be performed at an elevation at or below bottom of footing elevation or existing construction.

3.15 FIELD QUALITY CONTROL

A. Testing and inspection shall include but is not limited to the following tests. Testing and inspection shall be performed by a licensed Geotechnical Engineering firm or its representative.

1. Determine maximum densities and optimum moisture content in accordance with ASTM D698.

B. Determine in-place density by either the nuclear method (ASTM D 2922), the sand-cone method (ASTM D 1556) or the rubber balloon method (ASTM D 2167), as applicable.

C. Provide testing at the following locations:

1. Foundation Materials: For each strata of soil on which footings will be placed, conduct at least one field density test to verify required design bearing capacities. Subsequent verification and approval of each footing subgrade may be based on a visual comparison of each subgrade with related tested strata when acceptable to Testing Laboratory.
2. Subgrade at Building Slab: Make at least one field density test of subgrade for every 2,000 sq. ft. of building slab but in no case fewer than three tests.
3. Subgrade at Paving: Make at least one field density test of subgrade for every 5,000 sq. ft. of exterior paving but in no case fewer than three tests.
4. Foundation Wall Backfill: Take at least one field density test for every 100 feet of wall length per lift, but in no case fewer than three tests.
5. Pipe not under pavement: Test once every 1000 feet.
6. Pipe under pavement: Test once every 300 feet at a depth of 2 to 3 feet. The top one foot will be tested with the subgrade beneath the pavement.

D. Replace or rework and retest, at Contractor's expense, all subgrade and/or fill material that has become vegetated, disturbed, saturated, desiccated, or that in opinion of the Testing Service, do not conform to specified requirements.

3.16 DISPOSAL OF WASTE MATERIALS

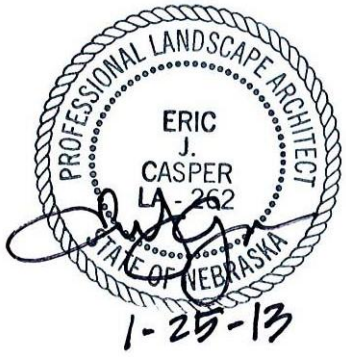
A. Stockpile, haul from site and legally dispose of waste materials, including excess excavated materials, rock, trash and debris.

B. Maintain disposal route clear, clean and free of debris.

3.17 CLEANING

A. Upon completion of earthwork operations, clean areas within contract limits, remove tools and equipment. Provide site clear, clean, free of debris and suitable for site work operations.

END OF SECTION 310000



SECTION 311000 - SITE CLEARING

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. See Section 007300 “Supplementary Conditions”, if included, for requirements relating to interpretation of the drawings and specifications.
2. See Section 012100 “Allowances”, if included, for use of allowances and what may and may not be included in them.

1.2 SUMMARY

A. Work shall include all labor, materials, and equipment necessary to completely remove, disconnect and protect the site features as indicated on the plans and as herein specified.

B. This section includes the following:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above- and below-grade site improvements.
6. Disconnecting, capping or sealing, removing site utilities, and abandoning site utilities in place.

C. Related Sections:

1. Division 01 Section "Temporary Facilities and Controls" for temporary utility services, construction and support facilities, security and protection facilities if included.
2. Division 02 Section "Selective Demolition" for demolition of buildings, structures, and site improvements.
3. Division 31 Section “Erosion and Sedimentation Controls” for erosion and sediment control.

1.3 MATERIAL OWNERSHIP

A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.4 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.

1. Do not proceed with work on adjoining property until directed by Architect.

C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated

D. Utility Locator Service: Notify One Call for area where Project is located before site clearing.

E. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.

F. The following practices are prohibited within protection zones:

1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Erection of sheds or structures.
4. Impoundment of water.
5. Excavation or other digging unless otherwise indicated.
6. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

G. Do not direct vehicle or equipment exhaust towards protection zones.

H. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.

I. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in geotechnical report.

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Locate and clearly identify trees, shrubs, and other vegetation to remain on site

C. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TREE AND PLANT PROTECTION

A. General: Protect trees and plants remaining on-site by temp chain link or snow fence.

B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.

1. Repair or replacement of trees scheduled to remain and damaged by construction operations shall be at Contractor's expense. Cost for tree replacement shall be determined in accordance with the Tree Evaluation Methods as described in The Guide for Plant Appraisal, 1992 Edition by the Council of Tree and Landscape Appraiser

3.3 EXISTING UTILITIES

A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.

1. Arrange with utility companies to shut off indicated utilities.

B. Locate, identify, and disconnect utilities indicated to be abandoned in place.

1. Do not proceed with utility interruptions without Owner’s written permission.

C. Excavate for and remove underground utilities indicated to be removed.

3.4 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.

1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.

2. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches below exposed subgrade.
3. Use only hand methods for grubbing within protection zones.
4. Chip removed tree branches and stockpile in areas approved by Architect for use on project site.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

3.5 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to depth indicated in geotechnical report in a manner to prevent intermingling with underlying subsoil or other waste materials.

C. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

1. Do not stockpile topsoil within protection zones.
2. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity to be reused.

3.6 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

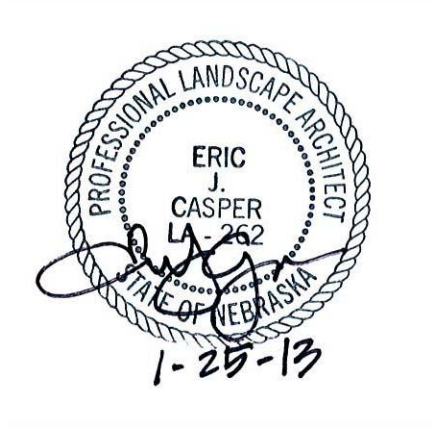
B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.

1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 311000


PROFESSIONAL LANDSCAPE ARCHITECT
ERIC
J.
CASPER
LA - 262
STATE OF NEBRASKA
1-25-13

SECTION 312219 – FINISH GRADING

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. See Section 007300 “Supplementary Conditions”, if included, for requirements relating to interpretation of the drawings and specifications.
2. See Section 012100 “Allowances”, if included, for use of allowances and what may and may not be included in them.

1.2 SUMMARY

A. Work shall include all labor, materials, and equipment necessary to completely furnish and install the fine grading and soil preparation as indicated on the plans and as herein specified.

B. Related Sections include the following:

1. Division 31 Section “Bioretention Soil Preparation” for soil amendments.
2. Division 31 Section “Erosion and Sedimentation Controls” for erosion and sedimentation controls

1.3 QUALITY ASSURANCE

A. Subcontract fine grading work to a single firm specializing in fine grading operations. Firm shall have satisfactory record of performance on completed projects of comparable size and quality.

1.4 JOB CONDITIONS

A. Proceed with and complete fine grading as rapidly as portions of site become available, working within seasonal limitations.

B. Protect existing utilities, paving, plant material, and other facilities from damage caused by fine grading operations.

C. Perform fine grading work only after other work affecting ground surface has been completed.

2. PRODUCTS (NOT USED)

3. EXECUTION

3.1 INSPECTION

A. Examine finish surfaces, grades, topsoil quality, and depth. Do not start fine grading work until unsatisfactory conditions are corrected.

3.2 PREPARATION

A. Loosen topsoil of planting areas to a minimum depth of 4". Remove stones over 3/4" in any dimension and sticks, roots, rubbish, and extraneous matter.

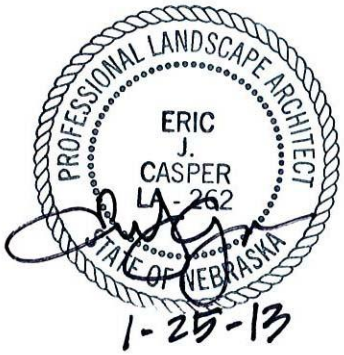
B. Grade planting areas to a smooth, free draining and even surface with a loose, moderately coarse texture. Roll and rake, remove ridges, and fill depressions as required to drain.

C. Provide straw bale checking in ditches or problem swales at intervals required to effectively slow water velocity.

3.3 CLEANUP AND PROTECTION

A. During fine grading operations, keep pavements clean and work area in an orderly condition.

END OF SECTION 312219



SECTION 321313 - CONCRETE PAVING

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. See Section 007300 “Supplementary Conditions”, if included, for requirements relating to interpretation of the drawings and specifications.
2. See Section 012100 “Allowances”, if included, for use of allowances and what may and may not be included in them.

1.2 SUMMARY

A. Work shall include all labor, materials, and equipment necessary to completely furnish and install the Portland Cement Concrete Paving as indicated on the plans and as herein specified.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. See Section 033000 “Cast-in-Place Concrete” for additional requirements.
2. See Section 310000 “Earthwork” for backfilling and subgrade preparation.

2. PRODUCTS

2.1 CONCRETE MATERIALS

A. Concrete construction materials including reinforcing, concrete and related materials are specified in Section 033000 "Cast-In-Place Concrete."

2.2 PROPORTIONING AND DESIGN OF MIXES

A. Design mixes to provide normal weight concrete with the following properties, unless otherwise indicated on drawings and schedules:

B. Prepare design mix such that ratio of course aggregate to fine aggregate is as specified in section 2.3 subparagraph B. Section 033000 "Cast In Place Concrete for 30% Limestone / 70% Sand and Gravel Aggregate.

1. Parking lots, drives and walks shall have a 28 day F'c = 4000 psi.

C. Use air-entraining admixture in all exterior concrete.

2.3 SEALANTS

A. Foam Expansion Joint Filler: Polyethylene closed-cell expansion-joint filler. Provide Sonoflex F by Sonneborn or equal.

B. Joint Sealer: Polyurethane self-leveling sealant, ASTM C 920, Type S, Grade P, Class 25, Use T at all expansion and contraction joints.

3. EXECUTION

3.1 SUBBASE PREPARATION

A. For subbase preparation see Section 310000 "Earthwork."

3.2 CONCRETE

A. For concrete placement, finishing, curing, surface repairs, and quality control testing during construction see Section 033000 "Cast-In-Place Concrete."

3.3 JOINTS

A. Use bonding agent on existing concrete surfaces that will be joined with fresh concrete.

B. Expansion Joints: If spacing is not indicated, construct expansion joints at 40 foot maximum intervals and at points of contact between slabs and vertical surfaces such as columns, foundation walls, stoops and elsewhere as indicated.

1. Provide foam expansion joint fillers and sealant or traffic grade hot pour at all expansion joints.

C. Contraction (Control) Joints: Should be cut ¼ of the slab thickness.

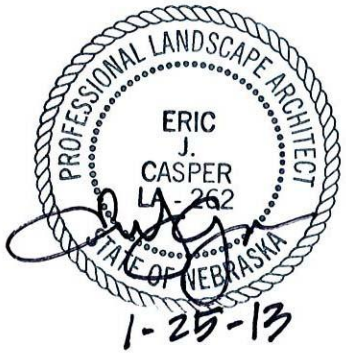
1. If joint spacing is not indicated, lay out joints to form square panels. When this is not practical, rectangular panels can be used if the long dimension is no more than 1.25 times the short side. In 4" slabs, the long side should not exceed 10 feet.

a. Spacing: Not to exceed 30 x slab thickness or 10 feet, whichever is less.

3.4 FINISH

A. All sidewalk surfaces should have a textured, non-slip broom finish free from trowel marks, except for the edging tool.

END OF SECTION 321313



SECTION 329300 – FURNISHING AND PLANTING OF PLANT MATERIALS

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. See Section 007300 “Supplementary Conditions”, if included, for requirements relating to interpretation of the drawings and specifications.
2. See Section 012100 “Allowances”, if included, for use of allowances and what may and may not be included in them.

1.2 SUMMARY OF WORK

A. Work shall include all labor, materials, and equipment necessary to completely furnish and install the Plant Materials as indicated on the plans and as herein specified.

B. The section includes the following:

1. Plant Materials as indicated on drawings

C. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 31 Section “Earthwork” for excavation, filling, and grading.
2. Division 31 Section “Site Clearing” for topsoil stripping and stockpiling
3. Division 31 Section “Finish Grading” for finish grade requirements

D. Nomenclature used conforms to the standard nomenclature as published in Hortus III, 1976. Names of varieties not listed conform generally with names accepted by the nursery trade.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated

1. Plant Materials: Include quantities, sizes, quality, and sources for plant material

a. List of Sources: Submit a written list of the nurseries where the plant material was grown. Plant materials from unapproved sources will be rejected.

2. Pesticides and Herbicides: Include product label and manufacturer’s application instruction specific to the Project

B. Samples for Verification: For each of the following

1. Trees and Shrubs: Samples of each variety and size delivered to the site for review
2. Mulch: 1-pint volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Sample shall be typical of the lot of material to be delivered and installed on the site; provide an accurate indication of color, texture and organic makeup.

C. Qualification Data: For qualified landscape installer. Included list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, address, and year completed, and include name and addresses of owners' contact persons.

1. Provide copy of Professional Landcare Network or the American Nursery and Landscape Association membership.

D. Certificate of Inspection: Submit certificates of inspection as required by governmental authorities.

E. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before start of required maintenance periods.

F. Maintenance Inspection Reports: Provide dates and location of plant material replaced during the special project warranty.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful establishment of plants

1. Professional Membership: Installer shall be a member in good standing or either the Professional Landcare Network or the American Nursery and Landscape Association
2. Experience: 5 years' minimum experience in landscape installation.
3. Installer's Field Supervision: Require Installer to maintain an experienced full-term supervisor on Project site when work is in progress
4. Pesticide Applicator: State licensed, commercial

B. Plant Material Observation: Landscape Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Architect retains right to observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site

1. Notify Landscape Architect or sources of planting materials 7 days in advance of delivery to site

C. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.

D. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.

1. Deciduous Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches above the root flare for trees up to 4-inch caliper size, and 12 inches above the root flare for larger trees.

a. Evergreen Trees: Height measurement shall not be taken at the tip of the leader, but should be taken at the midpoint between the uppermost whorl(s) and the tip of the leader.

2. Other Plants: Measure with stems, petioles, and foliage in their normal position.

E. Preinstallation Conference: Conduct conference at Project site with owner and landscape architect.

1.5 DELIVERY, STORAGE AND HANDLING

A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored at site. All plants shall be packed in such a manner as to assure proper protection against freezing, drying, breaking, overheating or other injury. Use accepted practices to insure arrival in good condition.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements including pervious concrete unit pavement, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge or soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

C. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handlying and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.

D. Handle planting stock by root ball.

E. Deliver trees and shrubs after preparations for planting have been completed. Plant immediately. If planting is delayed more than 6 hours after delivery, set trees and shrubs in shade, protect from damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.

1. Set balled stock on ground and cover ball with soil, peat moss or other acceptable material.
2. Do not remove container-grown stock from container before time of planting.
3. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly-wet condition.

1.6 PROJECT CONDITIONS

A. Proceed with and complete landscape work as rapidly as portions of site become available, working within seasonal limitations for each kind of landscape work required.

B. Planting Restrictions: Plant materials only during normal planting seasons for each type of landscape work required, except when prior written permission is obtained from the Architect. Actual planting time shall be as determined by weather conditions and accepted local practice. The planting seasons shall be:

1. Fall Planting Season: From August 15 to September 15 for all coniferous materials and from October 15 to November 15 for all deciduous materials; perennials shall be planted from September 1 to October 1.
2. Spring Planting Season: From March 15 to May 1 for all coniferous materials and from March 1 to May 15 for all deciduous materials; perennials shall be planted from April 15 to May 31.

C. Coordination with Lawns and Irrigation Systems: Planting of plant materials shall be after establishment of final grades and prior to planting of lawns and installation of irrigation system, unless otherwise acceptable to Architect.

1. If planting of plant materials occurs after lawn work, protect lawn areas and irrigation system and promptly repair damage resulting from planting operations.

1.7 SPECIAL PROJECT WARRANTY

A. The Contractor shall provide replacement plants for all plant materials which die during the 1 year of establishment following the completion and acceptance of all plantings.

1. Failures include, but are not limited to, the following:

a. Death or unsatisfactory growth, except for defects resulting from abuse, or material damaged by vandalism or unusual phenomena or incidents beyond the Landscape Installer's control will not be replaced as part of this contract.
b. Structural failures including plantings falling from blowing over
c. Faulty performance of tree stabilization

2. Include the following remedial actions as a minimum:

    a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
    b. Replace plants that are more then 25 percent dead or in an unhealthy condition at end of warranty period
    c. Provide extended warranty for period equal to original warranty period, for replaced plant material.

B. Establishment Period: will not begin until all of the following items of work have been performed. All plant material shall be in acceptable growing condition when the project enters the establishment period.

1. Notify Architect for inspection and acceptance.
2. Planting
3. Backfilling
4. Watering
5. Pruning
6. Wrapping
7. Staking
8. Guying
9. Mulching

C. Completion of the Establishment Period: Landscape Architect will make an inspection of the plant material for acceptability. The Contractor will be notified in writing of the quantities of the plant material that shall be replaced in the next planting season.

1. Replacement plants shall be at the Contractor's expense. Plant material damaged by vandalism or unusual phenomena or incidents beyond the Landscape Installer's control will not be replaced as part of this contract.

D. The Contractor's responsibility for all spring replacement plants shall extend for 60 days after such time as the last plant to be replaced is properly planted and accepted by the Landscape Architect. The Contractor's responsibility for all fall replacement plants shall extend until June 1 of the following year.

1.8 MAINTENANCE SERVICE

A. Initial Maintenance Service for Trees, Shrubs, Groundcovers and all other plants: Provide maintenance by skilled employees and landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below

1. Maintenance Period: 1 year from date of substantial completion

2. PRODUCTS

2.1 PLANT MATERIALS

A. Provide trees, shrubs, and other plants of size, genus, species, and variety shown and scheduled. Comply with recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock," latest edition.

B. Provide plant materials grown under climatic conditions similar to conditions in Lincoln, Nebraska (USDA Zone 5, Arnold Arboretum Zone 4) for a minimum of two years.

C. Dig balled and burlapped plants with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system. Provide ball sizes complying with the latest edition of ANSI Z60.1 "American Standard for Nursery Stock." Cracked or mushroomed balls are not acceptable.

D. Furnish minimum size indicated. Larger stock is acceptable provided stocks will not be cut back to size indicated. Enlarge root ball in proportion to the size of the plant.

E. No pruning wounds shall be present with a diameter of more than 1" and such wounds must show vigorous bark on all edges.

F. Deciduous Trees: Provide balled and burlapped (B & B) trees of height and caliper as indicated with branching configuration recommended by ANSI Z60.1 for type and species required. Unless otherwise indicated, provide single stem trees.

G. Deciduous Shrubs: Provide balled and burlapped or container grown shrubs of the height indicated and with not less than minimum number of canes required by ANSI Z60.1 for type and height of shrub required. Thin plants will not be accepted. Side branches shall be generous, well-twigged, and the plant as a whole well-bushed to the ground. Plants shall be in a moist, vigorous condition, free from dead wood, bruises, or other injuries.

H. Coniferous Evergreens: Provide balled and burlapped (B & B) evergreens of sizes indicated. Dimensions indicate minimum spread and height. Provide normal quality evergreens with well-balanced form, branched to the ground. Shearing evergreens will be cause for rejection.

I. Perennials: Provide container grown perennials which exhibit well-developed root systems and healthy, well-developed crowns.

2.2 MISCELLANEOUS PLANTING MATERIALS

A. Topsoil for Shrub Planting Areas: Fertile, friable, natural loam, dark in color (often black), free of subsoil, clay lumps, brush, weeds, roots, stumps, stones larger than 1-1/2" in any dimensions, debris, and other extraneous or toxic matter and harmful to plant growth. Topsoil shall be obtained from local sources and exhibit an acidity range (pH) of 7.0 to 8.0. Identify location of source.

B. Mulch for Trees, Shrubs and Perennials: Organic mulch, free from wood chips, sawdust and deleterious materials, suitable for top dressing of trees. Mulch shall consist of six-month-old, well-rotted, shredded native hardwood bark mulch not larger than 4" in length and 1/2" in width.

C. Fertilizer: Provide commercial type fertilizer of neutral character approved by Architect, containing 12% nitrogen, 4% phosphoric acid and 8% potash by weight. Application rates shall be as follows:

1.	For 1 1/2" Caliper Trees:	3/4 pound per plant
2.	For 2 ½" Caliper Trees:	1-1/4 pound per plant
3.	For 6' B&B Trees:	1/2 pound per plant
4.	For No. 5 Container shrubs:	1/3 pound per plant
5.	For No. 6 Container shrubs:	1/4 pound per plant

D. Anti-Desiccant: Emulsion type, film-forming agent designed to permit transpiration but retard excessive loss of moisture from plants. Deliver in manufacturer's fully identified containers and mix in accordance with manufacturer's instructions.

