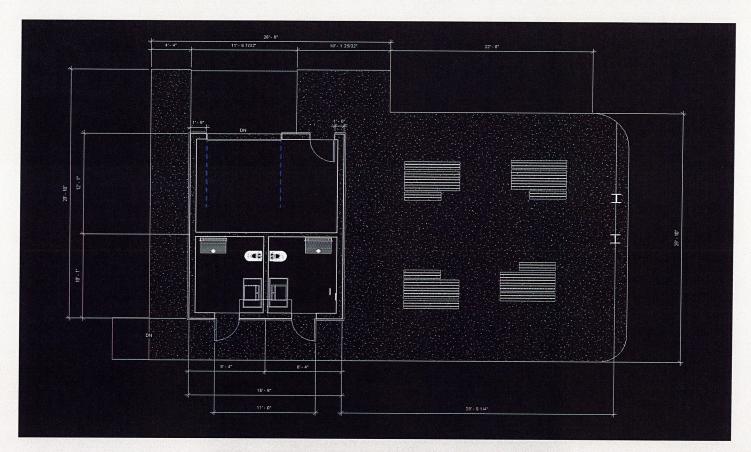
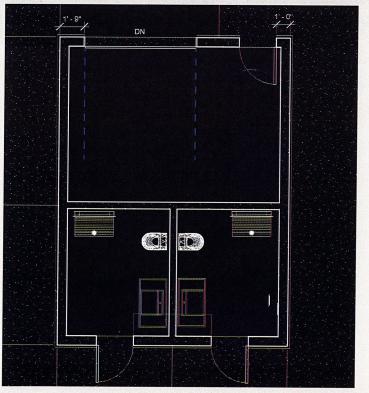
Revit Design









Meet The Designers

Faith Bartlett (Jr.)

faithbartlett@aledoisd.org

Designer/Modeler

Samuel Ghent (Sr.)

samghent01@gmail.com

CAD
Drafter/Designer/Modeler

Amelia Buck (Jr.)

ameliabuck@aledoisd.org

Designer/Modeler

Matthew Dominick (Jr.)

matthewdominick@aledoisd.org

Designer/Modeler









OUR APPROACH

We aimed to create a pavilion that fits right into the park, balancing the needs and preferences of the park's guests with practical and aesthetic features. For example, our design is practical through the incorporation of ADA guidelines, while still remaining aesthetically pleasing.

DESIGN INSPIRATION

We got our inspiration from the surrounding buildings such as The Shops at Willow Park, and other photos from park bathrooms and pavilions.





