

**ADDENDUM TWO
AVONDALE YOUTH AND FAMILY DEVELOPMENT CENTER
SITE IMPROVEMENTS
CONTRACT NO. Y-15-008-203
CITY OF CHATTANOOGA, TENNESSEE**

The following changes shall be made to the Contract Documents, Specifications, and Drawings:

I. Revised Plan Sheet

- A. **Revised Sheet CS 202 included in this Addendum.**
- B. **Revised Sheet CS 100 included in this Addendum.**

II. Additional Specifications

- A. **Additional Specifications are included in this Addendum.**

III. Q & A

Q: Sheet CS 030 directs to construct a “12’x21’ Metal Carport”. There are no specifications on this structure.

A: Specification 107300 Protective Covers is included in this Addendum.

Q: Sheet CS 030 directs to construct a “Concr. Pad and dumpster enclosure”. There are no specifications on this structure.

A: The dumpster pad and enclosure are shown for reference, and are not part of this Contract.

Q: Sheet CS 030 directs to construct “two (2) removable bollards.” Please provide specifications on this item.

A: Removable bollards shall be Hess TORO 900 removable in custom Dark Bronze finish, to match other recent construction bollards.

Q: Please provide specifications on Bid Line Item #30, “Basketball Goals, Nets, and Padding”.

A: Specification 116623 Sports Equipment is included in this Addendum.

Q: Please provide specifications, quantities, and locations on Bid Line Item #31 “Site Benches” and #32 “Site Bike Racks”

A: Specification 129300 Site Furnishings is included in this Addendum. Locations to be clarified in subsequent Addenda.

Q: Is the Utility Shed part of this project?

A: The Utility Shed and associated conduit are being constructed as part of another Contract. This Contract **does**, however, include making all necessary electrical connections in the Utility Shed to Site Lighting, and making all necessary connections to the existing Primary service to power the Site Lighting and Ballfield Lighting.

Q: Can you please clarify Bid Item #28 “Cantilever Retaining Wall and Barrier Rail”? There is not a detail for this item.

A: Bid Item #28 refers to “Retaining Wall 1”, which is a cantilever wall with pedestrian-height barrier rail. Please refer to CS 100, Retaining Wall 1 Section.

October 31, 2019

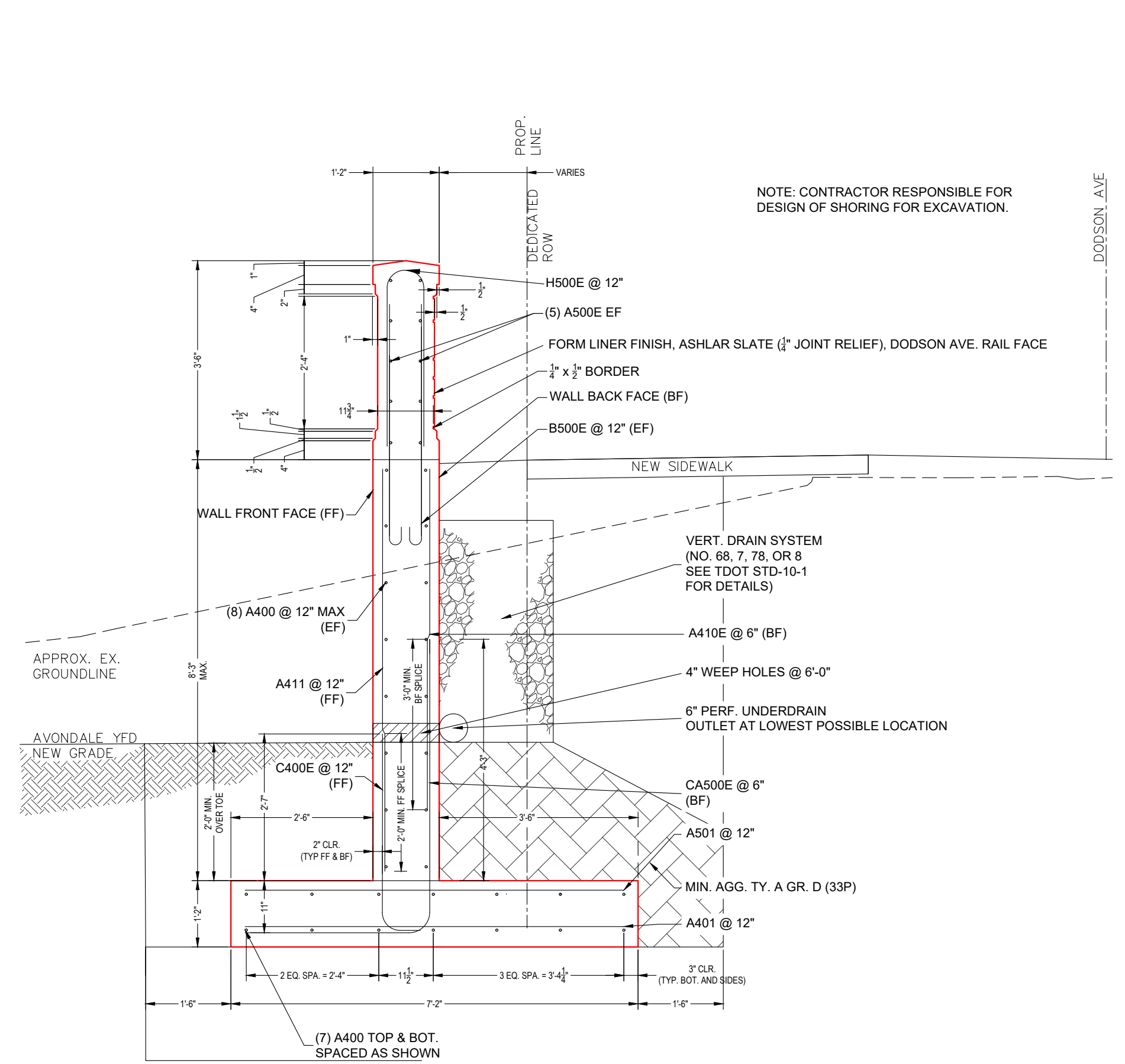
/s/ Justin C. Holland, Administrator
City of Chattanooga
Department of Public Works



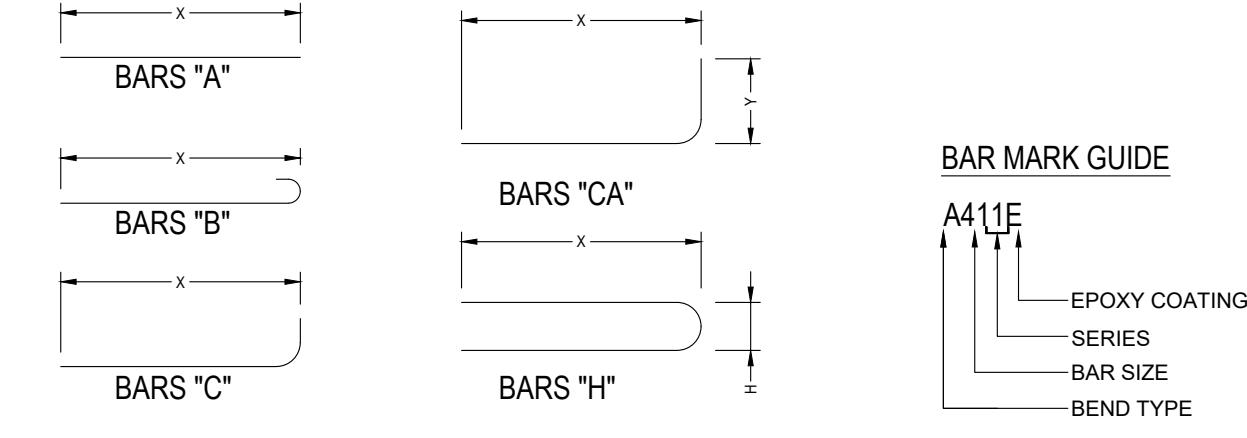
CITY OF CHATTANOOGA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

ADMINISTRATOR:
JUSTIN C. HOLLAND
CITY ENGINEER:
WILLIAM C. PAYNE, P.E.