E. Plant Starter: Liquid solution with an analysis of 3-10-3 (low analysis fertilizer), such as Upstart manufactured by Ortho, or approved equal. Guaranteed analysis shall be as follows:

1.	Total Nitrogen (N)	3.00%
2.	Ammoniacal Nitrogen	2.10%
3.	Nitrate Nitrogen	0.90%
4.	Available Phosphoric Acid (P_2O_5)	10.00%
5.	Soluble Potash (K_2O)	3.00%
6.	Nutrients from Ammonium Phosphate and Nitrate of Potash Chloride Not more than	0.10%
7.	Thiamine Hydrochloride (Vitamin B-1)	0.01%

F. Wrapping: Tree wrap shall be designed to prevent bore damage and winter freezing and shall consist of two sheets of crinkled, waterproof paper, cemented together with asphalt, and weighing not less than 4 pounds per 100 square feet. Tree-wrap tape shall be not less than 4" wide.

G. Twine: Two-ply jute material.

H. Water: Free of substances harmful to plant growth. Hoses shall be furnished by Contractor.

I. Stakes: Stakes shall be hardwood 2" x 2" by height indicated.

J. Guying Hose: Two-ply, reinforced garden hose not less than 1/2" inside diameter.

K. Guying Wire: 12 gauge galvanized double-twisted wire.

L. Edging: If and where indicated on the drawings, provide 3/16" x 4" mil finish continuous aluminum edging equal to Permalock Clean Line Aluminum edging (800) 356-9660.

3. EXECUTION

3.1 PREPARATION

A. Examine proposed planting areas and conditions of installation. Do not start planting work until unsatisfactory conditions are corrected.

B. Layout individual tree and shrub locations. Stake locations and secure Architect's acceptance before start of planting work. Make minor adjustments as may be requested.

C. Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required.

D. Excavate pits, beds and trenches with vertical sides and with bottom slightly raised at center to provide proper drainage. Loosen hard subsoil in bottom of excavation and scarify sides.

1. For balled and burlapped trees and shrubs, scarify bottom of the excavations to a depth of 4". Make excavations equal to the depth of ball, and diameter at least 12" greater than ball for shrubs and 24" trees.

E. When conditions detrimental to plant growth are encountered, such as rubble fill or adverse drainage conditions, notify Architect. Hand excavate near underground utilities. Maintain grade stakes set by others until removal is agreed upon by all parties concerned.

F. Place new topsoil in all planting beds to a depth of 12 inches prior to planting.

3.2 PLANTING TREES AND SHRUBS

A. Planting shall be performed only by experienced persons familiar with planting procedures under the supervision of a qualified supervisor.

B. Set balled and burlapped stock plumb and in center of pit or trench with top of ball at same elevation as adjacent finished landscape grades. Rotate plants to give the best appearance and relationship to each other or adjacent structures.

C. For all plants other than evergreens, remove burlap from sides of balls but retain burlap on bottoms. Where wire basket used, cut and remove wire basket without disturbing plant roots. Completely remove containers for container grown stock.

D. Place additional backfill around base and sides of ball, and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Apply plant starter at manufacturer's suggested rates during watering process. Water again after placing final layer of backfill. Remove all ropes and wires from tops of balls. Dish top of backfill to allow for mulching.

E. Mulch plant pits. Provide not less than 3" thickness of mulch and work into top of backfill and finish level with adjacent finish grades. Mulch within 24 hours of planting. Thoroughly water mulched areas. After watering, rake mulch to provide a uniform finished surface.

F. Apply anti-desiccant using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage.

1. If deciduous trees or shrubs are moved during full-leaf period, spray with anti-desiccant at nursery prior to moving and again two weeks after planting.

G. Prune, thin out and shape trees and shrubs in accordance with standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise directed by Architect, do not cut tree leaders and remove only injured or dead branches from flowering trees. Prune shrubs to retain natural character. Prune evergreens only to remove broken or damaged branches.

H. Remove and replace excessively pruned or misformed stock resulting from improper pruning.

I. Wrap tree trunks of 3/4" caliper and larger. Inspect tree trunks for injury, improper pruning and insect infestation and take corrective measures before wrapping. Start at ground and cover trunk to height of first branches and securely attach. The overlap shall not be less than 1/3 the width of the tree wrap. The wrapping shall be securely fastened with tree-wrap at top, middle and bottom. Stapling and the use of nylon reinforced strapping tape are not approved fastening methods.

3.3 MAINTENANCE

A. Begin maintenance immediately after planting. Maintain trees, shrubs and other plants until final acceptance of the entire project.

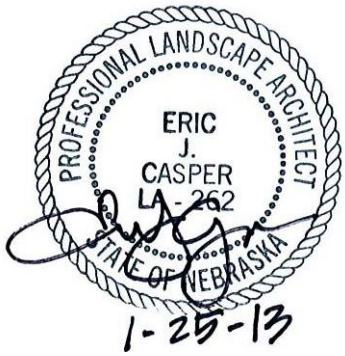
B. Maintain trees, shrubs and other plants by pruning, cultivating and weeding as required for healthy growth. Restore planting saucers. Tighten and repair stake and guy supports and reset trees to proper grades or vertical position as required. Restore or replace damaged wrappings. Spray as required to keep trees and shrubs free of insects and disease. Water trees and shrubs not less than twice per week until final acceptance.

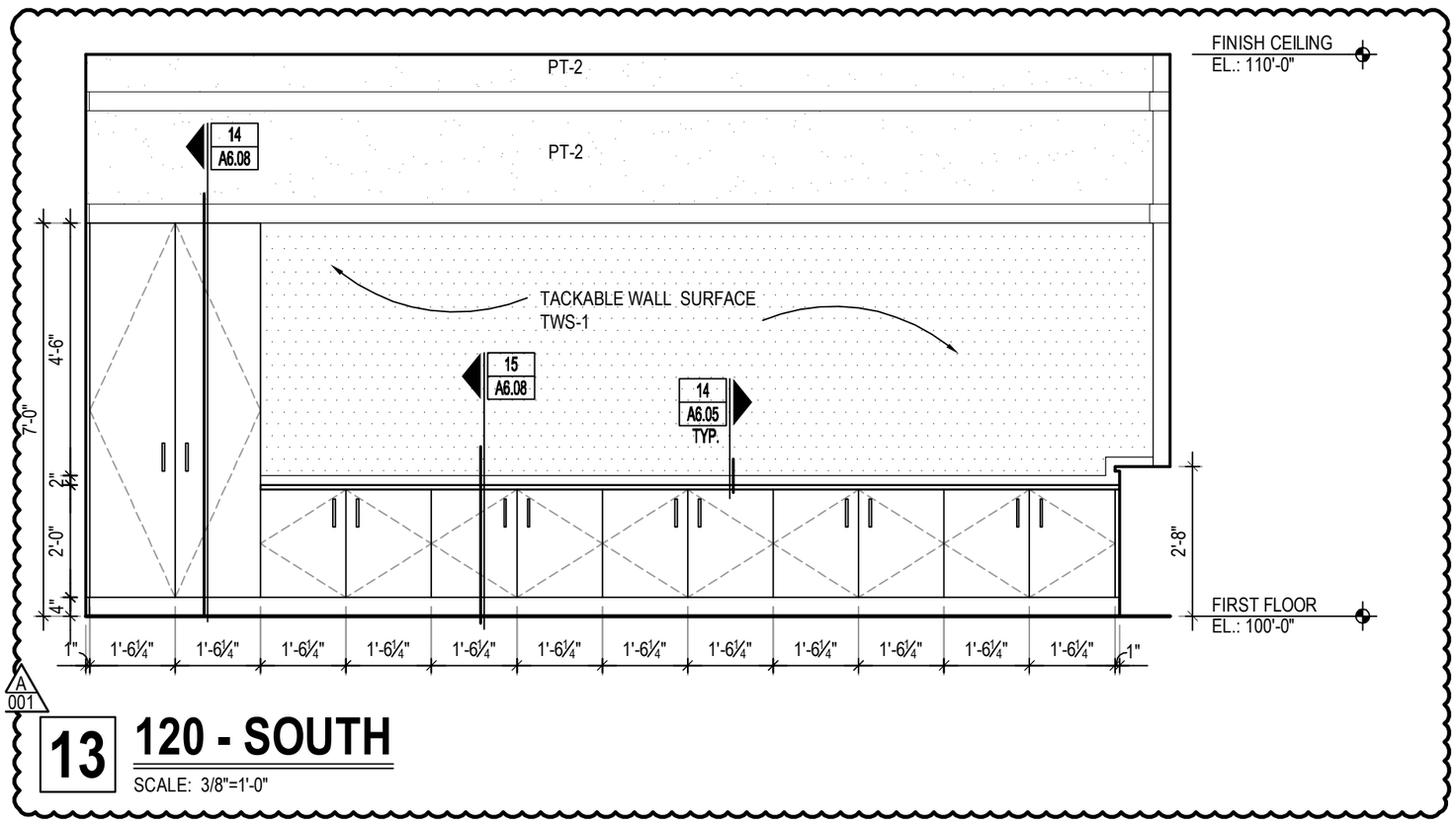
3.4 CLEANUP AND PROTECTION

A. During landscape work, keep pavements clean and work areas in an orderly condition.

B. At completion of establishment period the Contractor shall remove all stakes, guy wires, and rubber hose guards and dispose of materials off-site.

END OF SECTION 329300





13 120 - SOUTH

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

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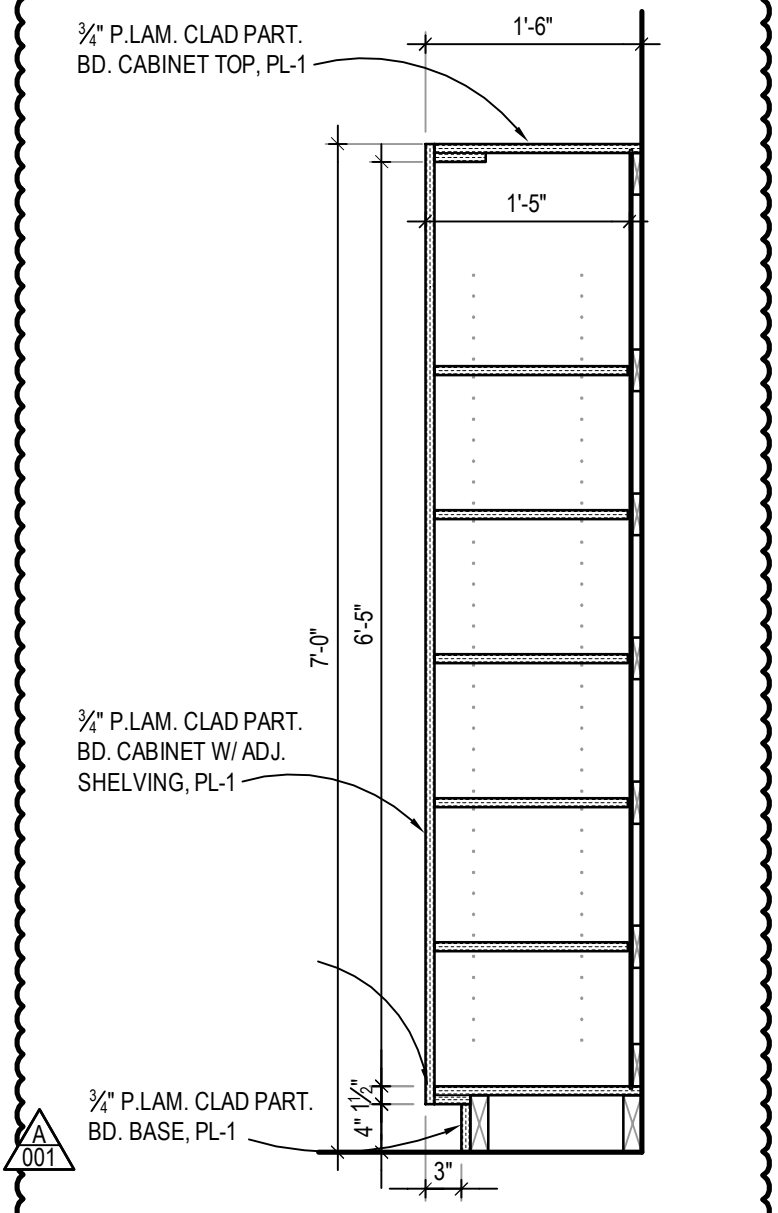
Seward Memorial Library
Lower Level Renovation
Seward, Nebraska
TCEP No.: 578-004-11

Addendum #001
Supplemental Drawing: SDA-001
Revision of Sheet: A6.05
Date: Jan. 25, 2013



14 **SECTION DETAIL**

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

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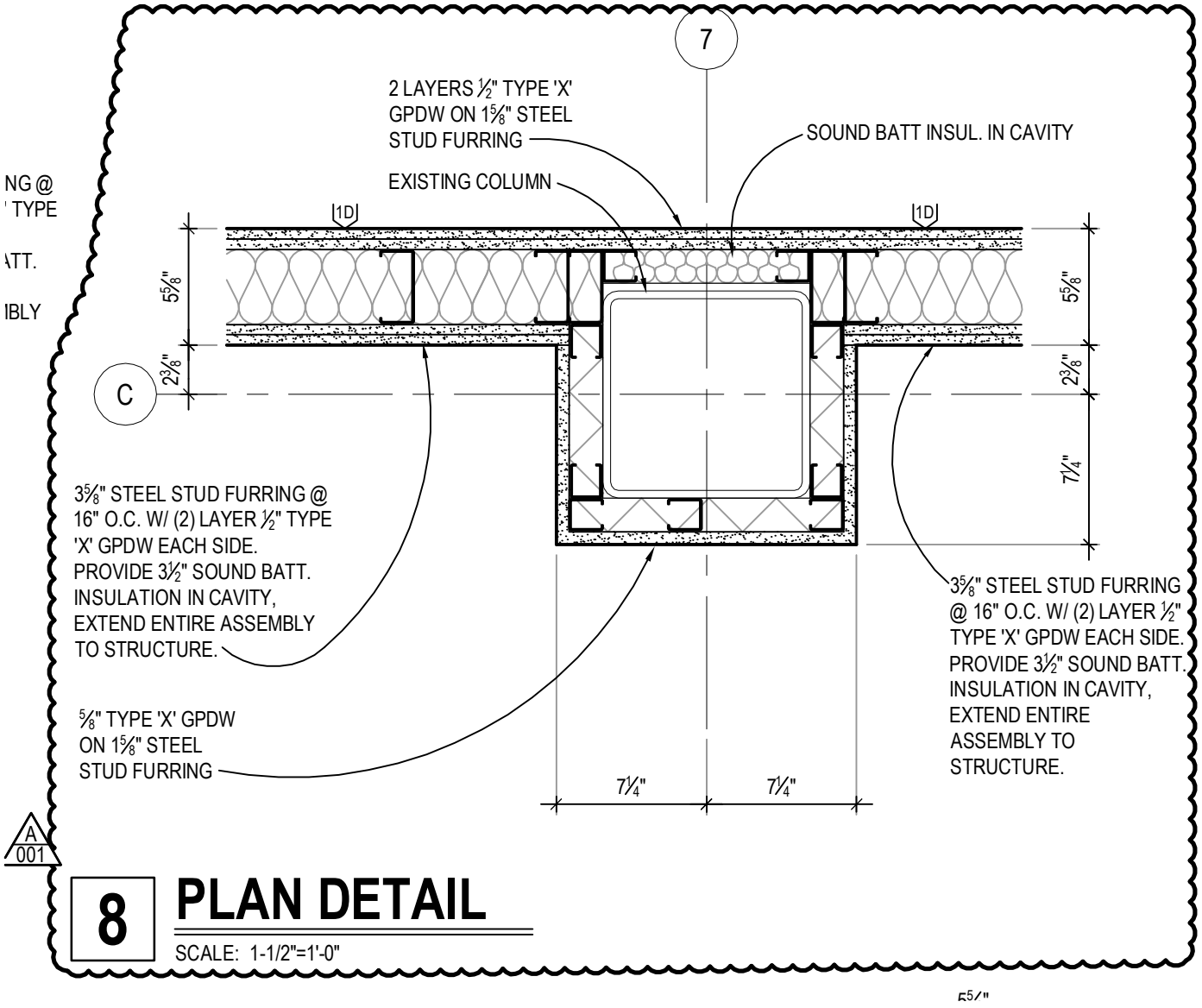
Seward Memorial Library Lower Level Renovation
Seward, Nebraska
TCEP Project No.: 578-004-11

Addendum #001
Supplemental Drawing: SDA-002
Revision of Sheet: A6.08
Date: Jan. 25, 2013



8 PLAN DETAIL

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

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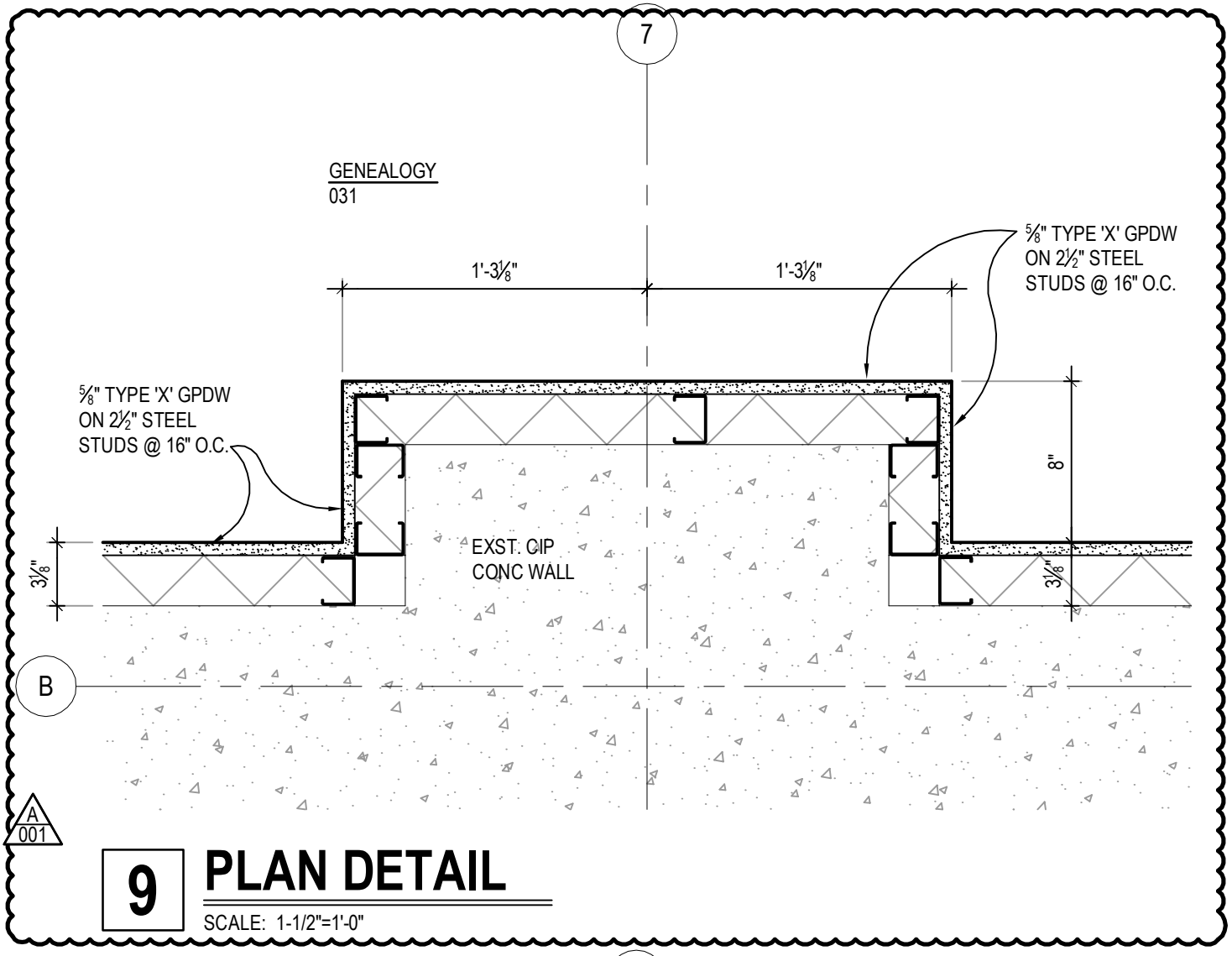
Seward Memorial Library Lower Level Renovation
Seward, Nebraska
TCEP Project No.: 578-004-11

Addendum #001
Supplemental Drawing: SDA-003
Revision of Sheet: A7.01
Date: Jan. 25, 2013



9 PLAN DETAIL

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

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Seward Memorial Library Lower Level Renovation
Seward, Nebraska
TCEP Project No.: 578-004-11

Addendum #001
Supplemental Drawing: SDA-004
Revision of Sheet: A7.01
Date: Jan. 25, 2013