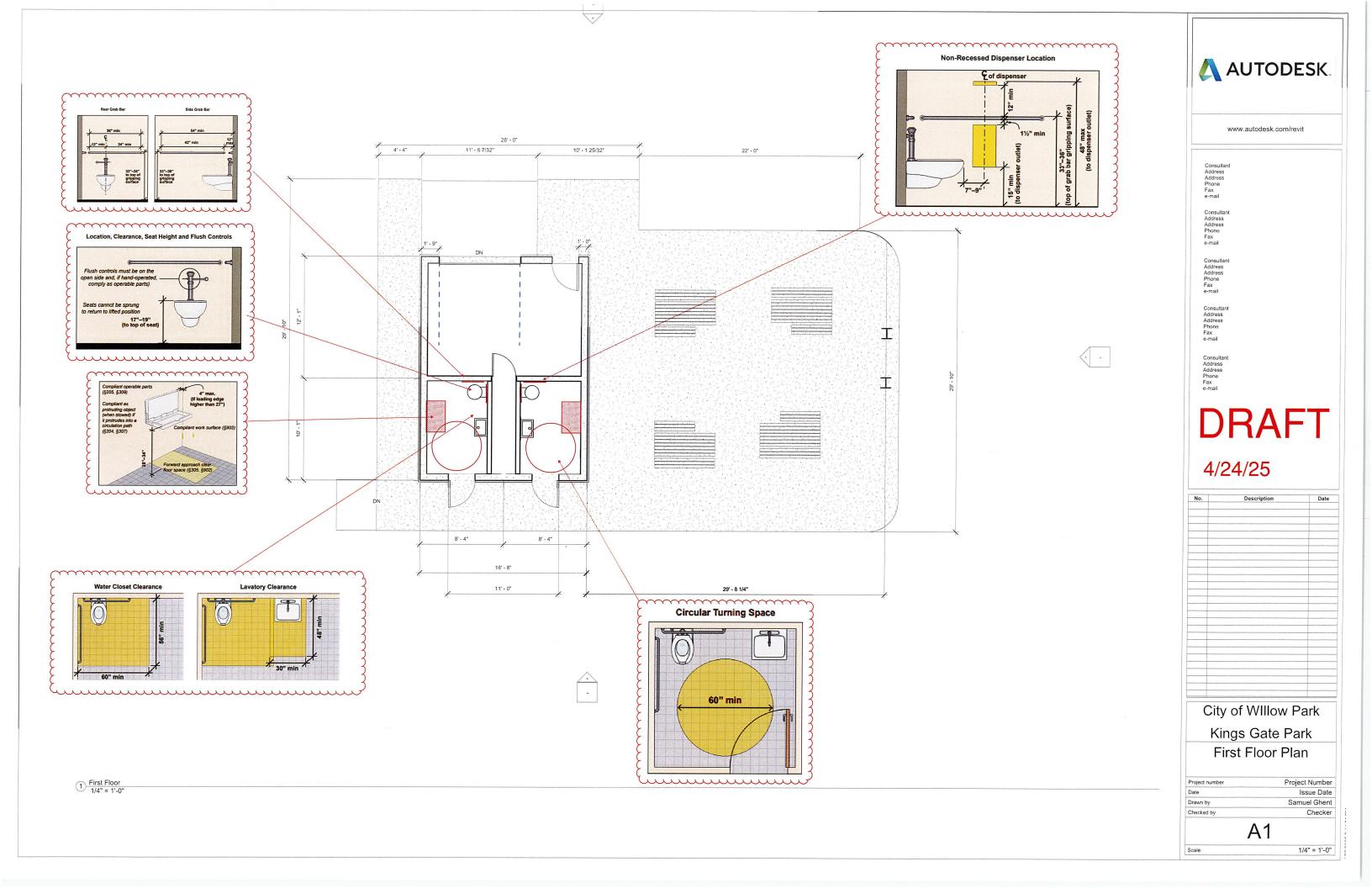
KINGS GATE PARK
RESTROOM AND PAVIL-

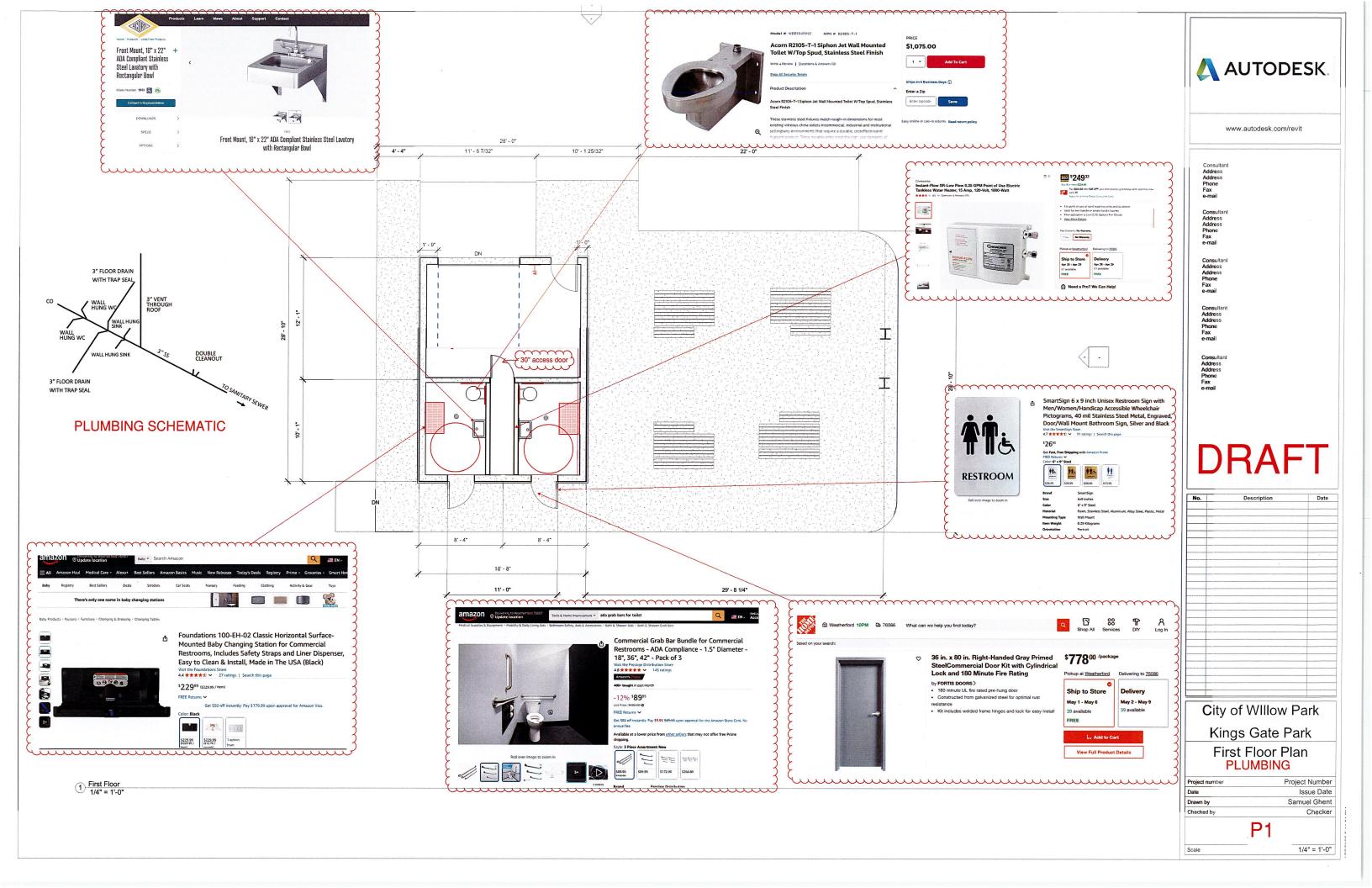
SITE PLAN

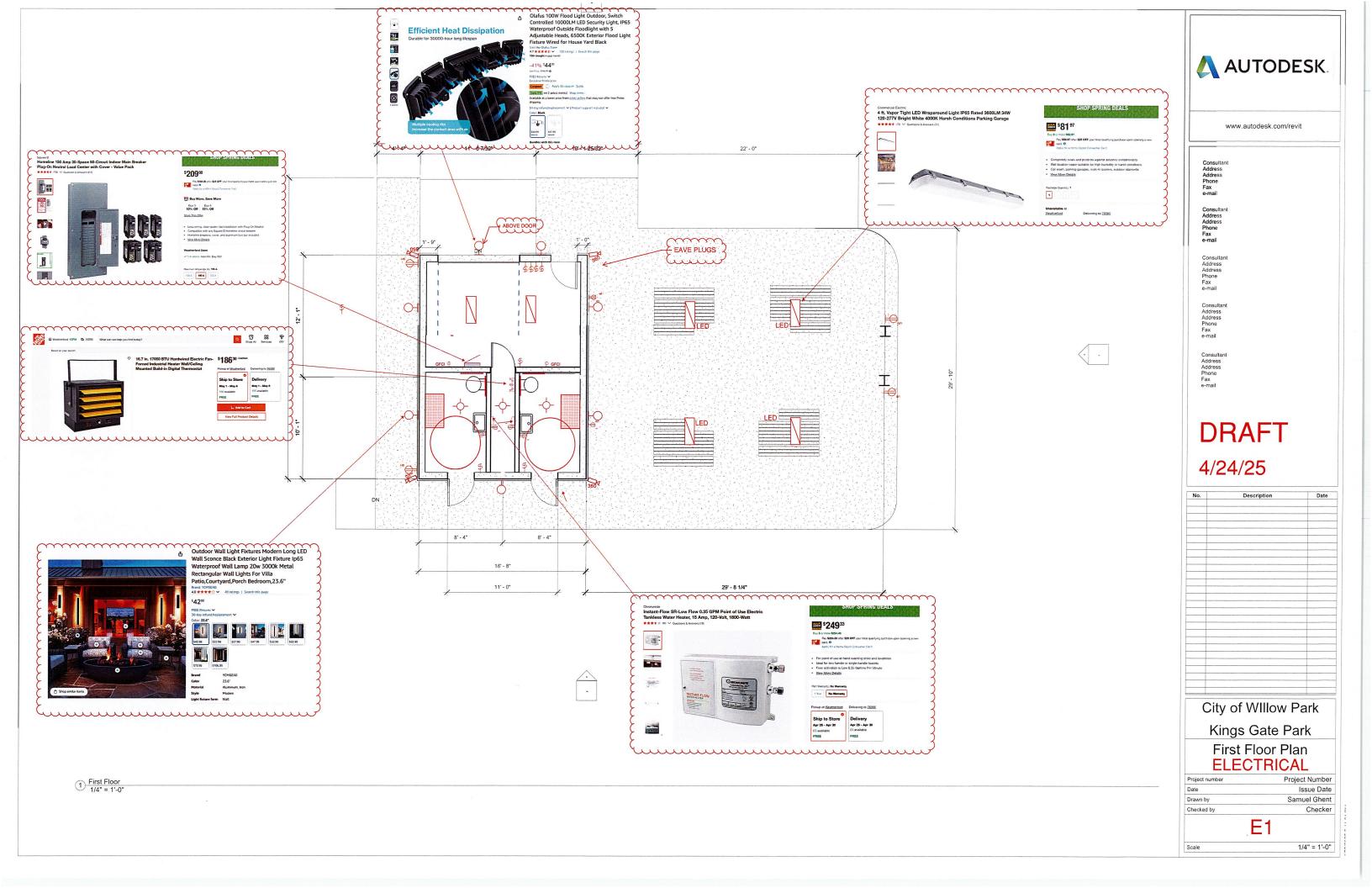
DRAFT 4-29-25

CITY OF WILLOW PARK

SITE PLAN







GENERAL NOTES

EXISTING CONDITIONS. EACH BIDDER/CONTRACTOR SHALL VISIT THE JOB SITE AS REQUIRED TO DETERMINE AND / OR VERIFY EXISTING CONDITIONS. ANY EXCEPTIONS TO EXISTING CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CITY