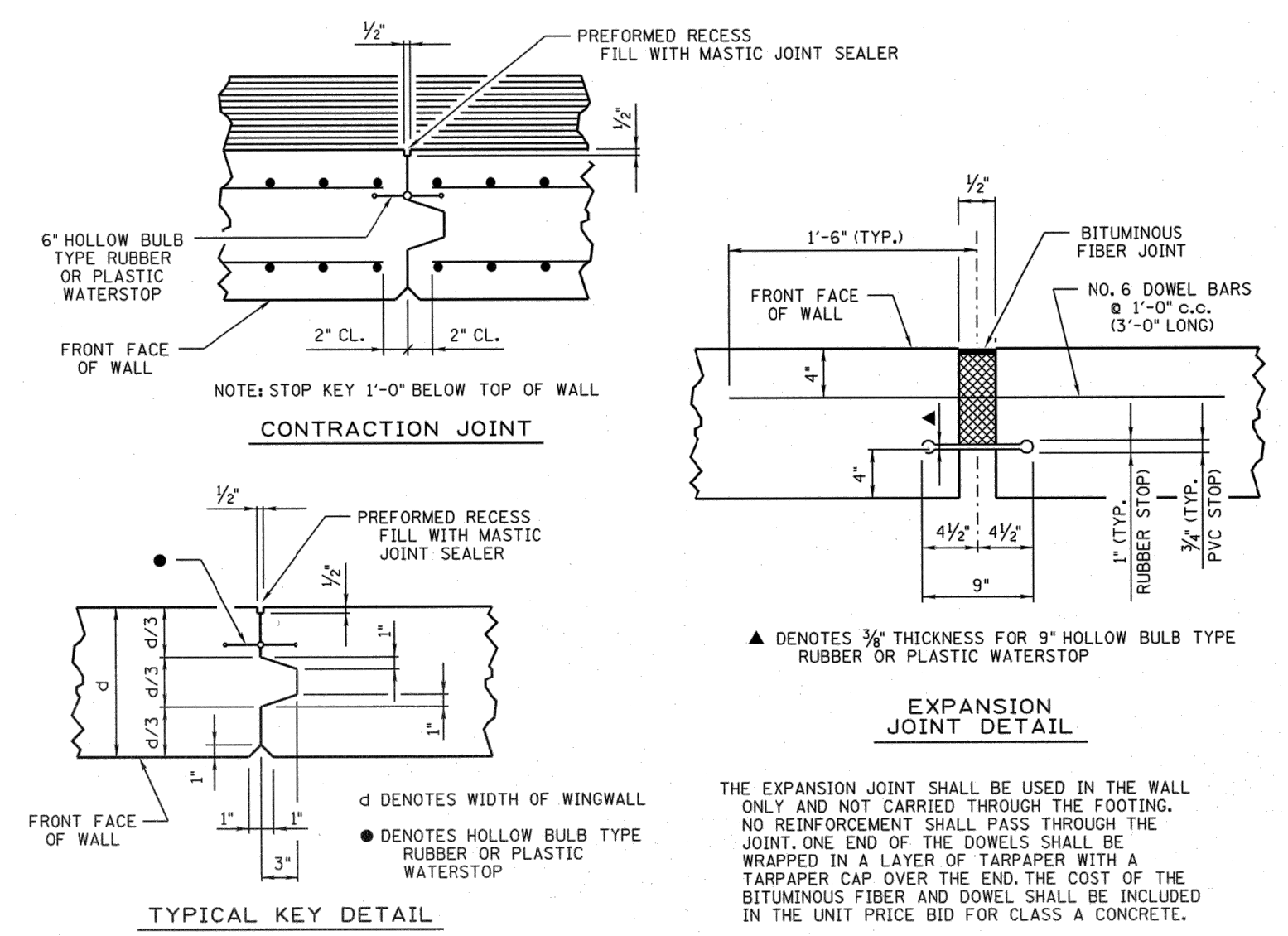
AVONDALE YOUTH AND FAMILY DEVELOPMENT CENTER
Y-15-008-202
RETAINING WALL DETAILS