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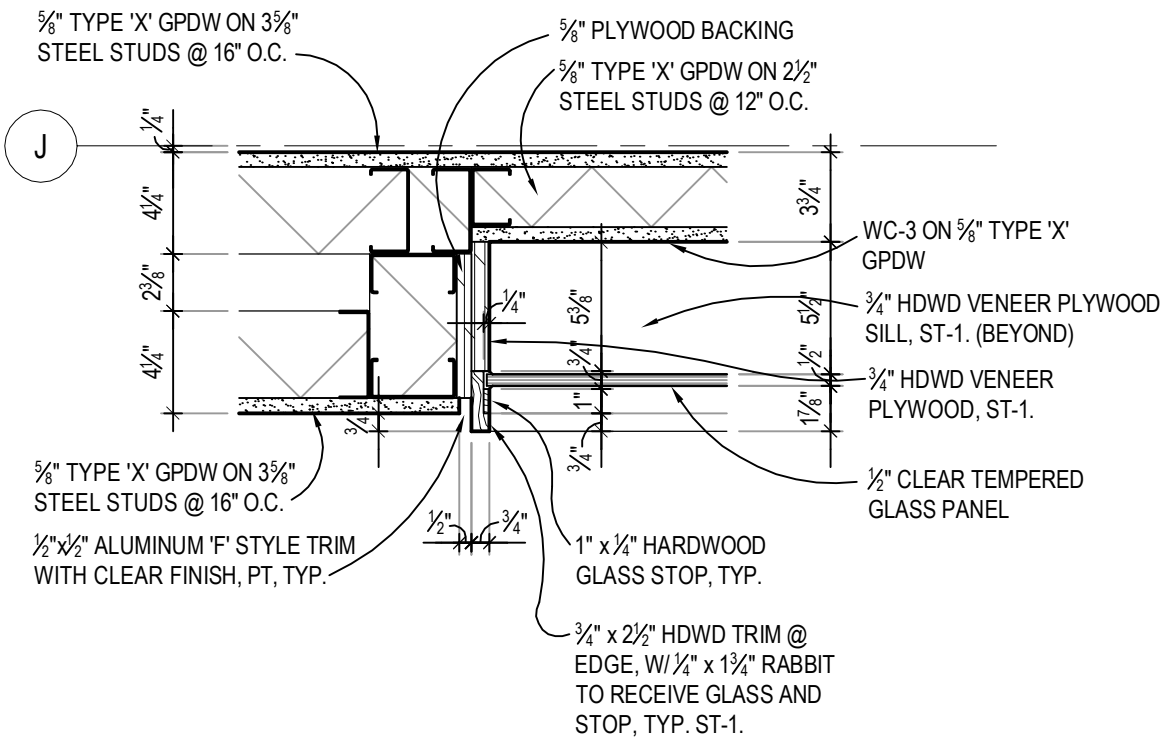

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11 PLAN DETAIL

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

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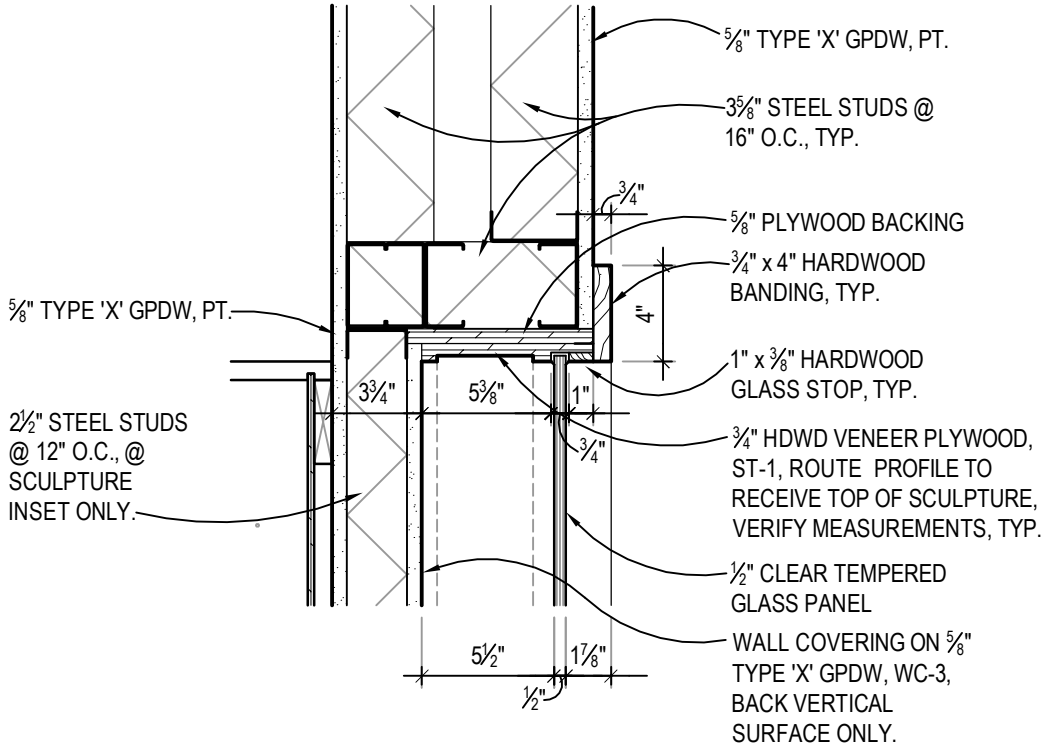
TCEP Project No.: 578-004-11

Addendum #001
Supplemental Drawing: SDA-005
Revision of Sheet: A7.02
Date: Jan. 25, 2013



6 SECTION DETAIL

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

A 001

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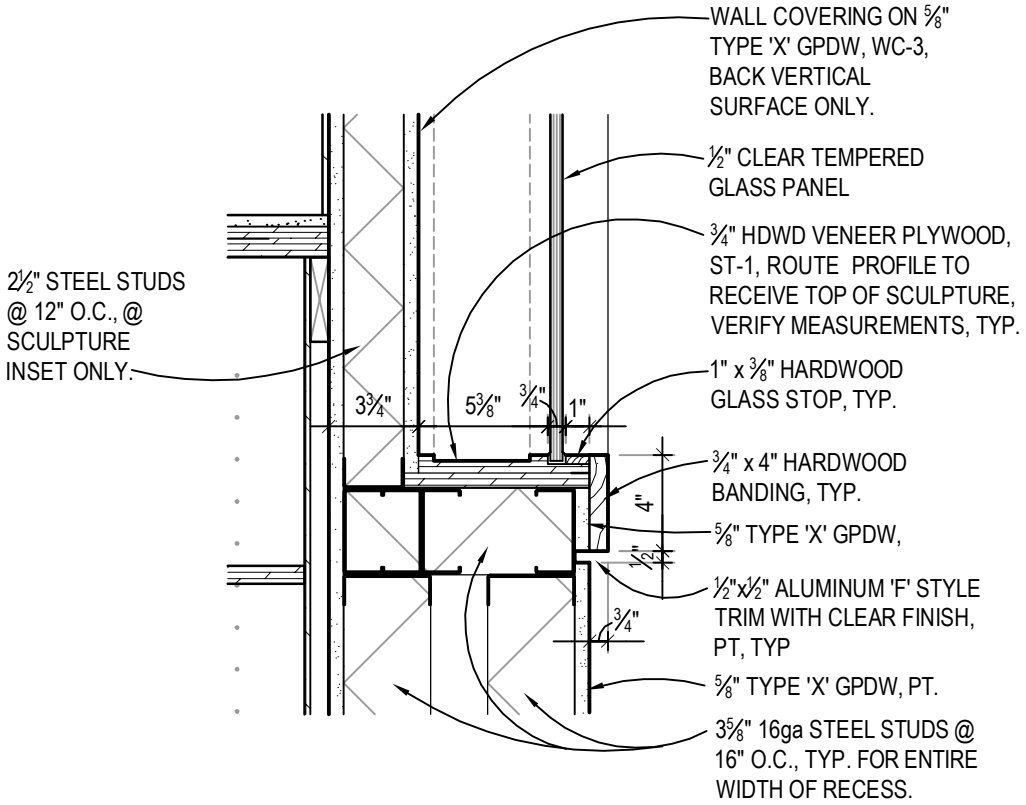
TCEP Project No.: 578-004-11

Addendum #001
Supplemental Drawing: SDA-006
Revision of Sheet: A8.02
Date: Jan. 25, 2013



7 SECTION DETAIL

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

A 001

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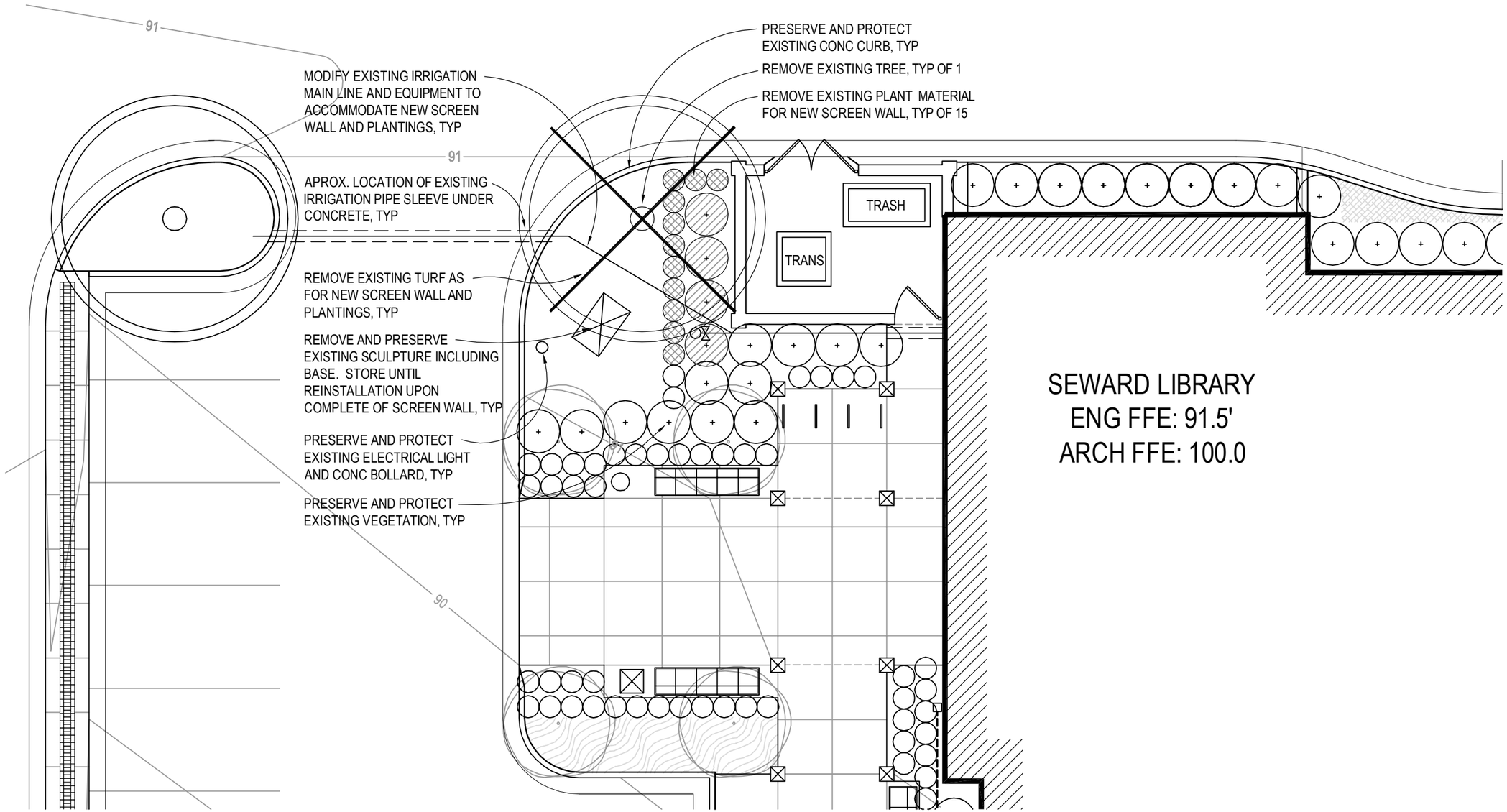
TCEP Project No.: 578-004-11

Addendum #001
Supplemental Drawing: SDA-007
Revision of Sheet: A8.02
Date: Jan. 25, 2013



SITE DEMOLITION PLAN

SCALE: 1/"=10'-0"

SEWARD LIBRARY
ENG FFE: 91.5'
ARCH FFE: 100.0

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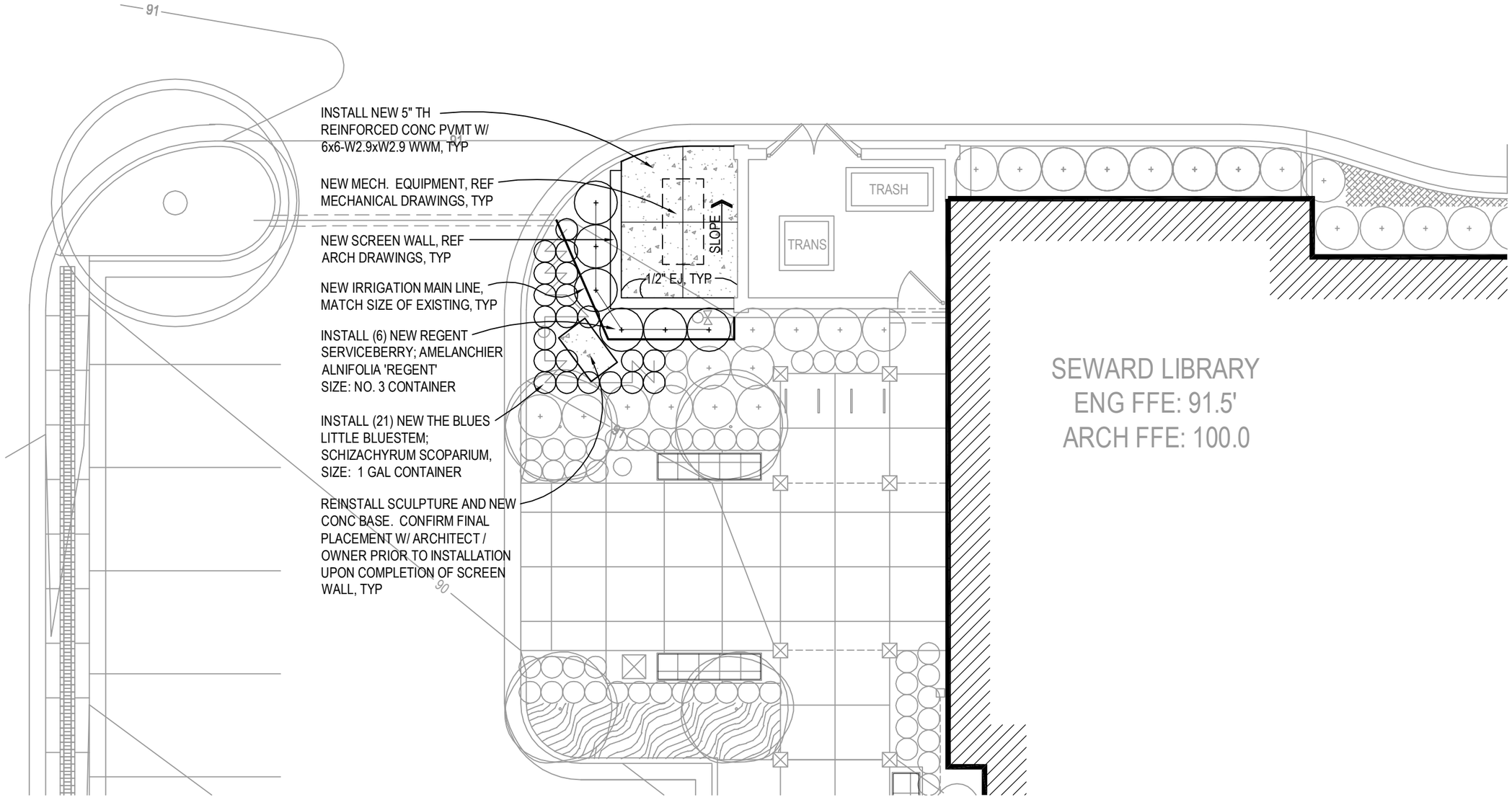
PROFESSIONAL LANDSCAPE ARCHITECT
ERIC J. CASPER
LA-262
STATE OF NEBRASKA
1-25-13

Seward Memorial Library
Lower Level Renovation
Seward, NE
TCEP No.: 578-004-11

Alternate Bid Item: M-1
Addendum #01
Supplemental Drawing: SDL-001

Date: Jan. 25, 2013



SITE DEVELOPMENT PLAN

SCALE: 1/"=10'-0"

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1-25-13

Seward Memorial Library
Lower Level Renovation
Seward, NE
TCEP No.: 578-004-11

Alternate Bid Item: M-1
Addendum #01
Supplemental Drawing: SDL-002

Date: Jan. 25, 2013

AIR COOLED CONDENSER UNIT, DX COOLING COIL, AND HOT GAS REHEAT COIL SCHEDULE	
EQUIPMENT MARK:	CC-1 / HGRH-1 / ACCU-1
UNIT SERVES:	ERU-1 DISCHARGE
UNIT TYPE:	-INDOOR AHU DX COOLING & HOT GAS REHEAT COIL SECTION -AIR COOLED CONDENSING UNIT AND NO HEAT
MANUFACTURER AND MODEL:	CC-1 & HGRC-1: AAON M2-H-011-R-2-A-A-0-C-0 ACCU-1: AAON CC-B-022-3-D-2:DDA00A0 OR APPROVED EQUIVALENT
DX COOLING:	(COOLING ONLY)
REFRIGERANT	R-410A
CONSTRUCTION	ALUMINUM FIN/ COPPER TUBE
MAX. UNIT SUPPLY AIRFLOW (CFM)	5,000
EVAP. COIL ROWS/ FINS PER IN.	6 / 10
COIL FACE VELOCITY (FPM)	460
AIR PRESSURE DROP (IN. WC.)	0.59
NET TOTAL COOLING CAPACITY (MBH)	249.80
NET SENSIBLE COOLING CAPACITY(MBH)	158.40
NOMINAL TONS	22.00
LEAVING SUPPLY AIR TEMPERATURE (DB/WB) (F)	51.9 / 51.29
ENTERING OUTSIDE AIR TEMPERATURE (DB/WB) (F)	81 / 68
RETURN AIR TEMPERATURE (DB/WB) (F)	NA
MIXED ENTERING AIR TEMPERATURE (DB/WB) (F)	NA
AHRI MIN. COOLING EER AT OPERATING CONDITIONS	11.20
DX MODULATING HOT GAS REHEAT (DURING DEHUMIDIFICATION):	
REFRIGERANT	R-410A
CONSTRUCTION	ALUMINUM FIN/ COPPER TUBE
TOTAL REHEAT CAPACITY (MBH)	98.20
ENTERING AIR TEMPERATURE (DB/WB) (F)	51
LEAVING SUPPLY AIR TEMPERATURE (DB/WB) (F)	70
RELATIVE HUMIDITY (RH %)	51
MAX. UNIT SUPPLY AIRFLOW (CFM)	5,000
AIR PRESSURE DROP (IN. WC.)	0.07
SINGLE POINT ELECTRICAL DATA	ACCU-1
VOLTAGE / PHASE / HZ.	460/3/60
FLA/ MCA / HACR RATED BREAKER MOCP	43 / 48 / 60
DIMENSIONS, (LENGTH, WIDTH, HEIGHT)	99 / 44.25 / 50
UNIT WEIGHT, (LBS)	1074
ADDITIONAL REMARKS:	1, 2, 3, 4, 5, 6

GENERAL NOTES

1) PROVIDE STAND ALONE PACKAGED CONTROL SYSTEM BY EQUIPMENT MANUFACTURER, COORDINATE WITH CONTROLS CONTRACTOR MONITORING POINTS AS LISTED BELOW.
UNIT MANUFACTURER TO PROGRAM, START-UP, AND COMMISSION THE SYSTEM CONTROLLER TO CONTROL UNIT INCLUDING DIGITAL SCROLL COMPRESSOR, COOLING & DEHUMIDIFICATION STAGES, HOT GAS REHEAT COIL, SAFETIES, AND MODE OF OPERATIONS AS NECESSARY TO SATISFY THE DISCHARGE AIR TEMPERATURE AND RELATIVE HUMIDITY. COORDINATE OCCUPIED AND UOCCUPIED ADJUSTABLE MODES WITH EMS CONTROLS CONTRACTOR. ENERGY MANAGEMENT SYSTEM (EMS) TO MONITOR ACCU-1 ALARMS, STATUS, DISCHARGE TEMPERATURE, RELATIVE HUMIDITY,MODE OF OPERATION, AND ENABLE / DISABLE UNIT WITH ERU-1.