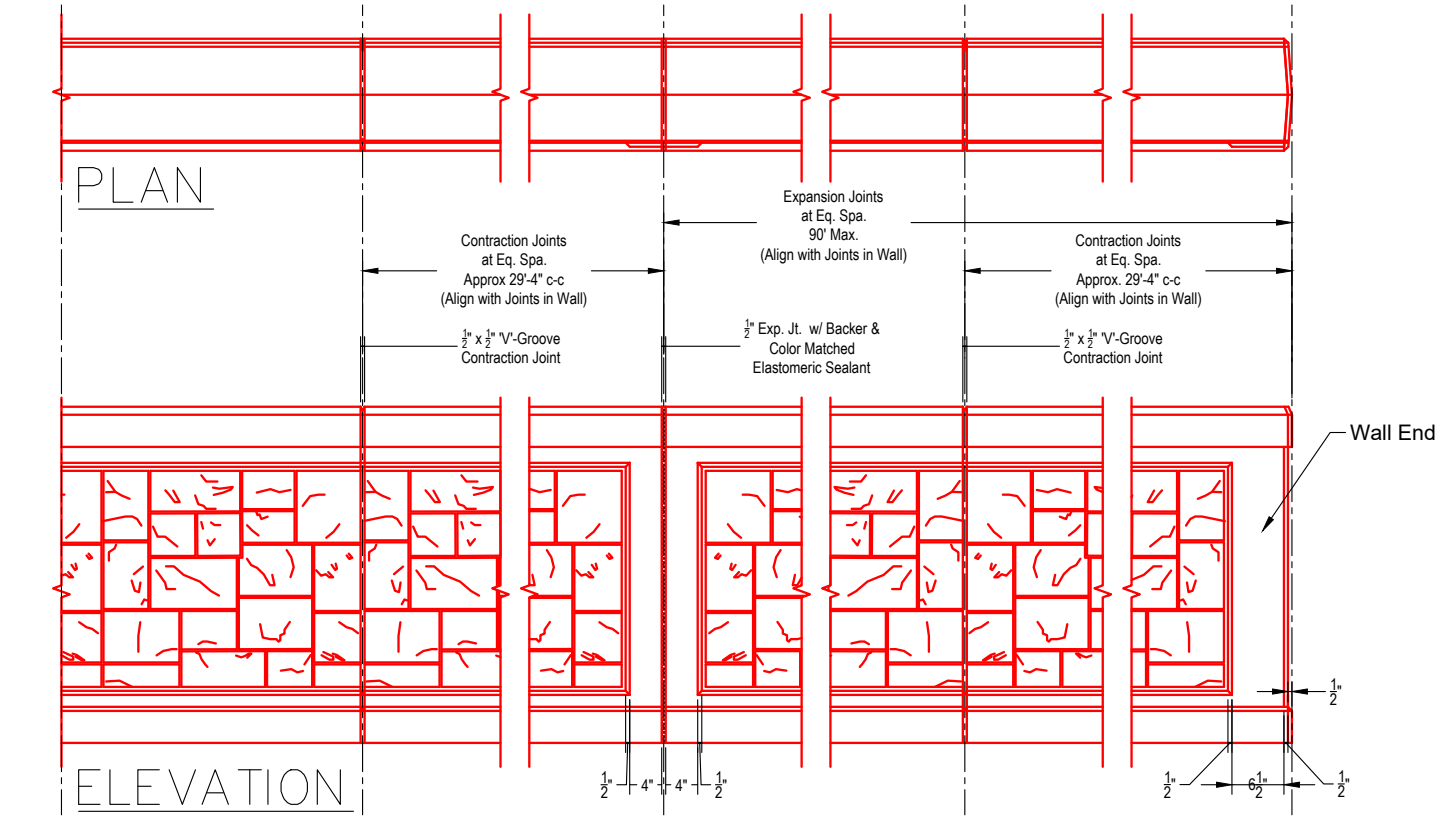
RETAINING WALL 1 SECTION



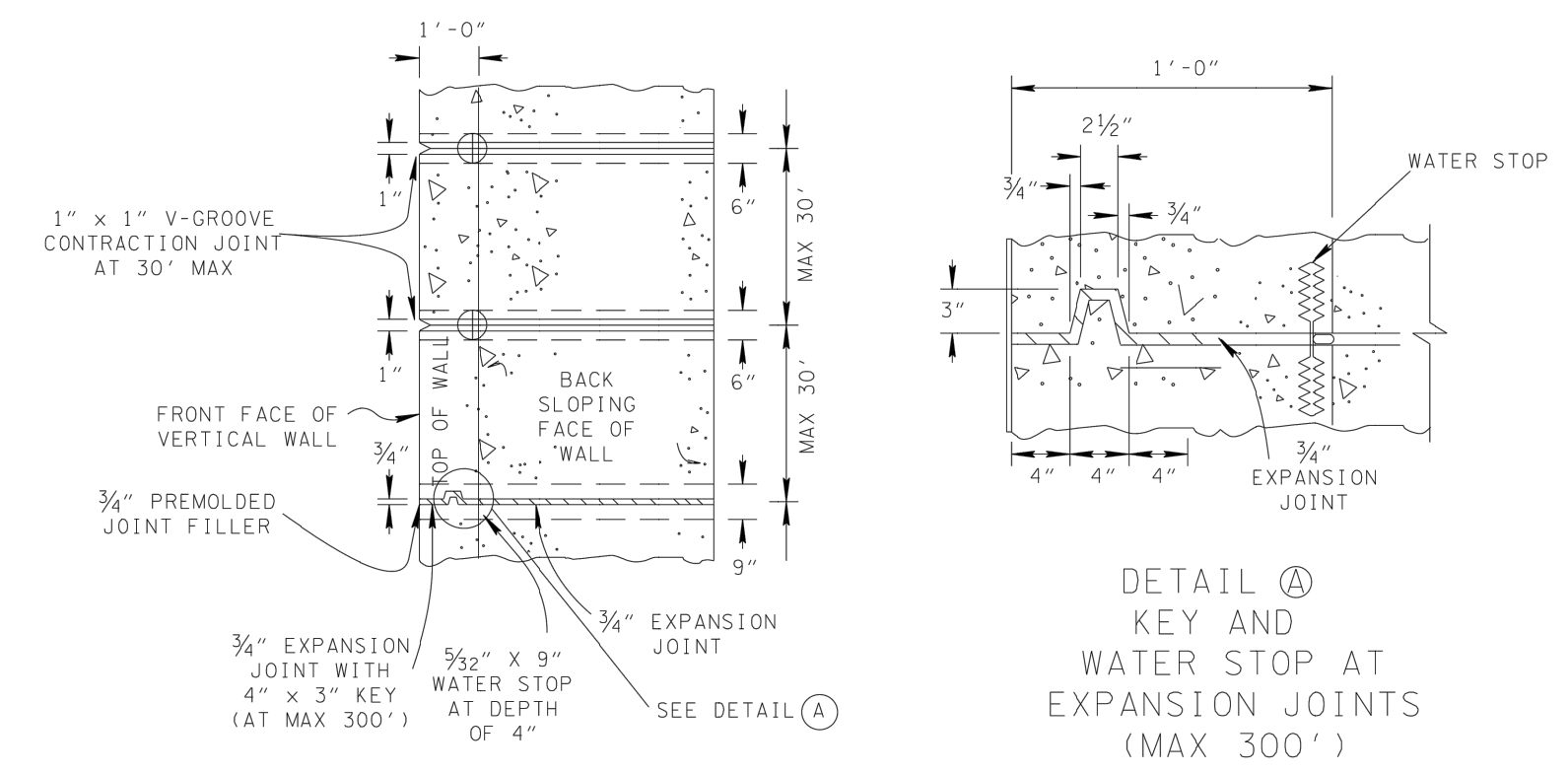
RETAINING WALL 1 REINFORCING BAR LEGEND



RETAINING WALL 1 JOINT DETAILS



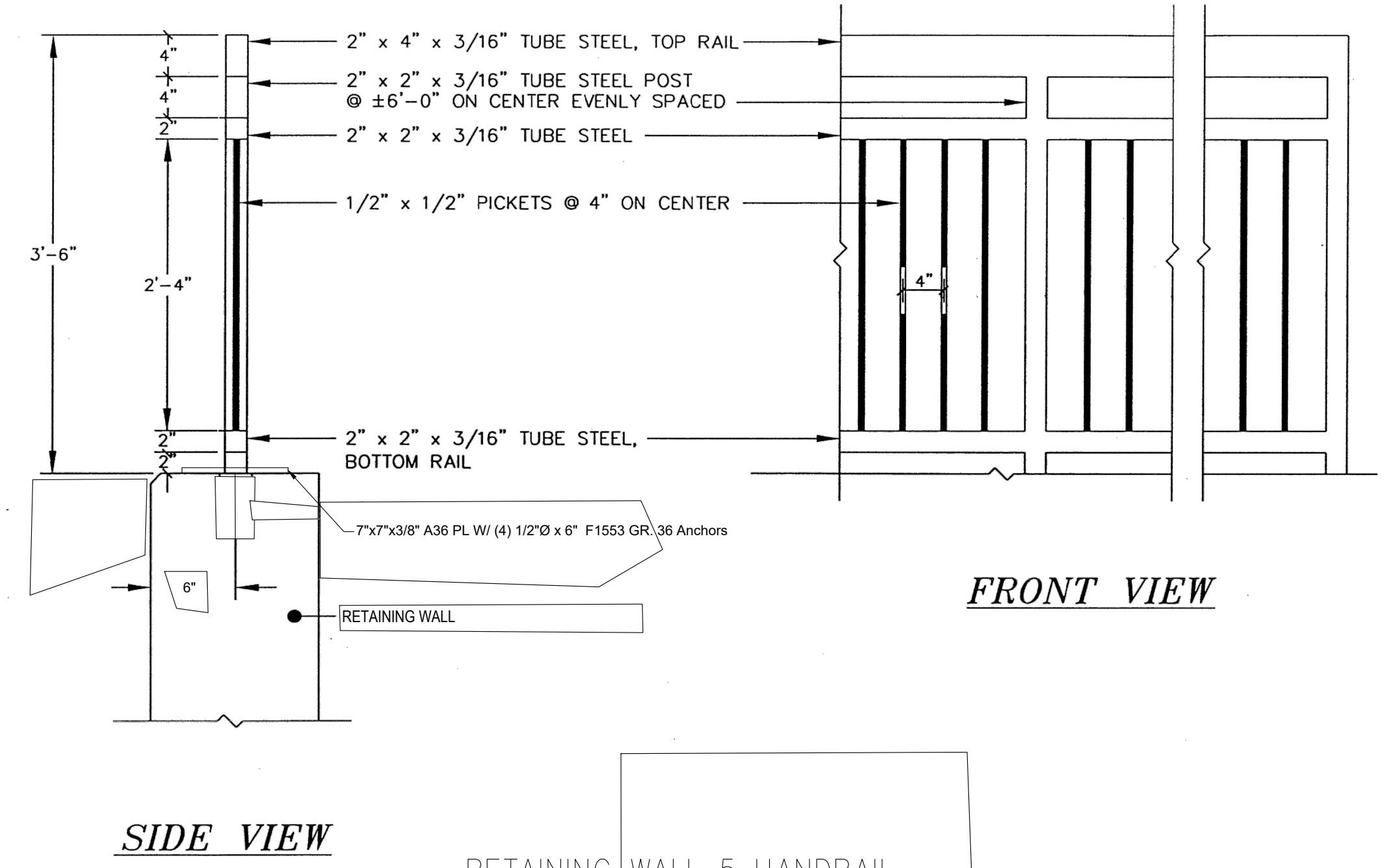
RETAINING WALL 1 RAIL PARTIAL ELEVATION AND PLAN