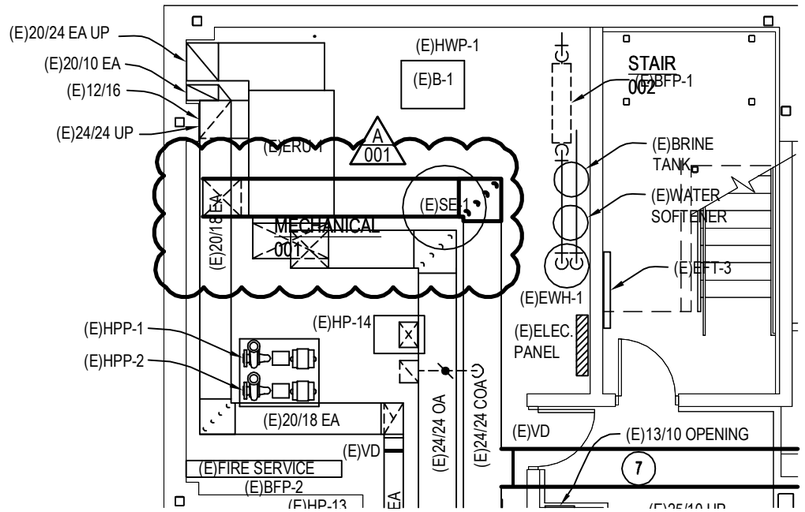
2) PROVIDE DUAL STAGE INDEPENDENT CIRCUITED COMPRESSORS, THE FIRST STAGE COMPRESSOR SHALL BE A 100 % DIGITAL VARIABLE CAPACITY SCROLL COMPRESSOR FOR MODULATING VARIABLE STAGING OF THE COOLING / DEHUMIDIFICATION SYSTEM DURING VARYING LOAD CONDITIONS, THE SECOND STAGE COMPRESSOR SHALL BE CONSTANT SPEED.

3) PROVIDE UNIT WITH SOUND INSULATION, AND WRAP COMPRESSORS WITH A SOUND RATED BLANKET, PROVIDE CONDENSER WITH AIR FOIL FAN WITH LOW RPM'S, SOUND POWER SHALL BE 88 DB OR LOWER.

4) PROVIDE MANUFACTURER RECOMMENDED AND SIZED REFRIGERANT LINE SETS TO CC-1 & HGRC-1, ROUTE IN A MANNER TO MINIMIZE PIPING AND REDUCE BENDS. INSTALL PER MANUFACTURER RECOMMENDATIONS.

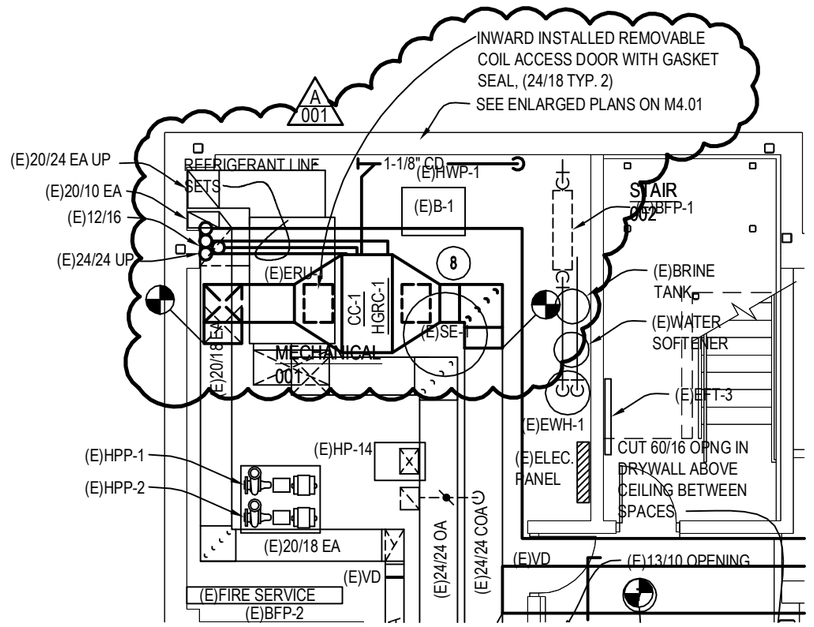
5) PROVIDE COOLING & HOT GAS REHEAT COIL SECTION TO MEET DIMENSIONS: 62" WIDE x 48" TALL x 32" LONG, MANUFACTURER TO COORDINATE UNIT HAND PRIOR TO ORDERING.
PROVIDE FULL FACE OPENING ENTERING AND LEAVING COIL SECTION, PROVIDE SECTION WITH 2" THICK 1.5# MIN. DENSITY INSULATION, DOUBLE WALL CONSTRUCTION.

6) PROVIDE ACCU-1 WITH SINGLE POINT ELECTRICAL CONNECTION INCLUDING FACTORY MOUNTED AND WIRED 115 VOLT GFI SERVICE RECEPTACLE.
DISCONNECT AND MOTOR STARTERS TO BE FURNISHED BY THE EQUIPMENT MANUFACTURER. ELECTRICAL CONTRACTOR TO INSTALL MANUFACTURER PROVIDED DISCONNECT AND MOTOR STARTERS.



PARTIAL LOWER LEVEL DEMOLITION HVAC PLAN

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



PARTIAL LOWER LEVEL HVAC PLAN

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

NOTES:

1. TIE NEW 14/12 EA INTO EXISTING EA MAIN IN MECHANICAL ROOM. REBALANCE ERU-1 TO EXHAUST 1000 ADDITIONAL CFM.
2. BALANCE COA TO 600 CFM INTO HP-18 AND HP-19 RETURN AIR DUCT.
3. BALANCE COA TO 240 CFM INTO HP-20 RETURN AIR DUCT.
4. BALANCE COA TO 700 CFM INTO HP-21 RETURN AIR DUCT.
5. ROUTE 4"Ø DRYER VENT UP IN THE NE CORNER OF CLOSET 130 UP THROUGH TO THE CEILING PLENUM IN MEETING A 128. TERMINATE IN BUILDING EVE WITH STAINLESS STEEL DRYER VENT USA MODEL RTDV-4 OR EQUAL. INSTALL DBF-1 AS PER MANUFACTURER RECOMMENDATIONS AT DRYER OUTLET.
6. CARBON DIOXIDE SENSOR WITH AUDIBLE ALARM AND BATTERY BACK-UP.
7. MOUNT HP-21 ON 4" EQUIPMENT PAD, REFERENCE DETAIL #7 ON M6.01.
8. RE-WORK EXISTING PIPE HANGERS, CONDUIT, 1" FIRE SPRINKLER PIPE, (3) 2" DWV SCHEDULE 40 PIPES FROM (E) SE-1 TO ACCOMMODATE THE REVISED COA DUCTWORK AND COIL LAYOUT. WHERE A CEILING HUNG SUPPORT WILL NOT ACCOMMODATE THE (E) HPS/R, FIRE SPRINKLER PIPING, OR COIL SECTIONS PROVIDE A METAL FLOOR MOUNTED SUPPORT.

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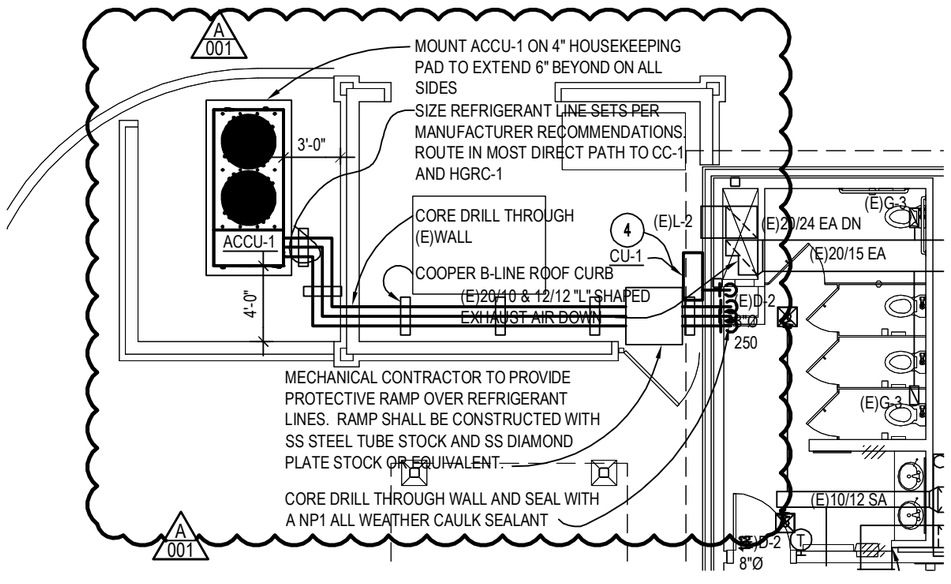

PARTIAL FIRST FLOOR HVAC PLAN

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

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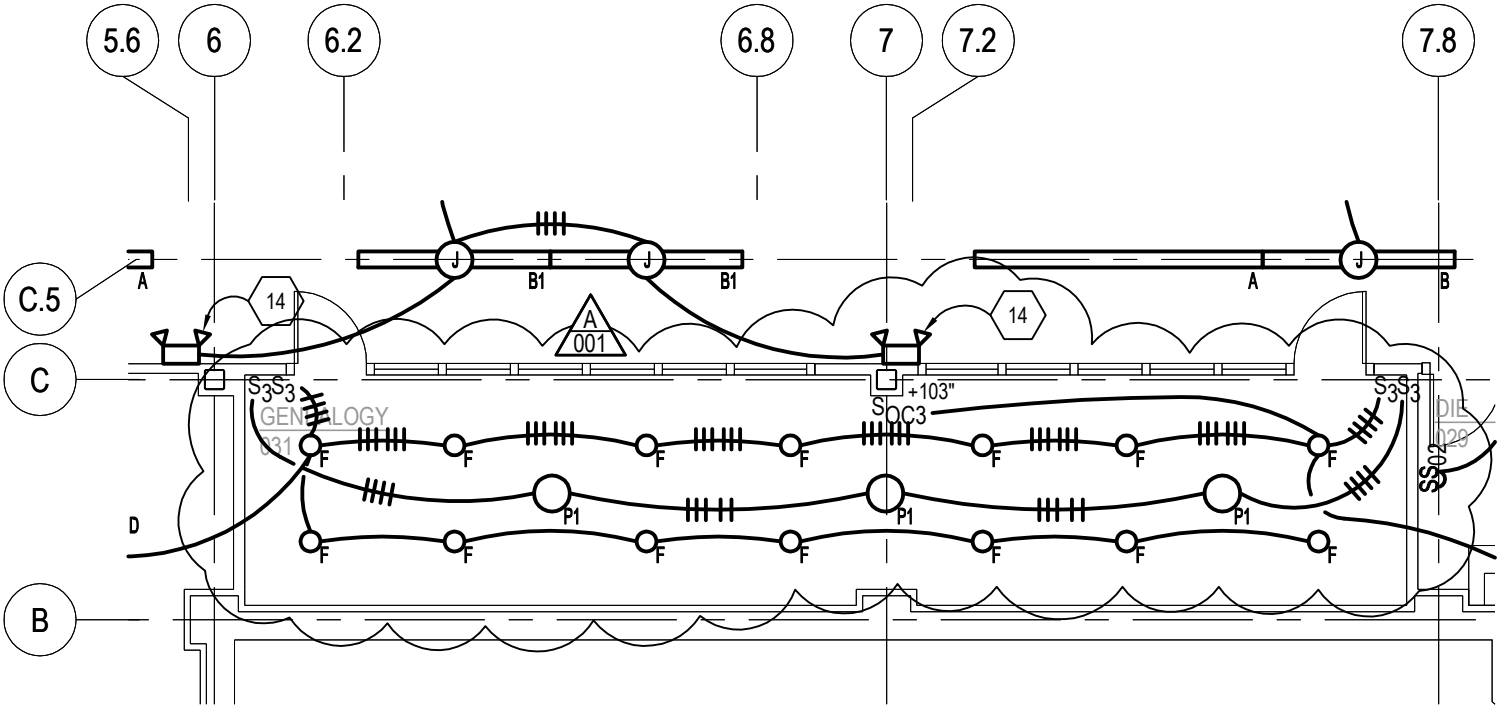
Seward, Nebraska
TCEP No.: 578-004-11

Addendum #01
Supplemental Drawing: SDM-02
Revision of Sheet: M1.01
Date: January 25, 2013



LOWER LEVEL LIGHTING PLAN

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

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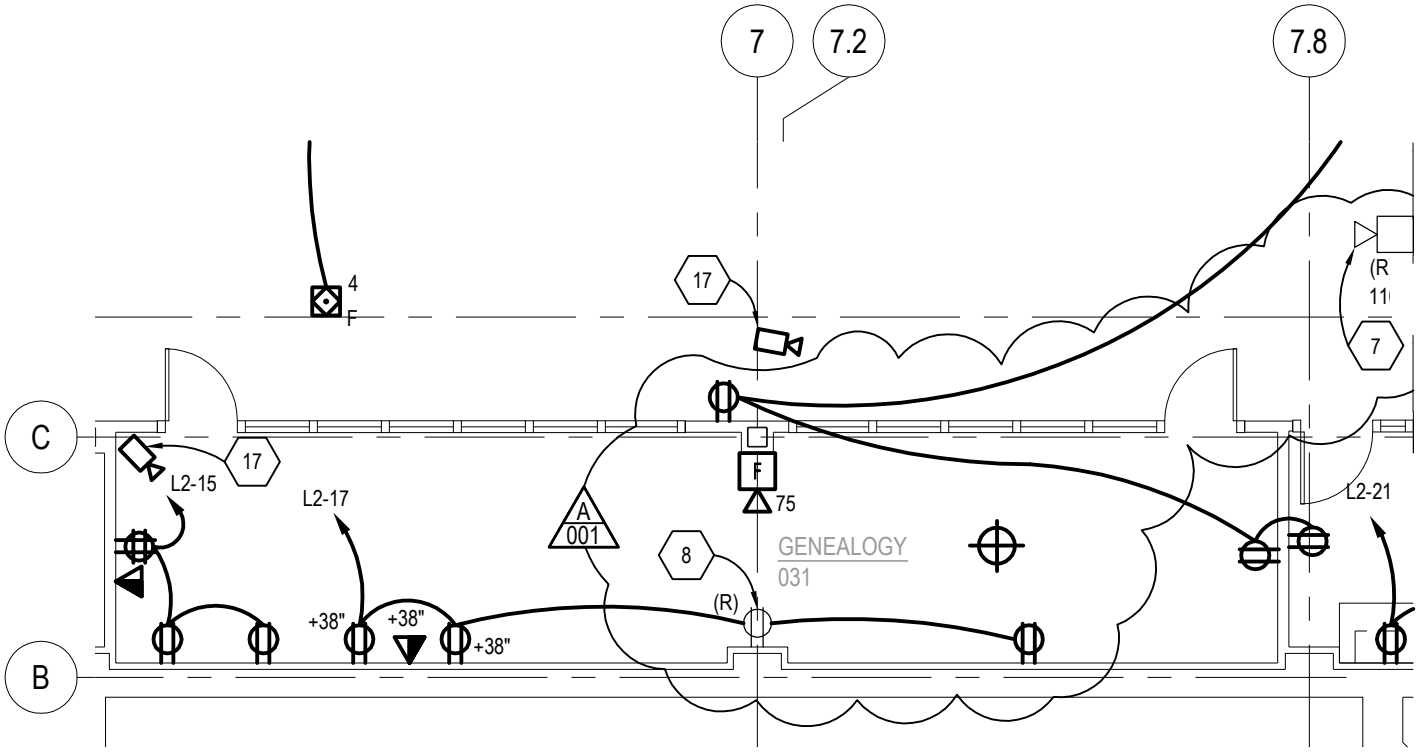
Addendum #01
Supplemental Drawing: SDE-001
Revision of Sheet: E1.01
Date: Jan. 25, 2013



LOWER LEVEL POWER & AUXILIARY SYSTEMS PLAN

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

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Seward Memoria
Seward, Ne
TCEP Project No.: 578

Addendu
Supplemental Drawing: S
Revision of Shee
Date: Jan. 2

CODE REQUIREMENTS

CODE ITEM	REQUIREMENTS	SEWARD MEMORIAL LIBRARY, LOWER LEVEL RENOVATION
OCCUPANCY CLASSIFICATION:		
2009 IBC: CHAPTER 3		A-3: ASSEMBLY; B: BUSINESS; S-2: STORAGE (LOW HAZARDOUS)
CONSTRUCTION TYPE:		
2009 IBC: CHAPTER 6		TABLE 601
		IBC TYPE V-B, NON-RATED FULLY SPRINKLED
OCCUPANCY SEPARATION:		
2009 IBC: TABLE 508.4	NONE	
ALLOWABLE BUILDING HEIGHT:		
2009 IBC: TABLE 503	1 STORY- 40 FT.	1 STORY - 31 FT. MAX. & FINISHED BASEMENT FULLY SPRINKLED
ALLOWABLE BUILDING AREA:		
2009 IBC: TABLE 503	6,000 SQ./FT.	EXISTING: 26,225 SQ./FT. - NO SQ./FT. ADDED.
		LOWER LEVEL: 12,923 SQ./FT.
		FIRST FLOOR: 13,302 SQ./FT.
		TOTAL: 26,225 SQ./FT.
AREA MODIFICATIONS:		
2009 IBC: SECTION 506	SEE CHART BELOW	INCREASE ALLOWED TO 26,880 SF
PORTABLE FIRE EXTINGUISHERS:		
2009 IFC: SECTION 906		6 PROVIDED (3 PER FLOOR) - MAX TRAVEL DISTANCE = 75'
FIRE RESISTIVE REQUIREMENTS (HOURS):		
2009 IBC: TABLES 601 & 602		
EXIST. STRUCTURAL FRAME	0 HR.	0 HR.
EXIST. BEARING WALLS		
EXTERIOR	0 HR. 10 < X < 30	0 HR.
INTERIOR	0 HR.	0 HR.
NON-BEARING WALLS & PARTITIONS		
EXTERIOR	1 HR. 10 < X < 30	0 HR.
INTERIOR	0 HR.	0 HR.
EXIST. SHAFT ENCLOSURES	1 HR. , 1 HR. DOORS	1 HR. , 1 HR. DOORS
EXST. FLOOR CONSTRUCTION	0 HR.	0 HR.
EXST. ROOF CONSTRUCTION	0 HR.	0 HR.
EXST. STAIRWAY	0 HR.	0 HR.
TOTAL OCCUPANT LOAD:		
2009 IBC: TABLE 1004.1.1		
LOWER LEVEL:		219
GROUP A-3:		10
GROUP B:		11
GROUP S-2:		
FIRST FLOOR:		261
GROUP A-3:		13
GROUP B:		3
GROUP S-2:		517 TOTAL

A/001

PLUMBING FIXTURE COUNT

OCCUPANCY	OCCUPANT LOAD	WATER CLOSETS				LAVATORIES			DRINKING FNTS.		SERVICE SINK
		RATIO	MEN	RATIO	WOMEN	RATIO	MEN	WOMEN	RATIO	REQD.	
ASSEMBLY A-3	475	1/125	2	1/65	4	1/200	2	2	1/500	1	-
BUSINESS	23	1/25	1	1/25	1	1/40	1	1	1/100	1	-
STORAGE S-2	14	1/100	1	1/100	1	1/100	1	1	1/1000	1	-
TOTAL REQUIRED		10				8			3		1
TOTAL PROVIDED		11 (+3 URINAL FOR MEN)				8			4		2

CODE LEGEND

SYMBOL	DESCRIPTION	REMARKS
	EXISTING 1 HOUR FIRE-RESISTANT/SMOKE RATED CONSTRUCTION.	NO NEW RATED CONSTRUCTION REQ'D WITHIN RENOVATION PROJECT.
	EXISTING DRAFTSTOP (ENCLOSURE SYSTEM TO UNDERSIDE OF STRUCTURE)	NO NEW DRAFTSTOPS REQ'D WITHIN RENOVATION PROJECT.
	AREA OF OCCUPANCY	
X	REPRESENTS EMERGENCY FIRE EXITS.	
60	EXISTING 60 MINUTE DOORS/WINDOWS, SMOKE & DRAFT CONTROL, SELF OR AUTOMATIC CLOSING.	NO NEW RATED DOORS REQ'D WITHIN RENOVATION PROJECT.
20	EXISTING 20 MINUTE DOORS/WINDOWS, SMOKE & DRAFT CONTROL, SELF OR AUTOMATIC CLOSING.	NO NEW RATED DOORS REQ'D WITHIN RENOVATION PROJECT.
90	EXISTING 90 MINUTE DOORS/WINDOWS, SMOKE & DRAFT CONTROL, SELF OR AUTOMATIC CLOSING.	NO NEW RATED DOORS REQ'D WITHIN RENOVATION PROJECT.
30	DESIGNATED EXIST PER OCCUPANT LOAD	
FEC	FIRE EXTINGUISHER CABINET	

GENERAL NOTES:

1) BUILDING IS TO BE 100% AUTOMATIC SPRINKLER PROTECTED.

2) PIPE AND DUCT PENETRATIONS THROUGH THESE WALLS SHALL BE SLEEVED AND SEALED WITH A U.L. TESTED FIRE CAULKING ASSEMBLY TO PROVIDE FIRE AND SMOKE PROTECTION TO MEET THE REQUIRED 1-HR FIRE/SMOKE RATING. REFER TO THE HVAC PLANS FOR LOCATION OF DUCT PENETRATIONS AND FIRE/SMOKE DAMPERS. REFER TO THE PIPING PLANS FOR LOCATION OF PIPING PENETRATIONS. REFER TO SECTION 15140 FOR FIRE SEALANT SPECIFICATIONS.

3) FIRE-RESISTIVE CONSTRUCTION IS NOTED ON THE DRAWING, UNNOTED WALLS ARE OF NON-COMBUSTIBLE CONSTRUCTION.

4) DOORS: AS NOTED ON THE DRAWINGS. UNNOTED DOORS ARE NOT REQUIRED TO BE FIRE RATED.

ALLOWABLE AREA INCREASES

SECTION 506.1. GENERAL AREA MODIFICATIONS.

$$A_a = A_t + \left[\frac{A_t \cdot I_f}{100}\right] + \left[\frac{A_t \cdot I_s}{100}\right] \longrightarrow 6{,}000 + \underbrace{\left[\frac{(6{,}000)(48)}{100}\right]}_{2{,}880} + \underbrace{\left[\frac{(6{,}000)(300)}{100}\right]}_{18{,}000} = 26{,}880 \text{ S.F.}$$

A_a = ALLOWABLE AREA PER FLOOR (SQUARE FEET)

A_t = TABULAR AREA PER FLOOR IN ACCORDANCE WITH TABLE 503 (SQUARE FEET) = 6,000

I_f = AREA INCREASE DUE TO FRONTAGE (PERCENT) AS CALCULATED IN ACCORDANCE WITH SECTION 506.2 = 48%

I_s = AREA INCREASE DUE TO SPRINKLER PROTECTION (PERCENT) AS CALCULATED IN ACCORDANCE WITH SECTION 506.3 = 300%

SECTION 506.2 FRONTAGE INCREASE.

$$I_f = 100 \left[\frac{F}{P} - 0.25\right] \frac{W}{30} \longrightarrow I_f = 100 \left[\frac{413}{566} - 0.25\right] \frac{30}{30} = 48$$

F = BUILDING PERIMETER WHICH FRONTS ON A PUBLIC WAY OR OPEN SPACE HAVING 20 FT. OPEN MINIMUM WIDTH = 413 FT.

P = PERIMETER OF ENTIRE BUILDING = 566 FT.

W = MINIMUM WIDTH OF PUBLIC WAY OR OPEN SPACE = 30 FT.

GENERAL CODE INFORMATION:

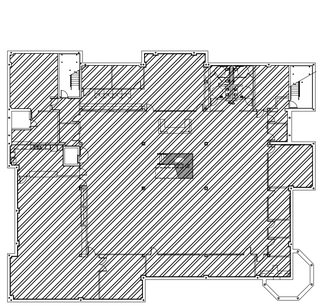
BUILDING CODES: 2009 INTERNATIONAL BUILDING CODE (IBC)
2011 NATIONAL ELECTRICAL CODE (NEC)
2006 INTERNATIONAL MECHANICAL CODE (IMC)
2006 INTERNATIONAL PLUMBING CODE (IPC)
2009 INTERNATIONAL FIRE CODE (IFC)
(NFPA 101, NFPA 45, NFPA 30)

ACCESSIBILITY STANDARDS: AMERICANS WITH DISABILITIES ACT
ACCESSIBILITY GUIDELINES (2010 ADAAG)

OCCUPANCY CLASSIFICATION: RENOVATION
MIXED "A-3" ASSEMBLY & "B" BUSINESS (A-3 ASSUMED)

FIRE SUPPRESSION SYSTEM: FULLY SPRINKLED

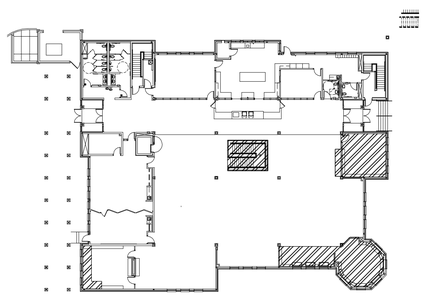
FIRE ALARM: INTELLIGENT, ADDRESSABLE, FIRE ALARM SYSTEM W/ VOICE EVACTUATION



LOWER LEVEL CONSTRUCTION LIMITS

SCALE: 1/32"=1'-0"

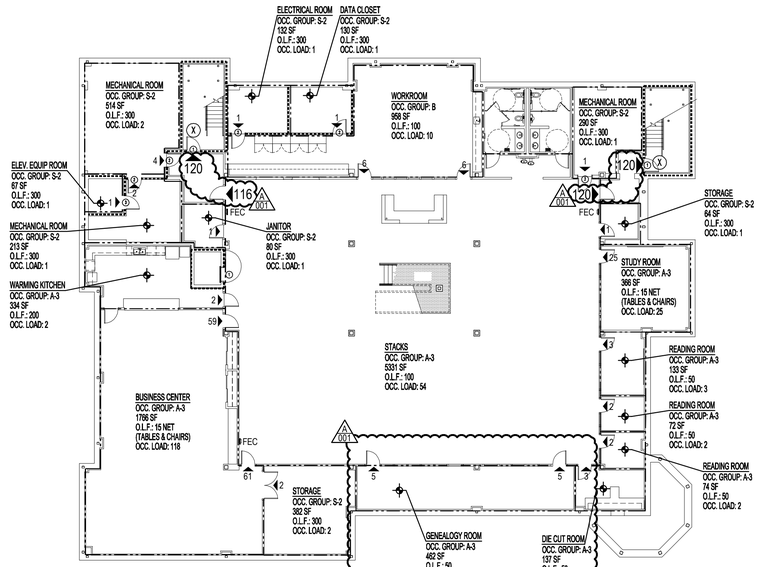
AREAS AFFECTED BY NEW CONSTRUCTION OR RENOVATION



FIRST FLOOR CONSTRUCTION LIMITS

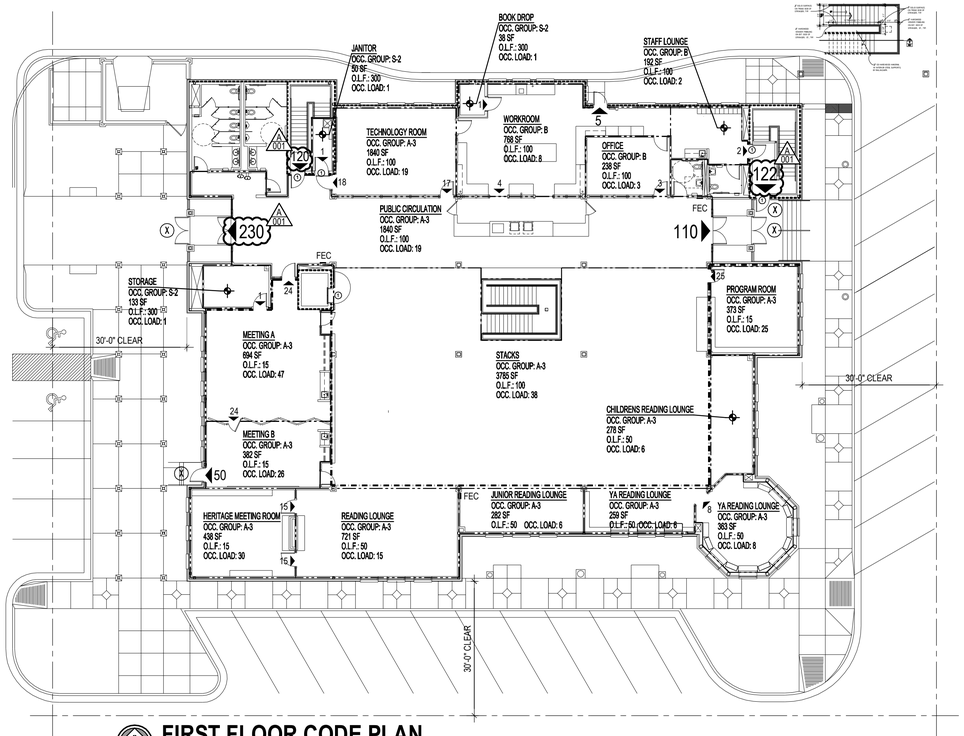
SCALE: 1/32"=1'-0"

AREAS AFFECTED BY NEW CONSTRUCTION OR RENOVATION



LOWER LEVEL CODE PLAN

SCALE: 1/16"=1'-0"



FIRST FLOOR CODE PLAN

SCALE: 1/16"=1'-0"

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SHEET HISTORY:

ISSUED	12/14/2012	AS PER CONSTRUCTION DOCUMENTS
A - 001	01/25/2013	AS PER ADDENDUM #001

Construction Documents Package

Seward Memorial Library Lower Level Renovation

233 South 5th Street
Seward, Nebraska

TCEP No.: 578-004-11

Dec. 14, 2012

CODE COMPLIANCE

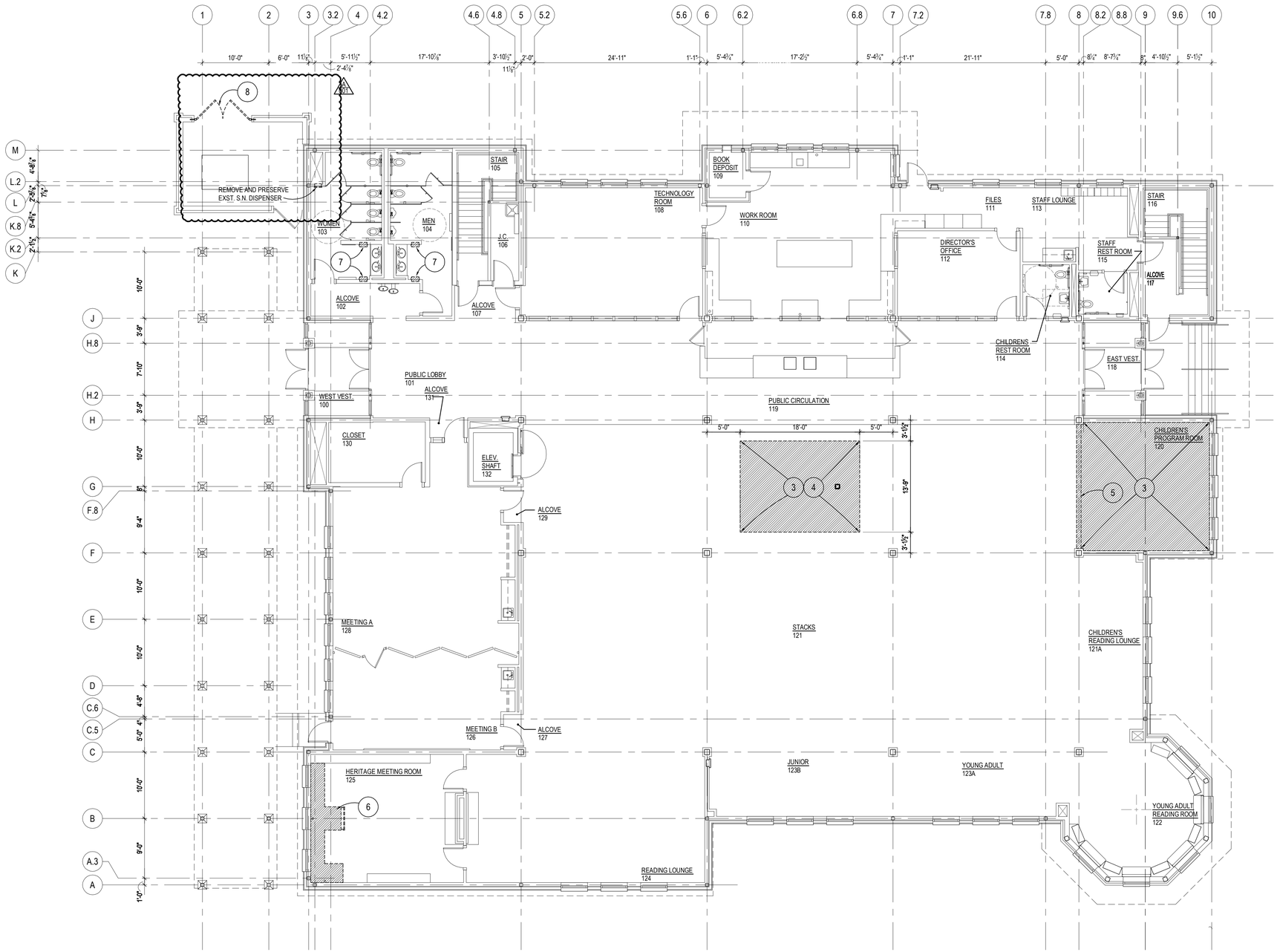
G1.01

DEMOLITION NOTES

1	REMOVE, REPAIR, REPLACE EXISTING GPDW COLUMN WRAP TO ACCOMMODATE NEW CONSTRUCTION. FINAL CONSTRUCTION SHOULD MAINTAIN ALL EXISTING 1-HOUR FIRE RATINGS REQUIRED BY CODE.
2	REMOVE EXISTING FLOOR SLAB AS NOTED.
3	REMOVE EXISTING FLOOR FINISHES
4	REMOVE EXISTING FLOOR SLAB AND ACCOMPANYING STRUCTURE. - SEE DETAILS ON A5.01 & A5.02 FOR SLAB DEMOLITION EXTENTS
5	REMOVE EXISTING HARDWOOD FRAME
6	REMOVE EXISTING CASEWORK IN ITS ENTIRETY
7	REMOVE EXISTING HAND DRYERS AND PATCH/FINISH EXPOSED WALL
8	REMOVE EXISTING GATE, PATCH/FINISH EXPOSED WALL

A/001

- VERIFY ALL CUT OPENING DIMENSIONS W/ ASSOCIATED TRADES PRIOR TO DEMOLITION.
- ALL CASEWORK, LIGHT AND PLUMBING FIXTURES & TRIM TO BE SALVAGED AND TURNED OVER TO OWNER.



FIRST FLOOR DEMOLITION PLAN

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

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TCEP No.: 578-004-11

Dec. 14, 2012

FIRST FLOOR DEMO PLAN

A0.02

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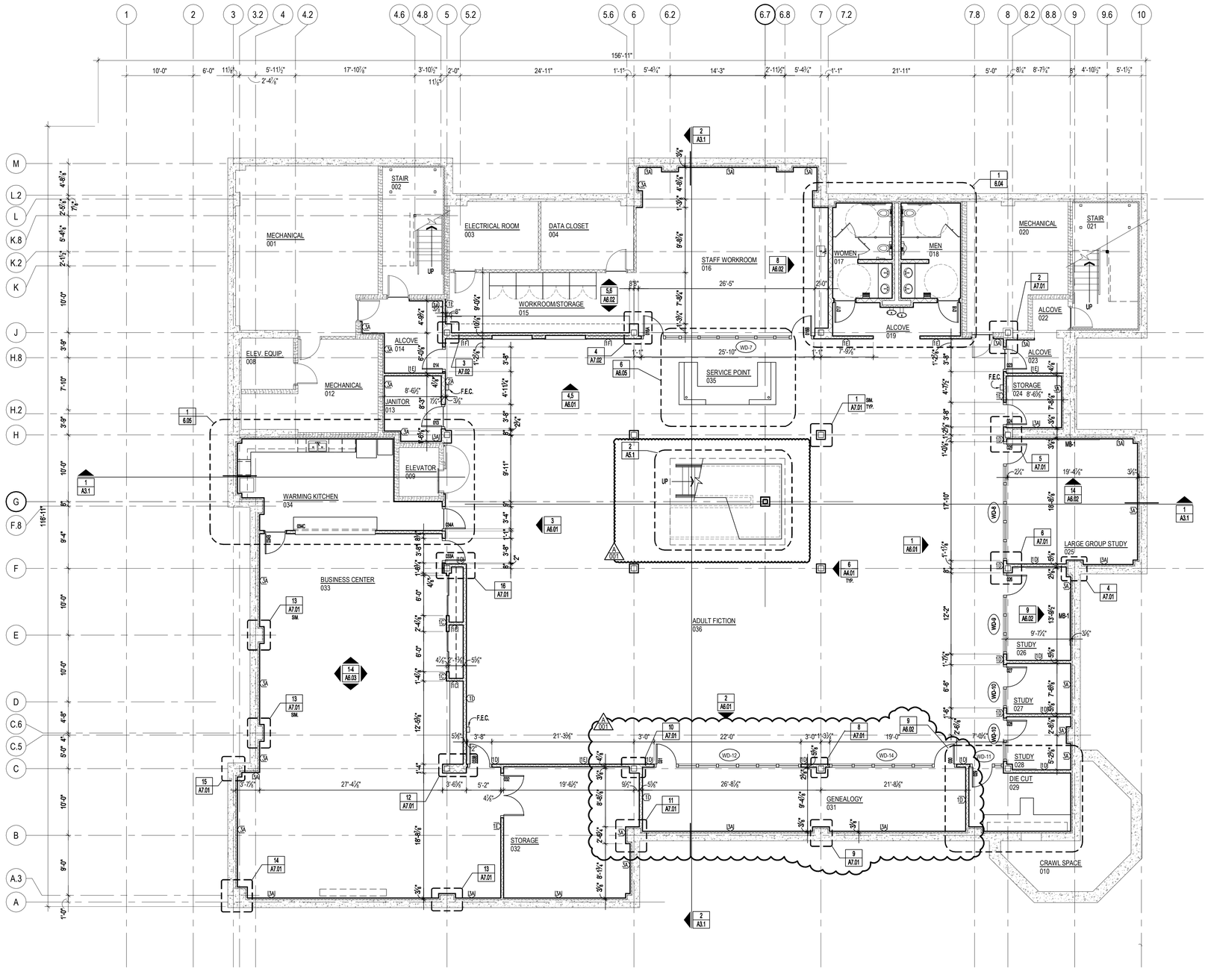

LOWER LEVEL FLOOR PLAN

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

WALL TYPE SCHEDULE

TAG	DESCRIPTION	NOM SIZE	ACT SIZE	UL DESIGN NUMBER	HOUR RATING	VISUAL REPRESENTATION
	3⅝" METAL STUDS					
1A	⅝" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW ONE SIDE. EXTEND TO 6" ABOVE FINISH CEILING.	4⅛"	4⅛"	-	-	
1B	⅝" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW ONE SIDE. PROVIDE 3½" SOUND BATT. INSULATION IN CAVITY, EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	4⅛"	4⅛"	-	-	
1C	⅝" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW EACH SIDE. EXTEND TO 6" ABOVE FINISH CEILING.	4⅛"	4⅛"	-	-	
1D	⅝" STEEL STUD FURRING @ 16" O.C. W/ (2) LAYER ½" TYPE 'X' GPDW EACH SIDE. PROVIDE 3½" SOUND BATT. INSULATION IN CAVITY, EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	5⅛"	5⅛"	-	-	
1E	⅝" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW EACH SIDE. EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	4⅛"	4⅛"	-	-	
1F	2 LAYERS ⅝" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW EACH OUTER SIDE. EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	10⅛"	10⅛"	-	-	
	6" METAL STUDS					
2A	6" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW EACH SIDE. EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	7⅛"	7⅛"	-	-	
2B	6" STEEL STUD FURRING @ 16" O.C. W/ (2) LAYERS ½" TYPE 'X' GPDW EACH SIDE. PROVIDE 3½" SOUND BATT. INSULATION IN CAVITY, EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	8"	8"	-	-	
	2½" METAL STUDS					
3A	2½" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW ONE SIDE. EXTEND ENTIRE ASSEMBLY 6" ABOVE FINISH CEILING.	3⅛"	3⅛"	-	-	
	METAL FURRING					
4A	⅞" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW ONE SIDE. EXTEND ENTIRE ASSEMBLY 6" ABOVE FINISH CEILING.	1⅛"	1⅛"	-	-	

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SHEET HISTORY:

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Construction Documents Package

Seward Memorial Library Lower Level Renovation

233 South 5th Street
Seward, Nebraska

TCEP No.: 578-004-11

Dec. 14, 2012

LOWER LEVEL FLOOR PLAN

A1.01

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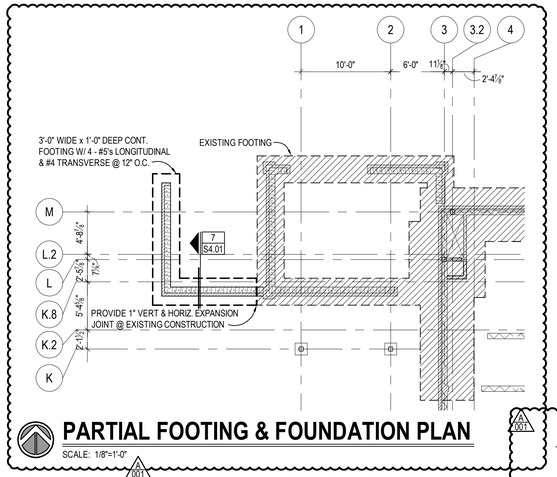