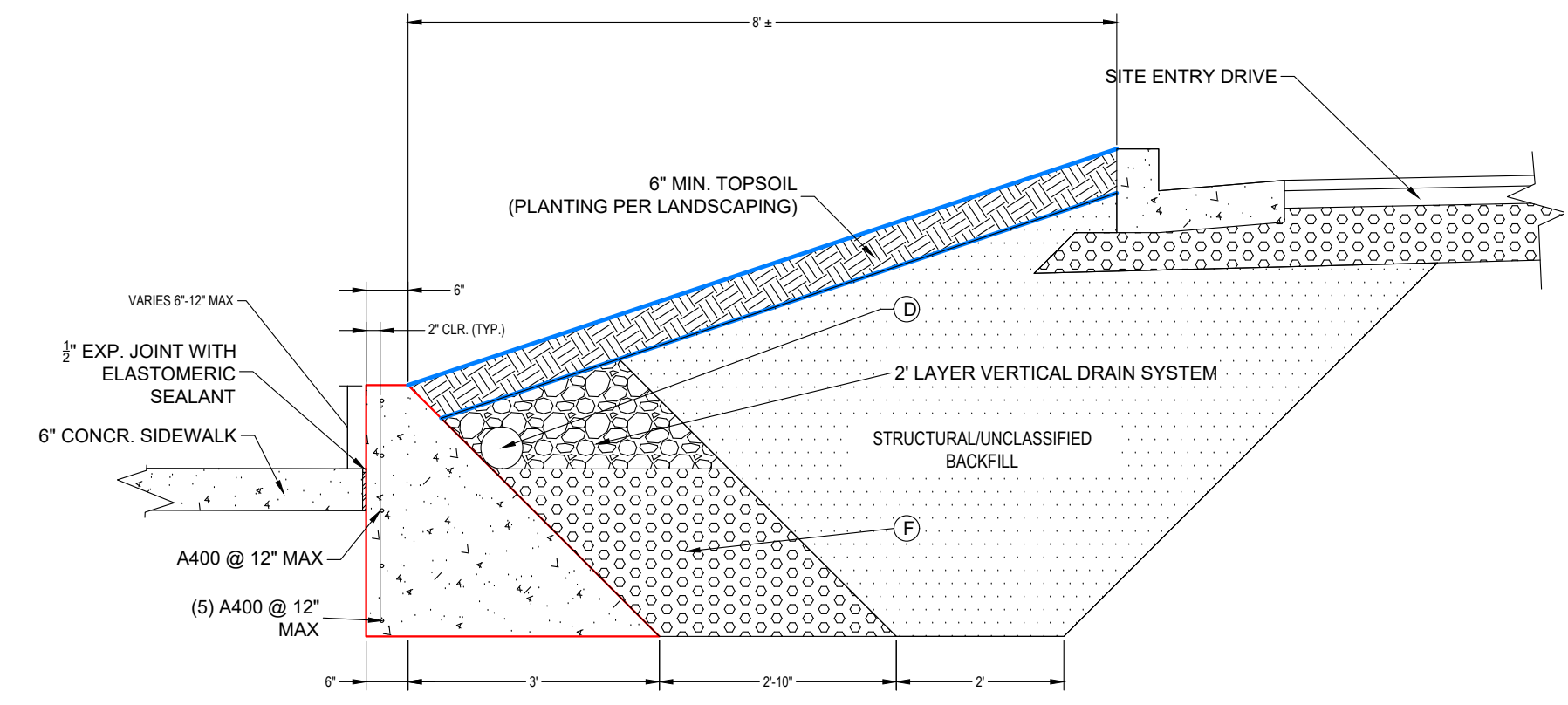
RETAINING WALL 5 CONSTRUCTION DETAILS

- GENERAL NOTES**
- GRAVITY WALL IS LIMITED TO 5 FEET IN HEIGHT ABOVE GROUND. WALLS GREATER THAN 5 FEET SHALL BE RETAINING WALLS DESIGNED IN CONSULTATION WITH THE SOILS AND GEOLOGY SECTION AND THE STRUCTURES DIVISION.
 - BASE OF WALL IS TO BE BELOW THE FROST LINE UNLESS WALL IS PLACED ON SOLID ROCK FOUNDATION. UNLESS OTHERWISE NOTED, PLACE BOTTOM TWO (2) FEET OF WALL BELOW THE GROUND LINE.
 - 4" DIAMETER WEEP HOLES AT MAXIMUM 10'-0" CENTER-TO-CENTER ARE TO BE PLACED AT THE LOWEST POINT PRACTICAL FOR PROPER DRAINAGE. THE ENGINEER WILL DETERMINE BOTH HORIZONTAL AND VERTICAL SPACING OF WEEP HOLES. PIPE IS TO BE PAID FOR UNDER THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
 - 6" DIAMETER PERFORATED PIPE IS TO BE CONNECTED TO AN OUTLET PIPE AT LOW POINTS AND AT A MAXIMUM SPACING OF 200'. PIPE IS TO BE PAID FOR UNDER THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
 - THE TREATMENT AT TOE OF FILL IS TO BE DETERMINED ACCORDING TO THE VOLUME AND VELOCITY OF THE RUNOFF (SEE ROADWAY PLANS).
 - GRANULAR BACKFILL BEHIND PROPOSED GRAVITY RETAINING WALL AND BELOW FLOW LINE OF OUTLET PIPES IS TO BE INCLUDED IN THE PRICE BID FOR THE WALL.
 - AT LOCATIONS WHERE A CONCRETE BARRIER PROTECTION IS ALSO NEEDED USE S-55MB-2 IN PLACE OF GRAVITY WALL FOR UP TO 2' OF FILL AND S-55MB-9 FOR UP TO 2' OF FILL AND S-55MB-9 FOR UP TO 5' OF FILL.
 - ACTUAL UNDERCUT DEPTH AND BACKFILL SLOPE TO BE DETERMINED BY THE GEOTECHNICAL ENGINEER.
 - THE ENTIRE WALL, INCLUDING GRANULAR BACKFILL TO BE INCLUDED IN THE RIGHT-OF-WAY.
 - IF THE WALL IS A FILL WALL, THERE SHOULD BE A 15' MINIMUM CONSTRUCTION EASEMENT IN FRONT OF THE WALL.

RETAINING WALLS 5 & 6 GENERAL NOTES



RETAINING WALL 5 HANDRAIL



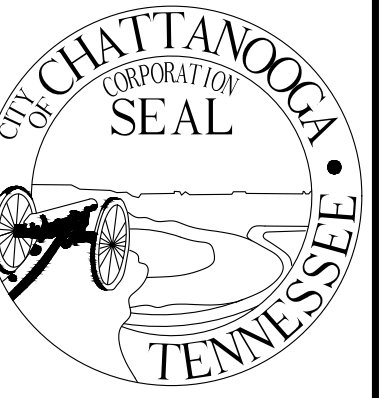
RETAINING WALL 6 CONSTRUCTION DETAILS

NO.	DATE	REVISION	SIG.
0	5/1/2018	MISC. REV.	
1	1/28/2019	REV. DTL.	
2	10/31/2019	MISC. REV.	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	

CONTRACT# Y-15-008-03
SCALE: NTS
DRAWN: ACH
DESIGN: ACH
CHECKED: ABM

SHEET: CS 100

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CITY OF
CHATTANOOGA
DEPARTMENT OF
PUBLIC WORKS
ENGINEERING
DIVISION

ADMINISTRATOR:
JUSTIN C. HOLLAND
CITY ENGINEER:
WILLIAM C. PAYNE, P.E.

AVONDALE YOUTH AND FAMILY
DEVELOPMENT CENTER
Y-15-008-202
SITE DETAILS 2

NO.	DATE	REVISION	SIG.
0	1/28/2019	ADDED SHT.	
1	10/31/2019	MISC. REV.	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	
X	X	X	

CONTRACT# Y-15-008-203
SCALE: AS NOTED
DRAWN: ACH
DESIGN: ACH
CHECKED: ABM



SHEET: CS 202



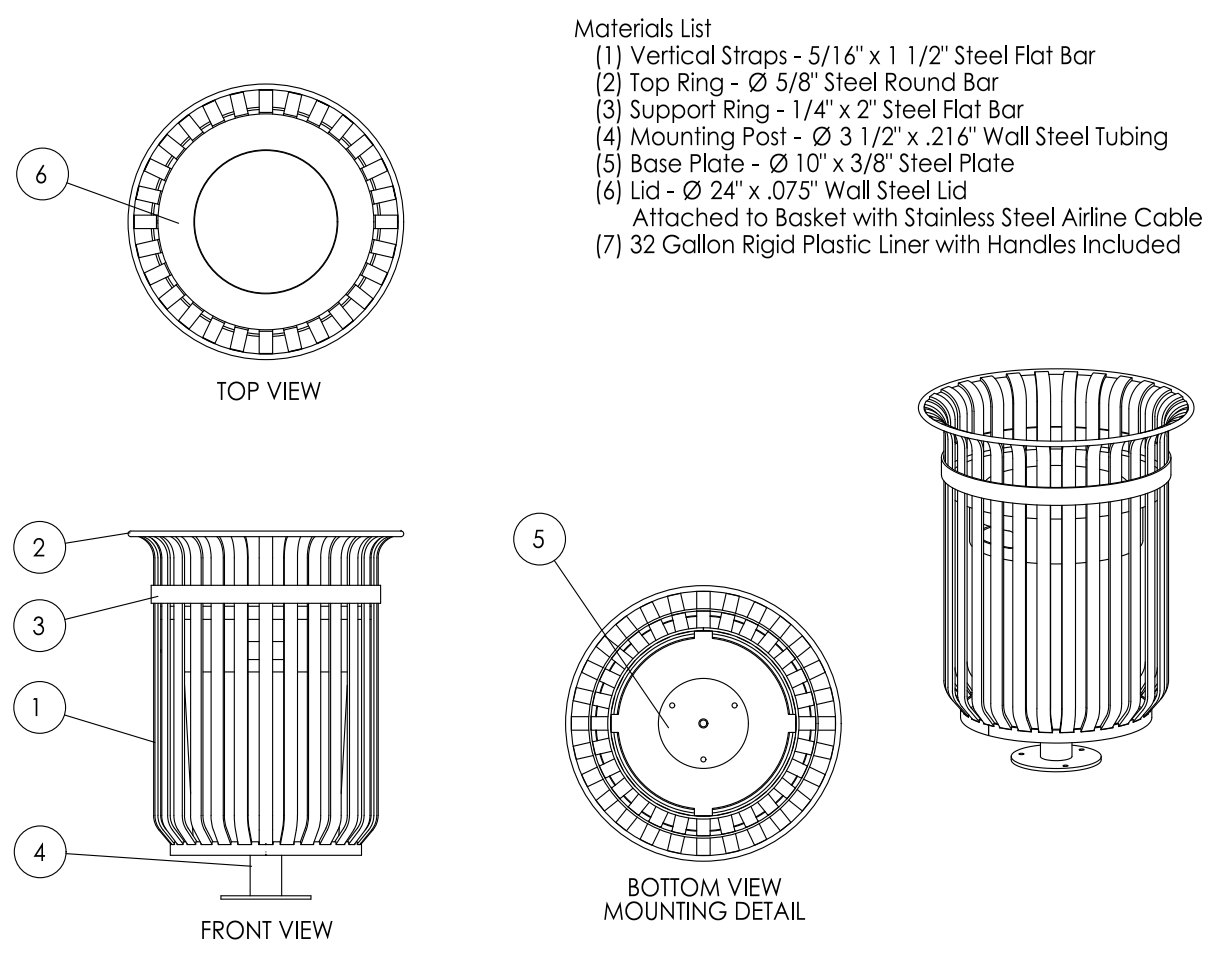
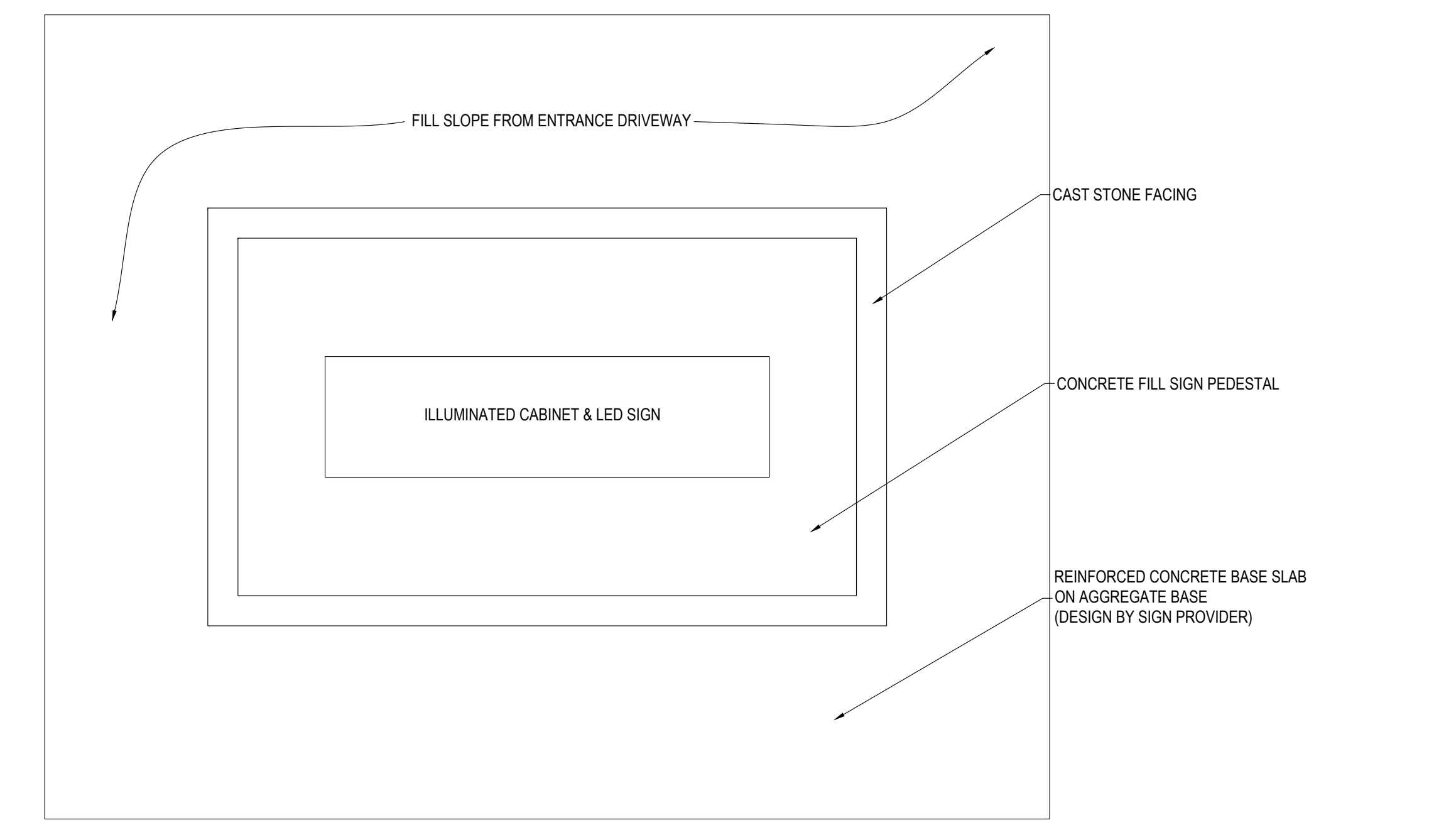
ILLUMINATED BOX SIGN, DOUBLE SIDED
SIZE: 3'x6'x1"
SINGLE POLE MOUNT
PAN-FORMED POLYCARBONATE
EMBOSSED GRAPHICS AND SECOND SURFACE PAINTED.
UL APPROVED
DHO FLUORESCENT ILLUMINATION
ALUMINUM EXTRUSION
DISCONNECT SWITCH

22mm LED DISPLAY
DOUBLE SIDED
FULL COLOR
APPROX. 32.5" x 67"
4 LINES OF 6" MINIMUM TEXT SIZE
CONTRACTOR TO INCLUDE SOFTWARE
AND STAFF TRAINING
PROGRAMMABLE REMOTELY BY RF WIRELESS
USING CONVENTIONAL WORKSTATION TYPE
COMPUTERS.

CAST STONE FACING
(SEE UTILITY SHED DETAILS)
CONCRETE PEDESTAL, SIGN FOUNDATION,
AND BASE SLAB DESIGN BY SIGN PROVIDER.

SHOP DRAWINGS FOR SIGN, SIGN FOUNDATION,
CONCRETE PEDESTAL, AND BASE SLAB SHALL
BE STAMPED BY A PROFESSIONAL
ENGINEER LICENSED IN THE STATE OF TENNESSEE.