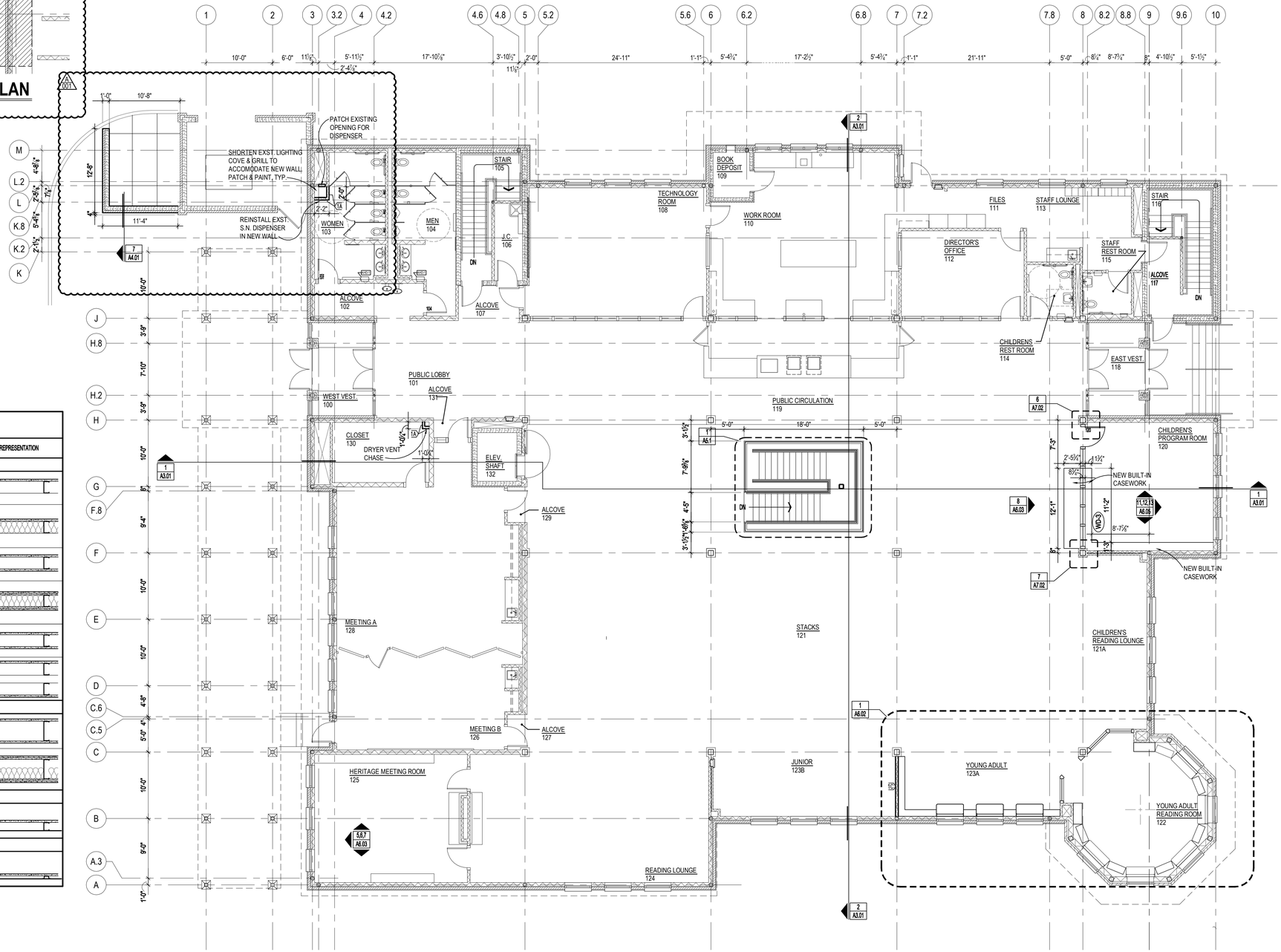
PARTIAL FOOTING & FOUNDATION PLAN

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

A 001

WALL TYPE SCHEDULE

TAG	DESCRIPTION	NOM SIZE	ACT SIZE	UL DESIGN NUMBER	HOUR RATING	VISUAL REPRESENTATION
	3⅝" METAL STUDS					
1A	⅝" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW ONE SIDE. EXTEND TO 6" ABOVE FINISH CEILING.	4⅛"	4⅛"	-	-	
1B	⅝" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW ONE SIDE. PROVIDE 3½" SOUND BATT. INSULATION IN CAVITY, EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	4⅛"	4⅛"	-	-	
1C	⅝" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW EACH SIDE. EXTEND TO 6" ABOVE FINISH CEILING.	4⅛"	4⅛"	-	-	
1D	⅝" STEEL STUD FURRING @ 16" O.C. W/ (2) LAYER ½" TYPE 'X' GPDW EACH SIDE. PROVIDE 3½" SOUND BATT. INSULATION IN CAVITY, EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	5⅛"	5⅛"	-	-	
1E	⅝" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW EACH SIDE. EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	4⅛"	4⅛"	-	-	
1F	2 LAYERS 3⅝" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW EACH OUTER SIDE. EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	10⅛"	10⅛"	-	-	
	6" METAL STUDS					
2A	6" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW EACH SIDE. EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	7⅛"	7⅛"	-	-	
2B	6" STEEL STUD FURRING @ 16" O.C. W/ (2) LAYERS ½" TYPE 'X' GPDW EACH SIDE. PROVIDE 3½" SOUND BATT. INSULATION IN CAVITY, EXTEND ENTIRE ASSEMBLY TO STRUCTURE.	8"	8"	-	-	
	2½" METAL STUDS					
3A	2½" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW ONE SIDE. EXTEND ENTIRE ASSEMBLY 6" ABOVE FINISH CEILING.	3⅛"	3⅛"	-	-	
	METAL FURRING					
4A	⅞" STEEL STUD FURRING @ 16" O.C. W/ (1) LAYER ⅝" TYPE 'X' GPDW ONE SIDE. EXTEND ENTIRE ASSEMBLY 6" ABOVE FINISH CEILING.	⅞"	1⅛"	-	-	



FIRST FLOOR PLAN

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

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SHEET HISTORY:

ISSUED	12/14/2012	AS PER CONSTRUCTION DOCUMENTS
A - 001	01/25/2013	AS PER ADDENDUM #001

Construction Documents Package

Seward Memorial Library Lower Level Renovation

233 South 5th Street
Seward, Nebraska

TCEP No.: 578-004-11

Dec. 14, 2012

FIRST FLOOR PLAN

A1.02

Plot Time Stamp: 1 / 24 / 2013 3:31:45 PM
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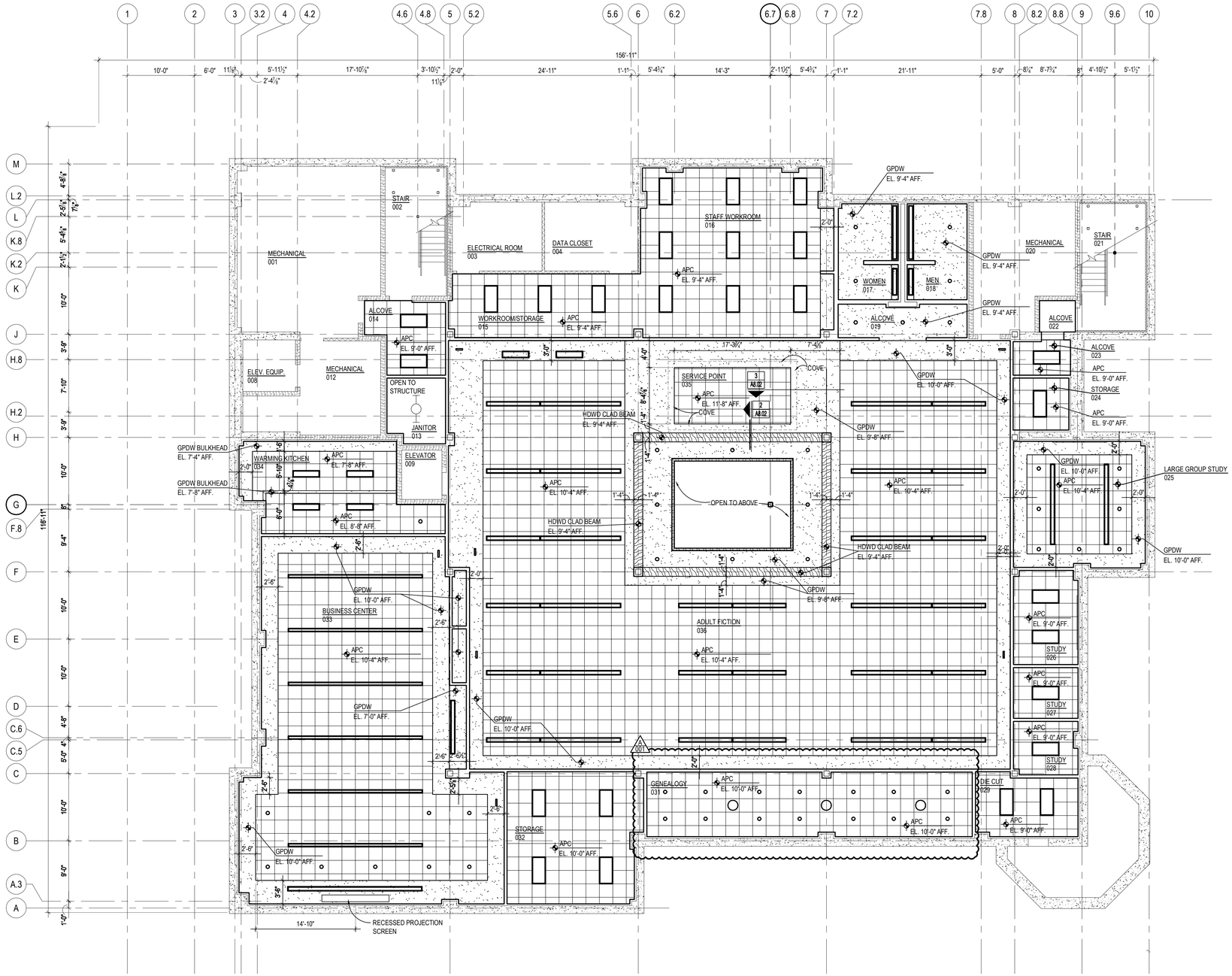

LOWER LEVEL REFLECTED CEILING PLAN

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

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LOWER LEVEL
REFLECTED CEILING PLAN

A1.03

Plot Time Stamp: 1 / 24 / 2013 3:33:09 PM
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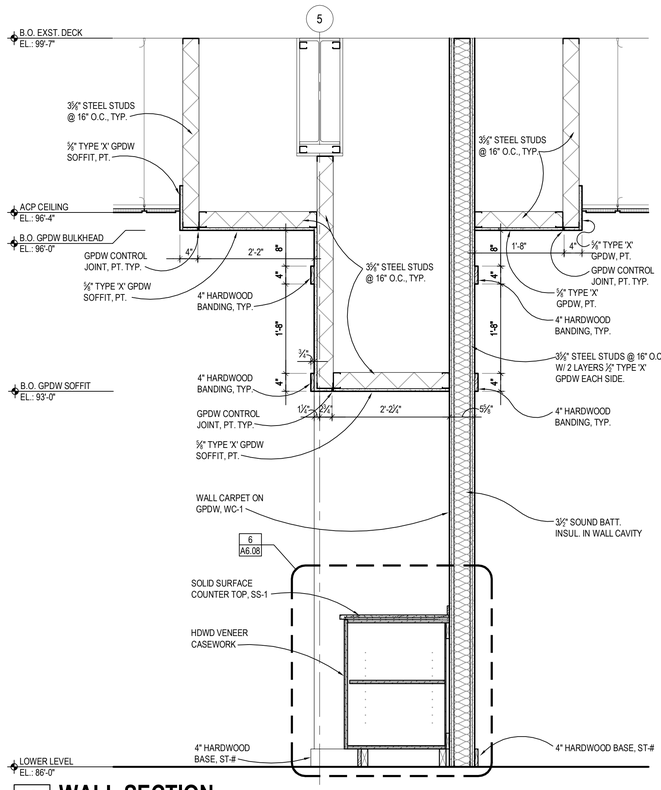
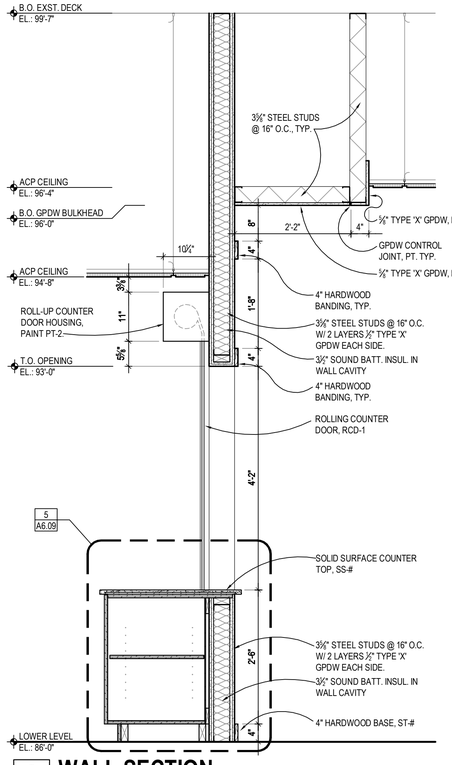


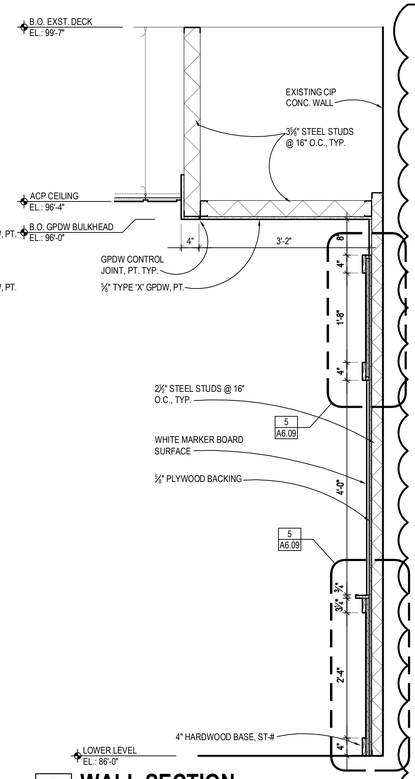
1 WALL SECTION

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



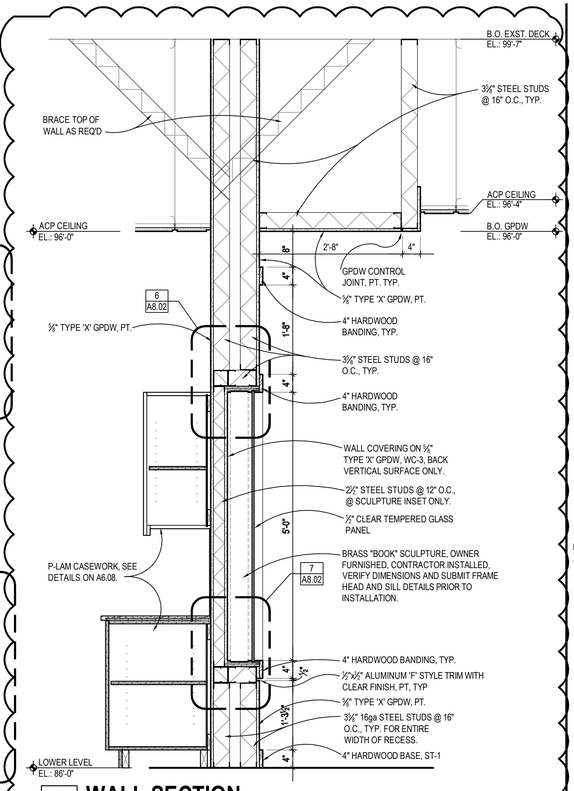
2 WALL SECTION

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



3 WALL SECTION

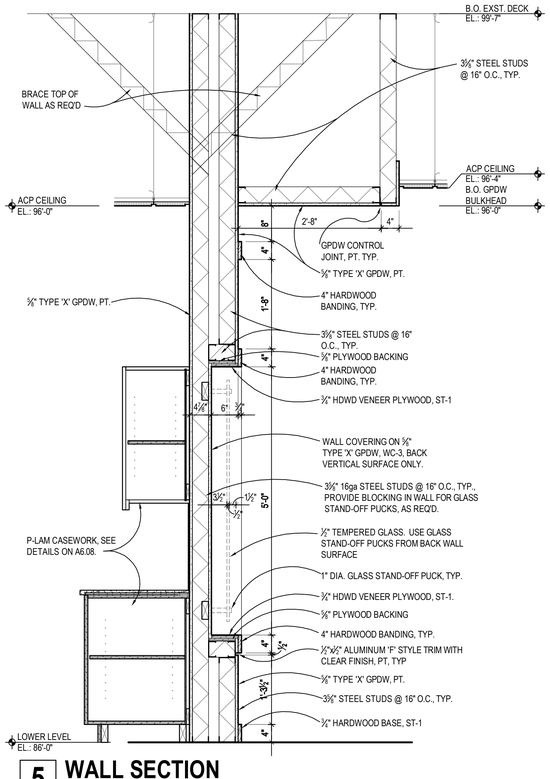
SCALE: 3/4"=1'-0"



4 WALL SECTION

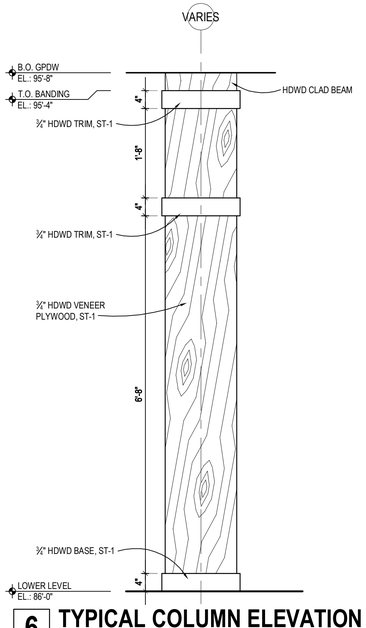
SCALE: 3/4"=1'-0"

001



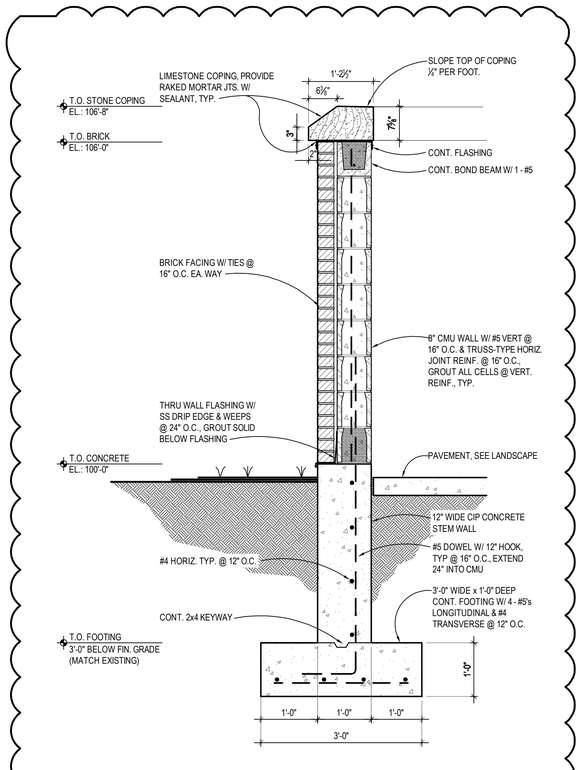
5 WALL SECTION

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



6 TYPICAL COLUMN ELEVATION

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



7 SCREEN WALL SECTION

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

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Construction Documents Package

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WALL SECTIONS, TYP. COLUMN ELEVATION

A4.01

Plot Time Stamp: 1 / 24 / 2013 3:34:19 PM
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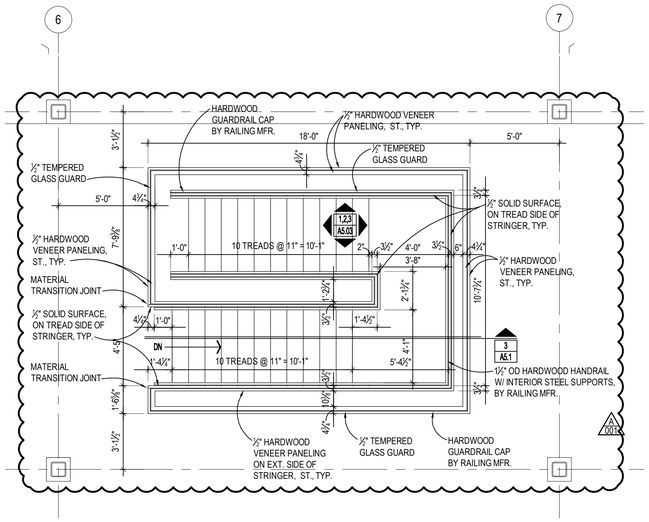
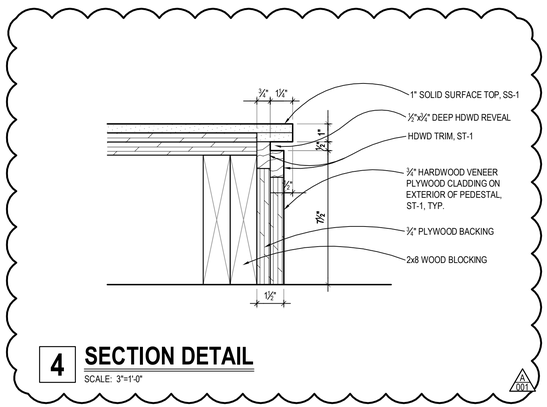