CONTRACTOR TO COMPLETE ELECTRICAL
CONNECTIONS TO BUILDING CIRCUITS FOR SIGN
POWER AND DATA (IF DATA REQUIRED)



Sitescapes CityView CV2-3010
32 gallon steel-strap style
pedestal mount trash receptacle
Ground mount with anchors in
minimum 18"Øx24" deep concrete.
6 TRASH RECEPTACLES REQUIRED

TRASH RECEPTACLE



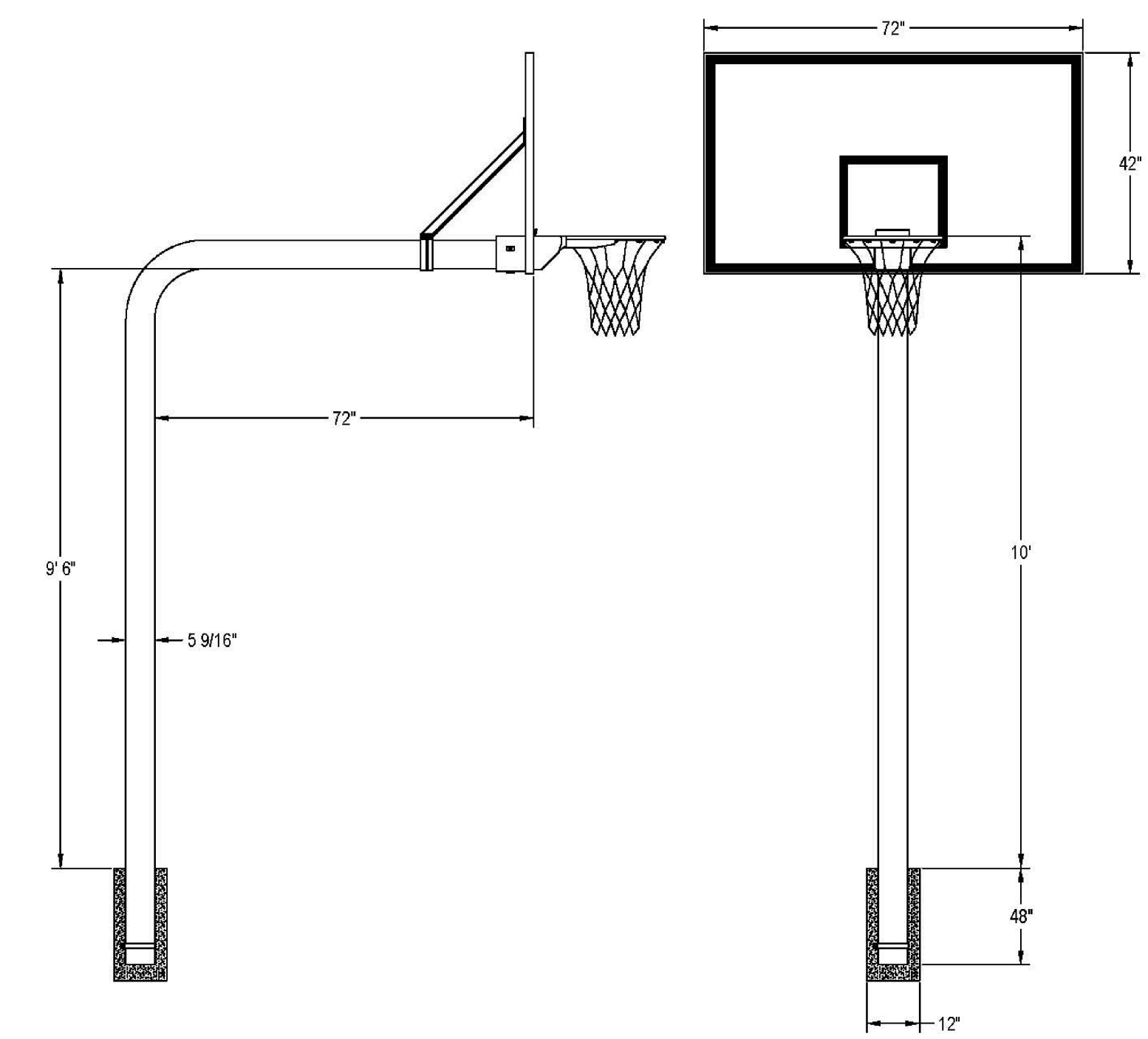
Belson Outdoors 940SM-V6
6' long, 12" wide diamond pattern
metal bench in black finish
Ground mount in minimum
18"Øx24" deep concrete.
4 BENCHES REQUIRED

BENCH



Belson Outdoors BRBC-8
6' long, 8-bike coil type galvanized and
powder coated bike rack in gloss black
finish
Ground mount per manufacturer's
recommendations or surface mount and
anchor to new 4'x6'x6" Class A Concr. pad

BIKE RACK



Bison, Inc. PR74 Mega-Duty
Gooseneck basketball goal.
Galvanized steel pole
72"x42" regulation polycarbonate
backboard
2 BASKETBALL GOALS REQUIRED

BASKETBALL GOALS

CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR PROGRAMMABLE LED SIGN ASSEMBLY
AND SIGN FOUNDATION, PEDESTAL, AND BASE CONCRETE PRIOR TO FABRICATING ANY COMPONENTS.

CONTRACTOR TO FURNISH AND INSTALL SITE FURNISHINGS (BIKE RACK, TRASH RECEPTACLE, BASKETBALL GOALS, BENCHES), SUPPLYING ALL MATERIALS AND LABOR
NECESSARY TO PROVIDE COMPLETE, IN-PLACE, USABLE FURNISHINGS TO THE OWNER, INCLUDING BUT NOT LIMITED TO EXCAVATION, CONCRETE FOUNDATIONS,
SPECIALIZED GROUND ANCHORS, ASSEMBLIES, AND HARDWARE, AND ALL FASTENERS AND ACCESSORIES NECESSARY TO COMPLETE INSTALLATION.

SECTION 107300

PROTECTIVE COVERS

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Manufacture and install prefabricated steel carports, canopies, solar support structures, or other commercial and industrial canopy-related coverings.

1.02 RELATED WORK

- A. Concrete: General contractor shall provide block out openings in concrete slab at each column location when applicable, or shall make other provisions necessary to anchor the protective cover to concrete in accordance with the Protective Cover engineering drawings.

1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Except as otherwise indicated, the Contractor shall comply with the Reference Standards specified in Section 1080, as well as the following Codes:
 1. International Building Code 2012 (IBC 2012)
 2. Structural Welding Code – AWS d1.1
 3. Sheet metal welding code – AWS d9.1
 4. Standard shapes – ASTM A572 Grade 50 (fy=50 ksi)
 5. Plates and angles – ASTM A36 (fy=36 ksi)
 6. Structural Tubing – ASTM A-500 Grade B (fy=46 ksi)
 7. Cold Formed Shapes – ASTM A-653 or A-570 (fy=55 ksi)

1.04 SHOP DRAWINGS, SUBMITTALS, AND SAMPLES

- A. Shop drawings holding the seal of a professional engineer licensed in the State of Tennessee are required. These drawings will specify proper construction in compliance with all local codes including, but not limited to, load, bearings, wind ratings, seismic loads, footings required, spacing of columns, roof pitch, and minimum clearance height.
- B. Shop drawings will be accompanied by structural calculation showing load tables, wind ratings, deflection variables, and technical data on all structural and cold-formed components.
- C. Shop drawings and calculations will be used by the Contractor to obtain the necessary building permits.

SECTION 107300

PROTECTIVE COVERS

- D. Furnish samples of color for roof deck selection.

1.05 QUALITY ASSURANCE

- A. Manufacturer shall have a minimum of 10 years' experience in the manufacture/supply of steel canopies.
- B. Installer shall have a minimum of 8 years' experience installing pre-engineered steel canopies. Installation shall be in accordance with manufacturer's engineering specifications.
- C. Safety meetings shall be held each day before the start of installation work.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Store and protect products prior to being delivered to job site.
- B. Deliver products to job site.
- C. Store materials on job site in a manner so they will not be damaged.
- D. Materials shall be placed so water will drain and no accumulate.

1.07 WARRANTY

- A. Provide a **two year warranty on all materials and workmanship**.
- B. Provide a 25 year warranty against fade and chalk of walls and roof decking.
- C. Replacement: Damaged materials or equipment shall be replaced or refinished by the manufacturer at no expense to the Owner.

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. All structural steel beams and columns shall be detailed, shop prime painted, piece marked, furnished, fabricated, and erected according to the AISC "Specifications for Structural Steel Buildings", current edition, and the AISC "Code of Standard Practice". Beams and columns shall conform to ASTM A572 Grade 50 ($f_y=50$ ksi) and ASTM A500 Gr. B ($f_y=46$ ksi). Members shall be shop galvanized or powder coated and shall be touched up in the field as necessary according to manufacturer's instructions.
- B. Structural Steel shall not be altered in the field from that shown on the approved drawings. Cutting, burning, or welding not shown on the drawings shall not be performed with the prior written approval of the Engineer.

SECTION 107300

PROTECTIVE COVERS

- C. Roof decking shall be minimum 26 gauge PBR UL 790 Class A fire-resistant rated, UL 2218 Class 4 hail impact resistance-rated, and with a pre-applied high-performance paint system. Other decking materials may be substituted with prior written approval of the Engineer.
- D. Welding shall be in accordance with the current “Structural Welding Code for Steel” D1.1 AWS (American Welding Society). Electrodes for welding shall be in accordance with AWS 5.1 or 5.5, E70XX.
- E. Anchoring hardware shall be galvanized or stainless, and shall be embedded 6” minimum or as specified by the Protective Cover engineer. 5/8” minimum diameter unless noted otherwise.

PART 3 -- EXECUTION

3.01 INSTALLATION

- A. Install canopy in a plumb manner to the highest standards of the trade and in strict accordance with the engineering drawings and manufacturer’s instructions.
- B. Install beams and columns at straight and true angles, level where shown, even if there are variances in grade change.
- C. Securely fasten all hardware and anchors in accordance with engineering specifications.
- D. Thoroughly clean canopy and job-site prior to completion.

3.02 INSPECTION

- A. Contractor shall be required to coordinate with City of Chattanooga Building Codes inspectors to allow for inspection of footing holes, rebar cages, anchors, etc, prior to pouring concrete, and for all other mandatory inspections throughout erection.

****END OF SECTION****

**SECTION 116623
SPORTS EQUIPMENT**

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Basketball court equipment and striping
 - 2. Safety pads

1.02 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop drawings: For basketball goals and safety padding on Retaining Wall.
 - 1. Include plans, elevations, sections, details, and attachments to other work
 - 2. Include Weights, support requirements, connections points to other elements
- C. Samples: For each exposed product and for each item and color specified.
- D. Warranty
- E. Maintenance Data and operation instructions
- F. Coordination drawings
- G. Product certificates

1.03 QUALITY ASSURANCE

- A. Supplier qualifications: A company that has at least 5 years' experience in production of the type of equipment specified.
- B. Installer qualifications: Contractor to use installers who have a minimum of 3 years' experience and have successfully installed at least 4 other projects of similar size and quality. Provide staff that are qualified in specialty work as required for that portion of the work.

1.04 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of the basketball goals that fail in materials or workmanship within **five (5) years from the date of Substantial Completion.**

PART 2 -- PRODUCTS

2.01 BASKETBALL EQUIPMENT

- A. Subject to compliance, manufacturers who produce products that may be incorporated into the work include:

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SPORTS EQUIPMENT

1. Bison, Inc.
 2. Draper
 3. Performance Sports Systems
 4. Porter Athletic Equipment
 5. BASIS OF DESIGN: Bison, Inc. PR74, 5-9/16" Mega Duty Playground Basketball System with 42"x72" Unbreakable Polycarbonate Backboard
- B. Goals to be gooseneck style with minimum 6' safe play area behind the backboard, provided by a minimum 72" extension from the front of the post to the face of the backboard.
- C. Goal posts to be installed per manufacturer's recommendations, with a minimum 48" embedment in the ground.
- D. Goals to be fixed height at 10' above court surface.
- E. Contractor to make provisions for setting goal posts in performance of other work, including constructing block-outs or core-drilling as necessary for proper installation of the posts.
- F. Nets to be 12-loop-mesh net, between 15 and 18 inches long, sized to fit rim diameter, and as follows:
1. Cord: Made from white nylon.
- G. Goal posts to have custom-fitted padding from ground to minimum height of 6' above ground. Safety padding to be minimum of 2" thick safety foam.
- H. Posts to be finished in galvanized steel or galvanized and powder-coated black.
- I. Backboards to be 42"x72" official size ½" clear unbreakable polycarbonate with a limited lifetime warranty. Polycarbonate shall be framed with aluminum extrusions and have a white border and shooters' square. A tubular subframe shall be mounted to the rear of the backboard to provide support at the rim mounting location and provide threaded inserts for brace attachment on gooseneck post systems. Post systems without backboard support braces shall not be considered equal. Backboard shall carry a lifetime limited warranty.
- J. Basketball goals to be complete with flanges, braces, attachment plates, and evenly spaced loops welded around the underside of the ring.
1. Single-rim basket ring competition goal
 2. Type: Flexible type with official 5/8" diameter ring and one-piece net attachment. Rim shall carry a minimum 1-year warranty. No fewer than two (2) spare rims and nets shall be provided.
 3. Standard manufacturer's finish.
- K. All hardware to be stainless steel.

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SPORTS EQUIPMENT

- L. Backboard Safety Pads: Designed for backboard thickness indicated and extending continuously along bottom and up sides of backboard and over goal mounting and backboard supports as required by referenced rules.
1. Color: Gray or as directed by Owner from the manufacturer's full range of colors.
 2. Padding shall be molded with an integral skin and have a tear strength of no less than 125 psi. Padding shall be no less than ¾" thick and cover the lower and bottom edge of the backboard no less than 2 ½" high and 3" deep. Padding shall protect both sides of the backboard a minimum of 12" from the bottom of the backboard or as required by referenced rules. Molded in steel inserts shall provide the mounting locations to allow padding to be screwed to backboard frame.

2.02 SAFETY PADS

- A. Manufacturers: Subject to compliance, manufacturers who produce products that may be incorporated into the work include:
1. Bison, Inc.
 2. Greatmats
 3. Draper
 4. Performance Sports Systems
 5. Porter Athletic Equipment
 6. Basis of Design: Bison, Inc., 3" All Weather Solid Color Outdoor Padding, Flange mounted.
- B. Pad Coverings: Provide safety pad fabric covering that is fabricated from puncture- and tear-resistant, PVC-coated polyester or nylon-reinforced PVC fabric, no less than 14-oz/sq. yd and treated with fungicide for mildew resistance. Treated for UV protection with minimum tear strength of 92 x 83 pounds per inch.
- C. Wall safety Pads:
1. 3" polyurethane foam wall padding
 2. Indentation Load Deflection (ILD) of 43-53 lbs. per 50 cubic inches
 3. 1.5 pounds per cubic foot density per ASTM tests B1 and A
 4. Foam conforms to California Fire Code TIB 117 Section 3 and FMVSS 302.
 5. Foam conforms to ISO 20743:2007 Antibacterial and AATCC 30 antifungal standards.
 6. Wood-backed padding is mounted on treated exterior grade plywood and the foam is attached with a manufacturer-recommended adhesive.
 7. Pads shall be fastened to treated furring strips with coated fasteners appropriate for use with treated lumber. Treated furring strips to be rated for ground contact. Furring strips to be fastened to concrete substrate with coated fasteners appropriate for use with treated lumber. Fasteners shall be screws or bolts in threaded inserts to facilitate maintenance of pads.
 8. Velcro-attached padding strips shall be used to protect the flanged fastening areas of the pads.
 9. Corner wall Safety Pads: Custom fit corner pads will be used to protect the free edge of the Retaining Wall.

SECTION 116623
SPORTS EQUIPMENT

10. Pad colors shall be Royal Blue, Carolina Blue, Black, or as directed by the Owner, using the manufacturer's full color palette.

2.03 MATERIALS

- A. Aluminum: Alloy and temper recommended by manufacturer for use and finish type indicated.
 - 1. Extruded bars, profiles, and tubes: ASTM B221
 - 2. Cast Aluminum: ASTM B179
 - 3. Flat Sheet: ASTM B209

- B. Steel: Comply with the following
 - 1. Steel plates, shapes, and bars: ASTM A36
 - 2. Steel tubing: ASTM A500 or A513 (cold formed)
 - 3. Steel sheet: ASTM A1011

- C. Anchors, fasteners, fitting, and hardware: Manufacturer's standard corrosion resistant or noncorrodible units, concealed, tamperproof, vandal-and theft-resistant design. Fasteners used with treated lumber shall be specifically coated, treated, or manufactured for use with same. Fasteners must not have any sharp edges. Countersunk or dome head recommended.