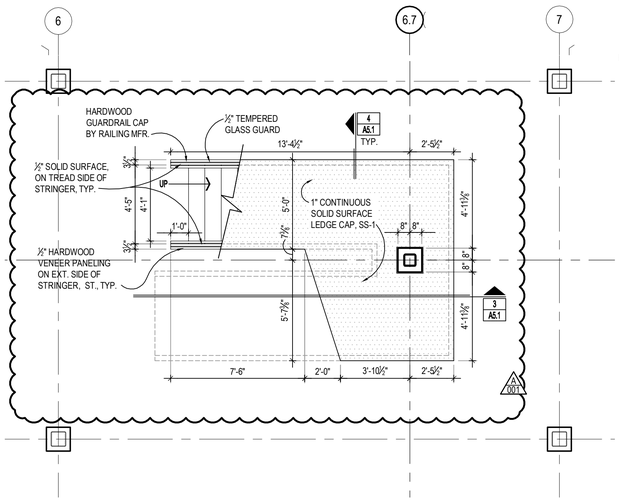
1 ENLARGED FIRST FLOOR MONUMENT STAIR PLAN

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



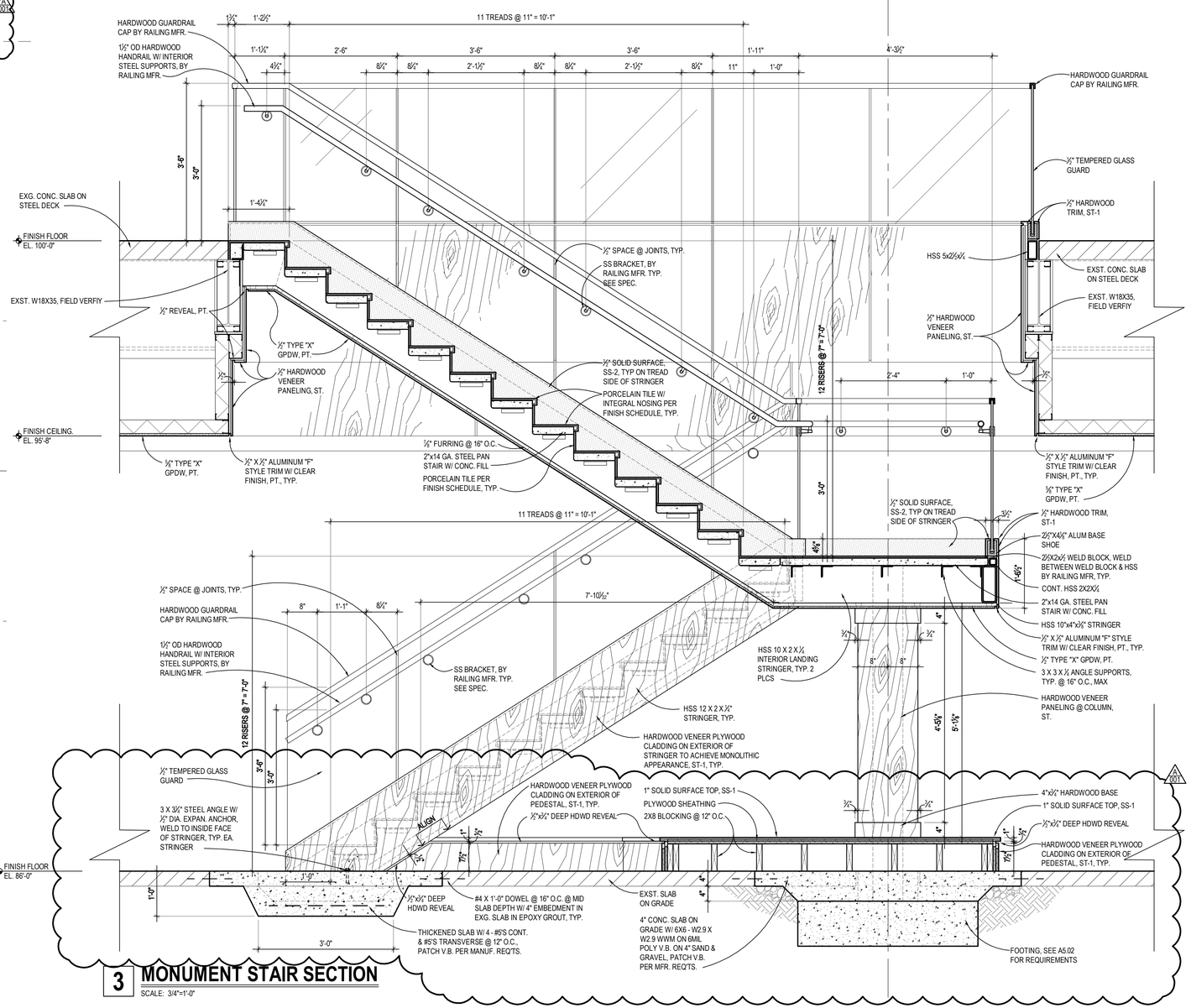
4 SECTION DETAIL

SCALE: 3"=1'-0"



2 ENLARGED LOWER LEVEL MONUMENT STAIR PLAN

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



3 MONUMENT STAIR SECTION

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

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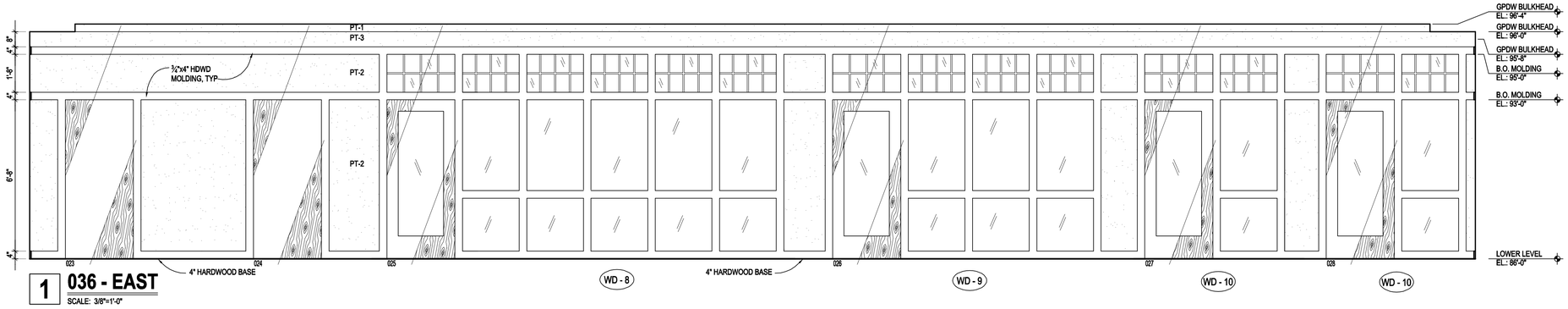
Seward, Nebraska

TCEP No.: 578-004-11

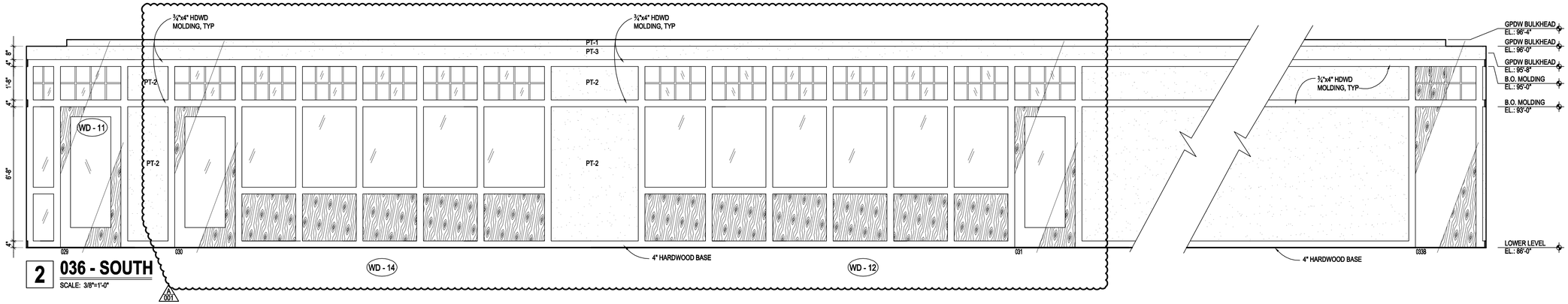
Dec. 14, 2012

ENLARGED STAIR SECTION & FLOOR PLAN

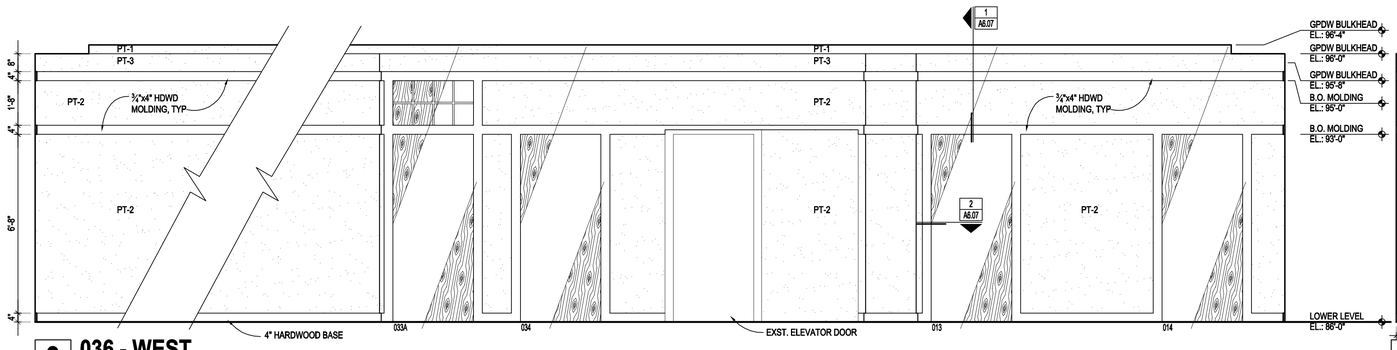
A5.01



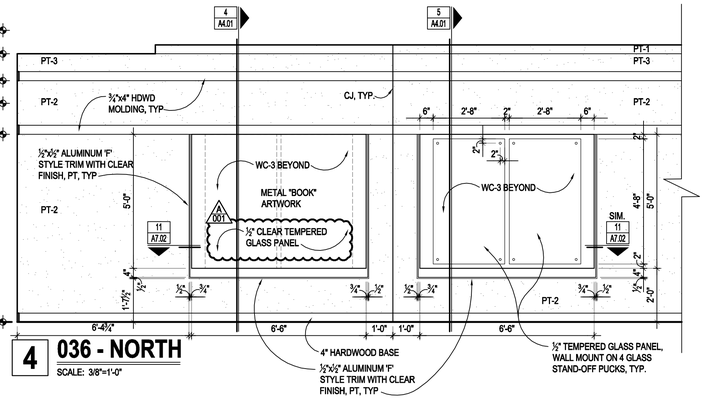
1 036 - EAST
SCALE: 3/8"=1'-0"



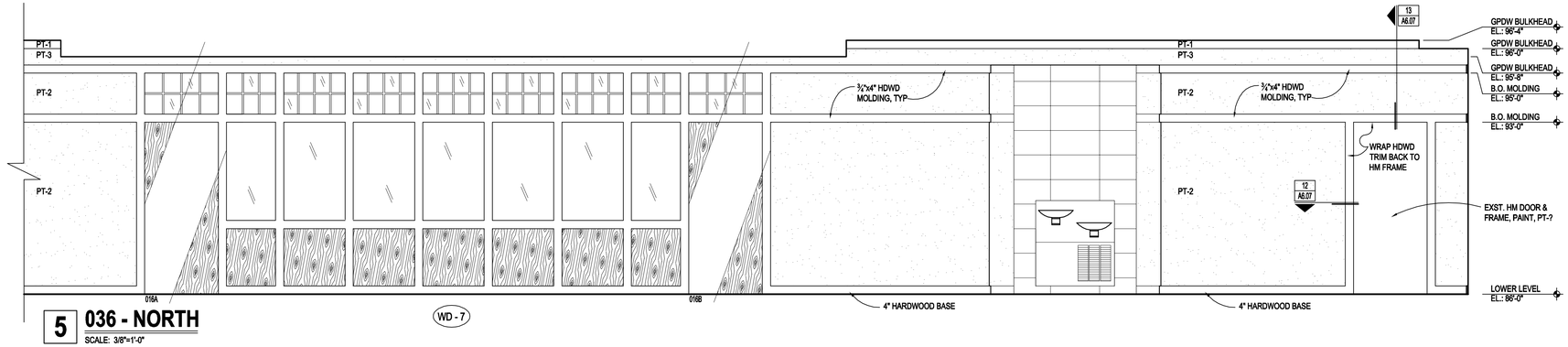
2 036 - SOUTH
SCALE: 3/8"=1'-0"



3 036 - WEST
SCALE: 3/8"=1'-0"



4 036 - NORTH
SCALE: 3/8"=1'-0"



5 036 - NORTH
SCALE: 3/8"=1'-0"

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Construction Documents Package

Seward Memorial Library Lower Level Renovation

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TCEP No.: 578-004-11

Dec. 14, 2012

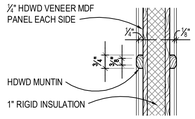
INTERIOR ELEVATIONS

A6.01

DOOR SCHEDULE

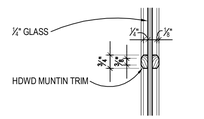
ALL DOORS SHALL HAVE LEVER HANDLES, CLOSERS ADJUSTABLE IN TERMS OF FORCE AND SPEED

DOOR NO	DOOR W	DOOR H	DOOR TYPE	DOOR FINISH	FRAME TYPE	FRAME FINISH	DOOR/FRAME FIRE RATING	HDWR	REMARKS
013	3'-0"	7'-0"	HMD-1	PT-2	HM-1	PT-2	-	1	-
014	3'-0"	7'-0"	WDD-1	-	WD-1	-	-	2	-
016A	3'-0"	7'-0"	WDD-1	-	WD-7	-	-	3	-
016B	3'-0"	7'-0"	WDD-1	-	WD-7	-	-	3	-
017	3'-0"	7'-0"	WDD-1	-	WD-1	-	-	4	-
018	3'-0"	7'-0"	WDD-1	-	WD-1	-	-	4	-
023	3'-0"	7'-0"	WDD-1	-	WD-1	-	-	2	-
024	3'-0"	7'-0"	WDD-1	-	WD-1	-	-	1	-
025	3'-0"	7'-0"	WDD-2	-	WD-8	-	-	1	-
026	3'-0"	7'-0"	WDD-2	-	WD-9	-	-	1	-
027	3'-0"	7'-0"	WDD-2	-	WD-10	-	-	1	-
028	3'-0"	7'-0"	WDD-2	-	WD-10	-	-	1	-
029	3'-0"	7'-0"	WDD-2	-	WD-11	-	-	1	-
A 001 030	3'-0"	7'-0"	WDD-2	-	WD-14	-	-	1	-
031	3'-0"	7'-0"	WDD-2	-	WD-12	-	-	3	-
032	3'-0"	7'-0"	WDD-1	-	WD-13	-	-	6	DOUBLE DOOR
033A	3'-0"	7'-0"	WDD-1	-	WD-2	-	-	7	-
033B	3'-0"	7'-0"	WDD-1	-	WD-2	-	-	7	-
034A	3'-0"	7'-0"	WDD-1	-	WD-1	-	-	3	-
034B	3'-0"	7'-0"	WDD-1	-	WD-1	-	-	1	-
034C	12'-0"	4'-2"	RCD-1	-	-	-	-	*	THUMB TURN LOCKS ON WARMING KITCHEN SIDE
103	EXST.	EXST.	EXST.	-	EXST.	-	-	8	
120	EXST.	EXST.	EXST.	-	EXST.	-	-	8	
120	3'-0"	7'-0"	WDD-2	-	WD-3	-	-	1	



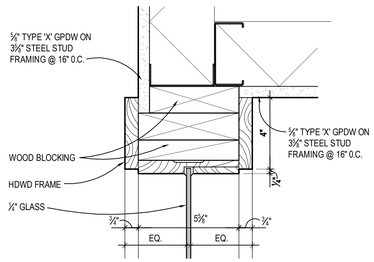
3 TYP. MUNTIN DETAIL

SCALE: 3"=1'-0"



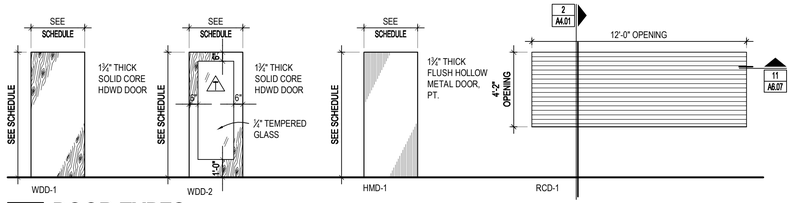
4 TYP. MUNTIN DETAIL

SCALE: 3"=1'-0"



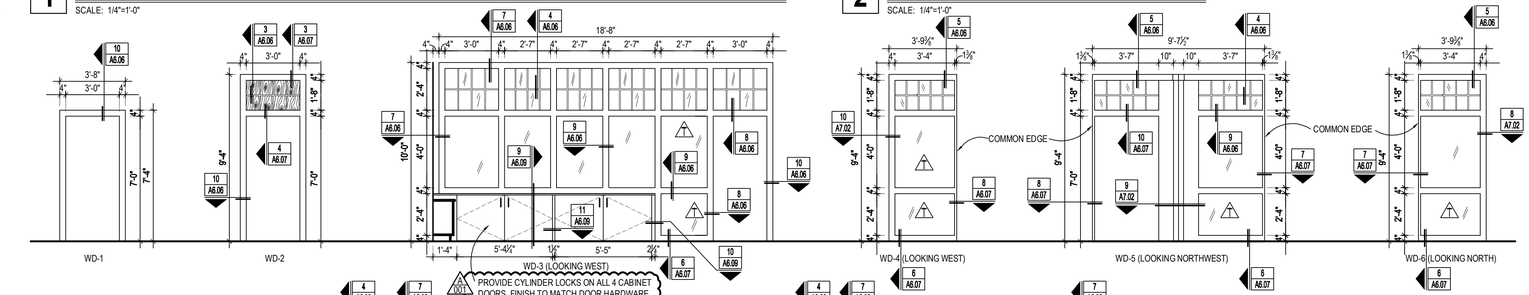
5 TYP. HEAD DETAIL

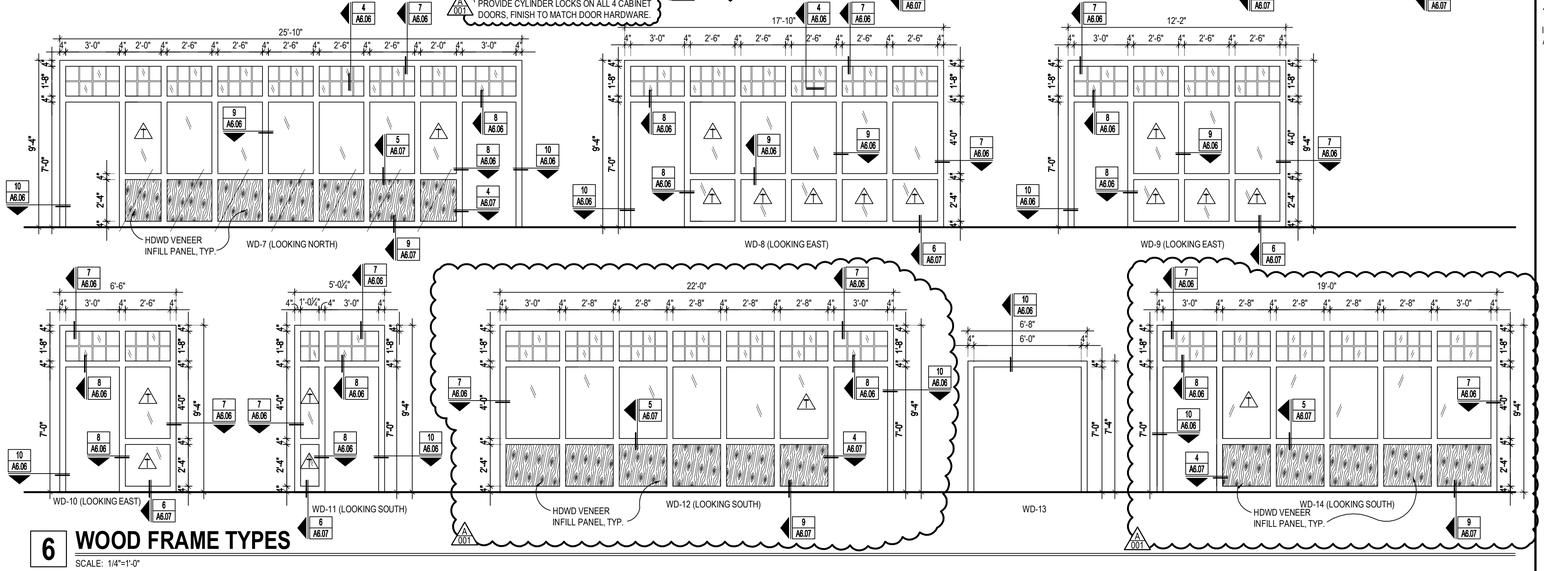
SCALE: 3"=1'-0"