- D. Grout: ASTM C1107 with minimum strength recommended in writing by equipment manufacturer.

PART 3 -- EXECUTION

3.01 INSTALLATION

- A. Comply with manufacturer's written installation instructions and competition rules unless more stringent requirements are indicated. Complete field assembly of equipment where required.

- B. Permanently placed Basketball Court Equipment and Components: Install rigid, level, plumb, square, and true. Anchor securely to supporting structures. Position at locations and elevations indicated or as directed by Owner, and in proper relation to adjacent construction, and aligned with the basketball court layout.

- C. Paint basketball court lines neatly, with continuous arcs and straight lines, using outdoor paint approved by the Owner or recommended by the Basketball Court Equipment manufacturer.

3.02 CLEANING AND PROTECTION

- A. Protect installed equipment from damage during the rest of the work.

SECTION 116623
SPORTS EQUIPMENT

- B. After completing Basketball Court Equipment installation, inspect components. Remove spots, dirt, and debris and touch up damaged shop-applied finishes according to the manufacturer's written instructions.
- C. Adjust any items which do not operate properly.
- D. Replace any damaged or defective items which can not be repaired or adjusted.
- E. Clean at time of substantial completion and final turn over.

3.03 DEMONSTRATION

- A. Train Owner's personnel to adjust, operate, and maintain equipment.

END OF SECTION

**SECTION 129300
SITE FURNISHINGS**

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Benches
 - 2. Bicycle Racks
 - 3. Trash Receptacles

1.02 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: For each exposed finish.
- C. Material Certificates: For site furnishings, signed by manufacturers.
- D. Maintenance Data

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated; free of surface blemishes.
- B. Steel and Iron: Free of surface blemishes
- C. Stainless Steel: Free of surface blemishes.
- D. Wood: Surfaced smooth of four sides with eased edges; kiln dried, free of knots.
- E. Recycled Plastic Lumber: Molded HDPE, free of surface blemishes.
 - 1. Non-combustible
 - 2. ASTM D6111, Density 0.0237-0.0249 lbs/in³
 - 3. ASTM D6109, Modulus of Elasticity (1% strain) 111,700-113,950 psi
 - 4. ASTM D6109, Ultimate flexural stress (3% strain) 2,250-2,325 psi
 - 5. ASTM D6109, Allowable flexural stress 1,200 psi
 - 6. ASTM D6108, Endwise compress. stress (3% str.) 3,300-3,650 psi
 - 7. ASTM D61177, Screw withdrawal #10, 1½” 325 lbs.

SECTION 129300
SITE FURNISHINGS

- 8. ASTM D570, Water absorption 11 weeks 0.01% 24 hrs.

- 9. ASTM D6341, Coefficient of thermal expansion 0.00007 in/in/°F

- F. Fiberglass: Multiple laminations of glass-fiber-reinforced polyester resin with UV-light-stable, colorfast, non-fading, weather- and stain-resistant, colored polyester gel coat, and manufacturer's standard finish.

- G. All plastics: Color impregnated, color and UV-light stabilized, and mold resistant.

- H. Anchors, fasteners, fittings, and hardware: Manufacturer's standard, corrosion-resistant-coated or non-corrodible materials; commercial quality, tamper proof, vandal and theft resistant, concealed, recessed, and capped or plugged.

- I. Non-shrink, Non-metallic Grout: Premixed, factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C 1107; recommended in writing by manufacturer, for exterior applications.

- J. Erosion-resistant anchoring cement: Factory-packaged, non-shrink, non-staining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound; resistant to erosion from water exposure without needing protection by a sealer or waterproof coating; recommended in writing by manufacturer for exterior applications.

- K. Galvanizing
 - 1. Zinc-coated tubing: External, zinc with organic overcoat, consisting of a minimum of 0.9 oz/sq. ft of zinc after welding, a chromate conversion coating, and a clear, polymer film. Internal, same as external or consisting of 81% zinc-pigmented coating, not less than 0.3 mil thick.

 - 2. Hot-dip galvanizing: According to ASTM A123/A123M, ASTM A153/A153M, or ASTM A924/A924M.

2.02 BENCHES

- A. Manufacturers:
 - 1. Belson Outdoors

- B. Model:
 - 1. Classic Park Bench with Diamond Pattern Steel

 - 2. 6' Length

- C. Colors:
 - 1. Black seat

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2. Black frame

D. Mounting:

1. Anchor to concrete OR use in-ground mounting with manufacturer's recommended anchoring devices.
2. Contractor to make provisions in finish paving or concrete work for installation of in-ground mounted benches

2.03 BICYCLE RACKS

A. Manufacturers:

1. Belson Outdoors

B. Model:

1. BRBC-8

C. Style: "Coil-style" for 8 bicycles.

D. Frame: Galvanized Steel Tube

1. Not less than 1.9"x0.095" Wall thickness
2. 7g (3/16") Galvanized Steel Plate

E. Finish: Polyester Powder Coat

1. Graphite gray color or black
2. Gloss finish

2.04 TRASH RECEPTACLES

A. Manufacturers:

1. SiteScapes

B. Model:

1. CityView Side Door
2. CityView Pedestal (For In-Ground Mounted Receptacles)

C. Surrounds:

1. Parallel flat steel straps, bars, or tubular shapes. Carbon steel.
2. 5/16" x 1½" Min. Flat strap, bar, or tubular shape size.

D. Receptacles:

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1. Round Cylinder with tapered funnel top, with opening for depositing trash in lid or top.
 2. With removable inner container.
 3. Capacity not less than 30 gal.
 4. Top Ring: 5/8" dia. Solid steel round bar
 5. Foot plates: 5/16"x1 1/2" Stainless steel with holes for mounting.
 6. Lid: 14 ga. Spun steel
 7. Hardware: 1/2" dia. X 4-5" stainless steel anchor bolts
 8. Finish: Shot blasted, phosphatized, preheated, powdercoated with TGIC exterior-rated powder, finished to 8-10 mil thickness and fully cured to manufacturer's specifications.
 9. Color: Onyx, Bronze, or Slate, as directed by Owner
- E. Liner:
1. High Density Polyethylene (HDPE) liner with handles, removable.

2.05 FABRICATION

- A. Metal components: Form to required shapes and sizes with true, consistent curves, lines, and angles. Separate metals from dissimilar materials to prevent electrolytic action.
- B. Welded connections: At exposed connections, finish surfaces smooth and blended so no roughness or unevenness shows after finishing and welded surface matches contours of adjoining surfaces.
- C. Pipes and tubes: Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain rectilinear or cylindrical cross section of member through entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of the pipe or tubing.
- D. Preservative-treated wood components: Complete fabrication of treated items before treatment if possible. If cut after treatment, apply field treatment complying with AWWA M4 to cut surfaces.
- E. Exposed Surfaces: Polished, sanded, or otherwise finished; all surfaces smooth, free of burrs, barbs, splinters, and sharpness; all edges and ends rolled, rounded, or capped.

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- F. Factory assembly: Assemble components in the factory to the greatest extent possible to minimize field assembly. Clearly mark units for assembly in the field.

PART 3 -- EXECUTION

3.01 INSTALLATION, GENERAL

- A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.
- B. Post setting: Set cast-in support posts in concrete footing plumb or at correct angle and aligned and at correct height and spacing. In-ground mounting posts shall also be plumb and aligned at correct angle, height and spacing.
- C. Posts set into voids in concrete: Form or core-drill holes for installing posts in concrete to depth recommended in writing by manufacturer of site furnishings and fill annular space between post and concrete with non-shrink grout, mixed and placed to comply with anchoring material manufacturer's written instructions.
- D. Pipe sleeves: Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with non-shrink grout, mixed and placed to comply with anchoring material manufacturer's written instructions.
- E. Surface-mounting: Use cast-in anchors or anchoring hardware recommended by furnishings manufacturer. Carefully drill holes for anchors using rotation-only drills and proper masonry bits. Holes shall be neatly cleaner prior to installation of post-installed anchors. All fasteners to be snugged tight, but not overtightened such that the furnishings are damaged. Supports shall be shimmed or shall have annular space grouted to leave no unsightly gaps at the bases of the furnishing.

END OF SECTION