1 DOOR TYPES

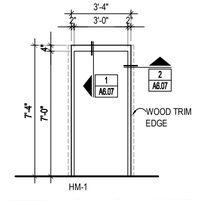
SCALE: 1/4"=1'-0"





6 WOOD FRAME TYPES

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



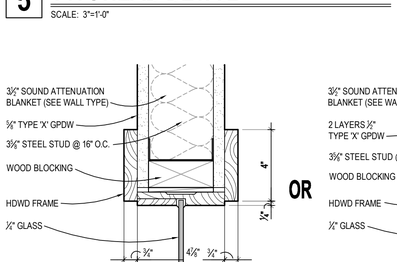
2 HOLLOW METAL FRAME TYPES

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

GENERAL NOTES:

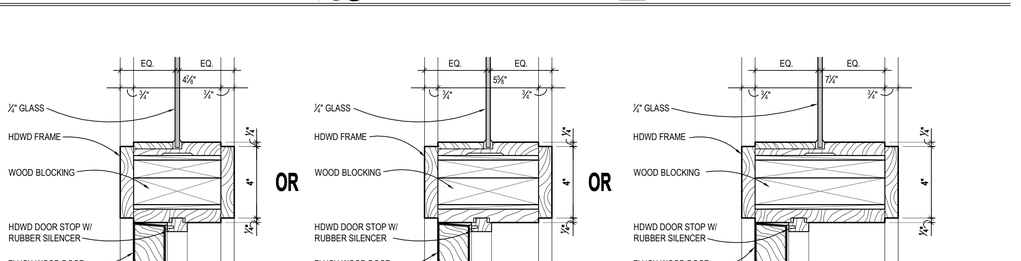
1. ALL FRAMES WITH GLASS TO HAVE REMOVABLE STOP ON NON-PUBLIC SIDE OF FRAMES.
2. PROVIDE TEMPERED GLASS IN LOCATIONS REQUIRED BY CURRENT LOCAL CODE.

   ⚠ REPRESENTS TEMPERED GLASS LOCATIONS.
3. ALL INTERIOR FIRE RATED HOLLOW METAL DOOR FRAMES TO BE GROUTED FULL.
4. ALL DIMENSIONS ARE NOMINAL. ACTUAL DIMENSIONS TO BE PROVIDED BY SUPPLIER W/ ADJUSTMENTS MADE FOR INSTALLATION TOLERANCES REQUIRED.
5. DOORS MAY BE SHOWN INACCURATELY IN SOME FRAME DETAILS. SEE FLOOR PLANS FOR ACTUAL DIRECTION OF DOOR SWING.
6. FRAME DETAILS TO MATCH SIMILAR EXISTING FRAME CONDITIONS. VERIFY EXISTING PRIOR TO CONSTRUCTION.



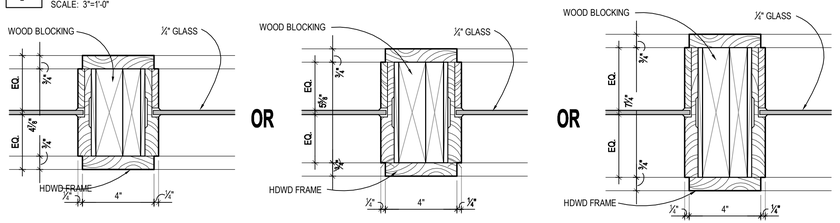
7 TYP. HEAD DETAIL (JAMB SIMILAR)

SCALE: 3"=1'-0"



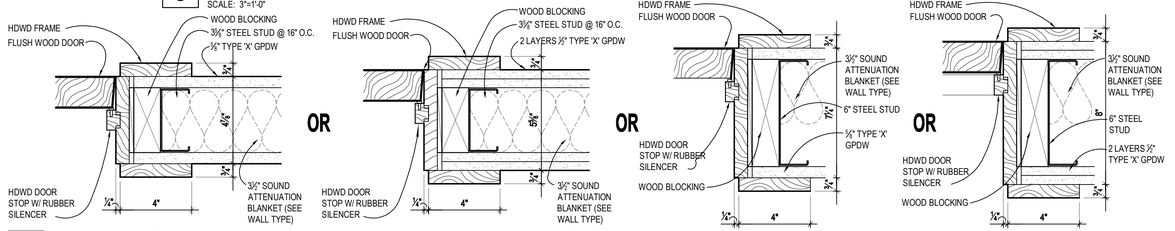
8 TYP. JAMB DETAIL

SCALE: 3"=1'-0"



9 TYP. JAMB DETAIL (HEAD SIMILAR)

SCALE: 3"=1'-0"



10 TYP. JAMB DETAIL

SCALE: 3"=1'-0"

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DOOR SCHEDULE, FRAME TYPE ELEVATIONS, FRAME DETAILS

A6.06

FINISH MATERIALS

CARPET

CPT-1: INTERFACE
STYLE: TONAL 14123, 50 CM x 50 CM
COLOR: PEACOCK, 2916
INSTALLATION METHOD: QUARTER-TURNED

CPT-2: INTERFACE
STYLE: TONAL 14123, 50 CM x 50 CM
COLOR: TERRA, 2897
INSTALLATION METHOD: QUARTER-TURNED

CPT-3: INTERFACE
STYLE: TONAL 14123, 50 CM x 50 CM
COLOR: HONEY, 2911
INSTALLATION METHOD: QUARTER-TURNED

CPT-4: INTERFACE
STYLE: VIVA COLORES 14650, 50 CM x 50 CM
COLOR: MANDARINA, 101162
INSTALLATION METHOD: QUARTER-TURNED

CPT-5: INTERFACE
STYLE: VIVA COLORES 14650, 50 CM x 50 CM
COLOR: ORO, 101119
INSTALLATION METHOD: QUARTER-TURNED

CPT-6: INTERFACE
STYLE: FRESH START, 50 CM x 50 CM
COLOR: TOURMALINE, 9561
INSTALLATION METHOD: QUARTER-TURNED (SEE DRAWINGS)

CPT-7: INTERFACE
STYLE: FRESH START, 50 CM x 50 CM
COLOR: EDWARDIAN, 9558
INSTALLATION METHOD: QUARTER-TURNED (SEE DRAWINGS)

PORCELAIN TILE

PCT-1: ERGON
PRODUCT: STONE PROJECT, CONTROFALDA NATURALE
SIZE: 11-13/16" x 23-5/8"
COLOR: GOLD

PCT-1A: ERGON
ITEM: STONE PROJECT, GRADONE STAIR TREAD/NOSING
PRODUCT: CONTROFALDA NATURALE
SIZE: 12-15/16" x 23-5/8" x 1-3/16"
COLOR: GOLD

CERAMIC TILE

CT-1: AMERICAN OLEAN
PRODUCT: URBAN CANVAS
SIZE: 4-1/4" x 12-3/4" FIELD TILE
COLOR: DESIGNER WHITE, 0061

CT-2: AMERICAN OLEAN
PRODUCT: URBAN CANVAS
SIZE: 4-1/4" x 8-1/2" COVE BASE A-3481
COLOR: DESIGNER WHITE, 0061

GLASS TILE

GT-1: DALTILE
PRODUCT: REFLECTIONS IN GLASS TILE
SIZE: 2" x 12"
COLOR: HOT FUDGE

GT-2: DALTILE
PRODUCT: REFLECTIONS IN GLASS TILE
SIZE: 2" x 12"
COLOR: ELECTRIC YELLOW

GT-3: DALTILE
PRODUCT: REFLECTIONS IN GLASS TILE
SIZE: 2" x 12"
COLOR: ALMOST AQUA

GT-4: DALTILE
PRODUCT: REFLECTIONS IN GLASS TILE
SIZE: 2" x 12"
COLOR: COBALT BLUE

PAINT

PT-1: GLIDDEN
COLOR: WHITE HIGH HIDING, A0113 (CEILINGS)

PT-2: GLIDDEN
COLOR: BRAZIL NUT, A1802

PT-3: ICI (GLIDDEN) PAINT
COLOR: MATCH TO - ICI, TUNDRA POND, 1282

PT-4: GLIDDEN
COLOR: DOWNING STREET, A0418

WALL COVERING

WC-1: D.L. COUCH - SOURCE ONE
PRODUCT: ACOUSTICORD, ACS-16 SUNBURST

WC-2: D.L. COUCH - SOURCE ONE
PRODUCT: ACOUSTICORD, ACS-08 SANDSTONE

WC-3: CARNEGIE XOREL
PRODUCT: METEOR 6427 W215

TACKABLE WALL SURFACE

TWS-1: FORBO
COLOR: 2186

SOLID SURFACE

SS-1: CORIAN
PRODUCT: CLAM SHELL

SS-2: CORIAN
PRODUCT: COPPERITE

PLASTIC LAMINATE

PL-1: WILSONART LAMINATE
PRODUCT: BURNISHED EMBER, 4798-60

PL-2: WILSONART LAMINATE
PRODUCT: SAND, D331-60

PL-3: FORMICA
PRODUCT: SAIL WHITE OXIDE MATTE, 300-58

RUBBER BASE

RB-1: JOHNSONITE TIGHT LOCK STRAIGHT RUBBER BASE
PRODUCT: CANVAS, 11

WOOD BASE

WB-1: CHERRY HARDWOOD BASE
PROFILE: TO MATCH EXISTING

STAIN

ST-1: SHERWIN WILLIAMS
PRODUCT: STAIN TO MATCH EXISTING CHERRY

ACOUSTICAL PANEL CEILING

APC-1: ARMSTRONG
PATTERN: OPTIMA OPEN PLAN, 3355
SIZE: 24" x 24" x 1" TEGULAR EDGE FOR 9/16" GRID
COLOR: WHITE

WINDOW COVERINGS

WIC-1: MECHOSHADE
PRODUCT: MANUAL CLUTCH SINGLE ROLLER SHADE
WITH FASCIA AND END CAPS, 10% OPENNESS
FABRIC: THERMOVEIL 2100 SERIES, BEIGE 2102

UPHOLSTERY FABRIC

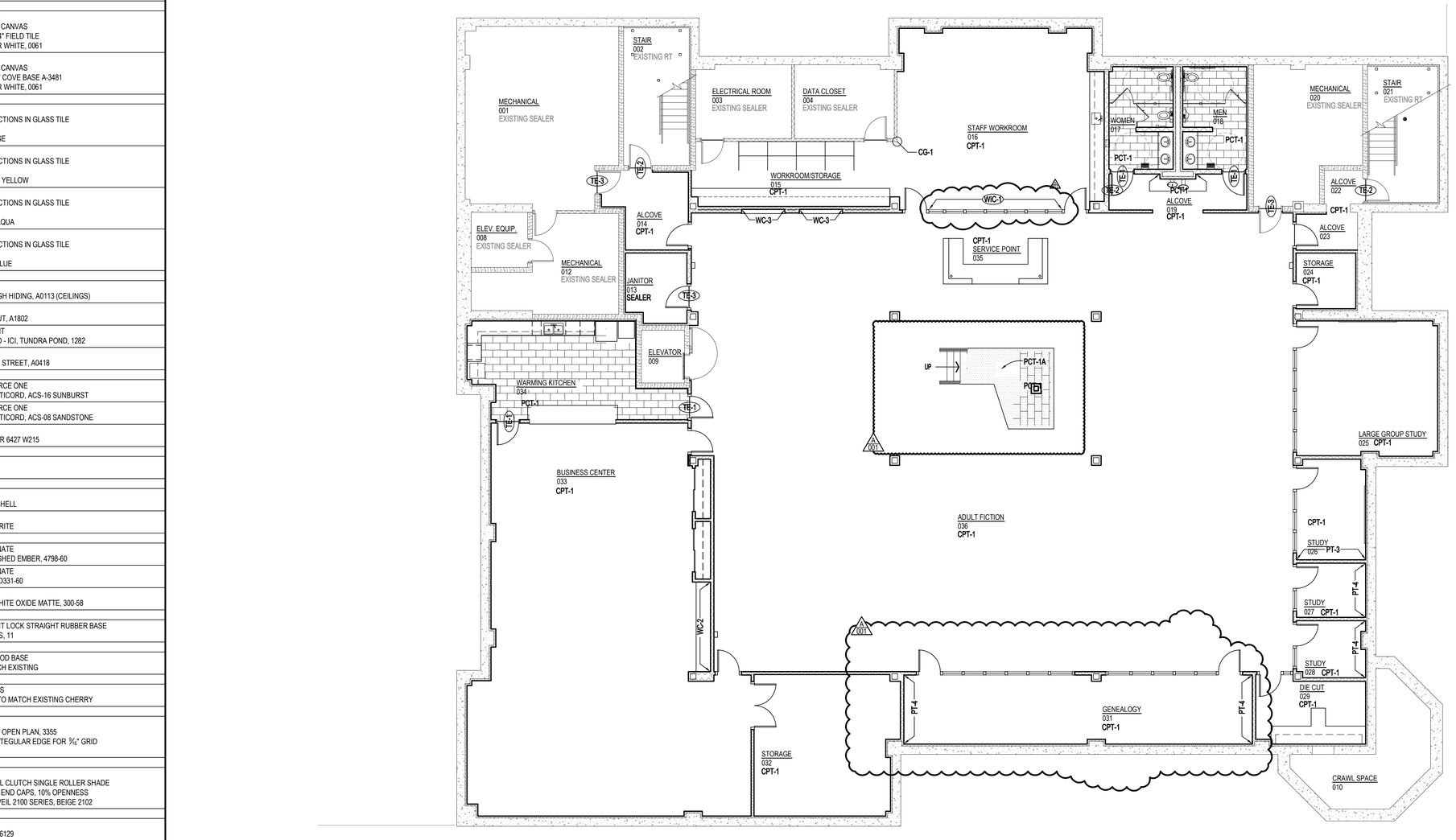
UF-1: MAHARAM
PATTERN: BLIP 466129
COLOR: 005 COVE

CORNER GUARD

CG-1: C/S GROUP (ACROVYN)
PRODUCT: FLUSH MOUNTED FULL HT. CORNER GUARD, SFS-204N
COLOR: DESERT SAND, 102

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING			REMARKS *
		MTL.	FIN.	MTL.	FIN.	MTL.	FIN.	MTL.	FIN.	MTL.	FIN.	MTL.	FIN.	MTL.	FIN.	HT.	
001	MECHANICAL RM.	CONC	EXG SEALER	-	-	-	-	-	-	-	-	-	-	-	-	OPEN TO STRUCT.	
002	STAIRS	CONC	EXG RT-1	-	-	-	-	-	-	-	-	-	-	-	-	-	
003	ELECTRICAL RM.	CONC	EXG SEALER	-	-	-	-	-	-	-	-	-	-	-	-	OPEN TO STRUCT.	
004	DATA CLOSET	CONC	EXG SEALER	-	-	-	-	-	-	-	-	-	-	-	-	OPEN TO STRUCT.	
008	ELEVATOR EQ. RM.	CONC	SEALER	-	-	-	-	-	-	-	-	-	-	-	-	-	
009	ELEVATOR SHAFT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
012	MECHANICAL ROOM	CONC	EXG SEALER	-	-	-	-	-	-	-	-	-	-	-	-	-	
013	JANITOR	CONC	SEALER	-	-	GPDW	CT-1/PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	-	-	OPEN TO STRUCT.	
014	ALCOVE	CONC	CPT-1	RB-1	-	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	APC-1	-	9'-0"	
015	WORKROOM / STORAGE	CONC	CPT-1	RB-1	-	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	APC-1	-	10'-0"	
016	STAFF WORKROOM	CONC	CPT-1	RB	-	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	APC-1	-	10'-0"	
017	WOMEN	CONC	PCT-1	CT-2	-	GPDW	CT-1/GT-1,2,3,4 *	GPDW	CT-1/GT-1,2,3,4 *	GPDW	CT-1	GPDW	PT-1/CT-2	GPDW	PT-1	9'-4"	*SEE ELEVATIONS FOR EXTENT
018	MEN	CONC	PCT-1	CT-2	-	GPDW	CT-1/GT-1,2,3,4 *	GPDW	PT-1/CT-2	GPDW	CT-1	GPDW	CT-1/GT-1,2,3,4 *	GPDW	PT-1	9'-4"	*SEE ELEVATIONS FOR EXTENT
019	ALCOVE	CONC	CPT-1	-	-	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-1	10'-0"	
020	MECHANICAL	CONC	EXG SEALER	-	-	-	-	-	-	-	-	-	-	-	-	-	
021	STAIR	CONC	EXG RT-1	RB-1	-	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-1	-	
022	ALCOVE	CONC	CPT-1	RB-1	-	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	APC-1	-	9'-0"	
023	ALCOVE	CONC	CPT-1	RB-1	-	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	APC-1	-	9'-0"	
024	STORAGE	CONC	CPT-1	RB-1	-	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	APC-1	-	9'-0"	
025	LARGE GROUP STUDY	CONC	CPT-1	WB-1	ST-1	GPDW	PT-2,4	GPDW	PT-2,4	GPDW	PT-2,4	GPDW	PT-2,4	APC-1/GPDW	4PT-1	10'-4"/10'-0"	
026	STUDY	CONC	CPT-1	WB-1	ST-1	GPDW	PT-2	GPDW	PT-2	GPDW	PT-3	GPDW	PT-2	APC-1	-	9'-0"	
027	STUDY	CONC	CPT-1	WB-1	ST-1	GPDW	PT-2	GPDW	PT-4	GPDW	PT-2	GPDW	PT-2	APC-1	-	9'-0"	
028	STUDY	CONC	CPT-1	WB-1	ST-1	GPDW	PT-2	GPDW	PT-4	GPDW	PT-2	GPDW	PT-2	APC-1	-	9'-0"	
029	DIE CUT	CONC	CPT-1	WB-1	ST-1	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	APC-1	-	9'-0"	
031	GENEALOGY	CONC	CPT-1	WB-1	ST-1	GPDW	PT-2	GPDW	PT-4	GPDW	PT-2	GPDW	PT-4	APC-1	-	10'-0"	
032	STORAGE	CONC	CPT-1	RB-1	-	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	APC-1	-	10'-0"	
033	BUSINESS CENTER/THEATRE	CONC	CPT-1	WB-1	ST-1	GPDW	PT-2,4	GPDW	PT-2,4/WC-2	GPDW	PT-2,4	GPDW	PT-2,4	APC-1/GPDW	4PT-1	10'-4"/10'-0"	
034	WARMING KITCHEN	CONC	PCT-1	WB-1	ST-1	GPDW	PT-2/CT-1	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2/CT-1	APC-1/GPDW	4PT-1	8'-6"/7'-4"	
035	SERVICE POINT	CONC	CPT-1	WB-1	ST-1	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	GPDW	PT-2	APC-1/GPDW	4PT-1	10'-4"/9'-0"	
036	ADULT FICTION	CONC	CPT-1	WB-1	ST-1	GPDW	PT-2,3	GPDW	PT-2,3	GPDW	PT-2,3	GPDW	PT-2,3	APC-1/GPDW	4PT-1	*	*SEE REFLECTED CEILING PLAN



LOWER LEVEL FINISH FLOOR PLAN

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

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? - #

SHEET HISTORY:

ISSUED	mm/dd/yyyy	AS PER CONSTRUCTION DOCUMENTS
A-001	01/25/2013	ADDENDUM #001

Construction Documents Package

Seward Memorial Library Lower Level Renovation

233 South 5th Street
Seward, Nebraska

TCEP No.: 578-004-11

Dec. 14, 2012

LOWER LEVEL
FINISH FLOOR PLAN

F1.01

Plot Time Stamp: 1 / 25 / 2013 9:58:25 AM
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