THE CONTRACTOR SHALL COMPARE STRUCTURAL DRAWING TO ALL OTHER DISCIPLINES. ANY DESCREPENCIES SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE CITY.

THE STRUCTURAL DRAWINGS REPRESENTS THE FINISHED STRUCTURE. DRAWINGS DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE AL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHOULD INCLUDE, BE NOT LIMITED TO BRACING AND SHORING OF DEAD LOADS, CONSTRUCTION LOADS, WIND LOADS ETC.

THIRD PARTY COMPONENT DESIGNERS SHALL VERIFY ALL DESIGN / CODE REQUIREMENTS WITH THE BUILDING OFFICIAL PRIOR TO BIDS OR FABRICATION.

DESIGN CRITERIA

1. BUILDING CODES

A. 2021 INTERNATIONAL BUILDING CODE AS ADOPTED BY THE CITY OF WILLOW PARK, TEXAS.

B. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI318.

C. AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS- ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN, NINTH EDITION.

2. DESIGN CRITERIA

GRAVITY LOADS
ROOF LIVE LOAD OF 20 PSF
ROOF DEAD LOAD OF 20 PSF
FLOOR LIVE LOAD 40 PSF
CORRIDOR AND STAIRS LOAD 100 PSF 300 LBS CONC.
GROUND SNOW LOAD 5 PSF
RAIN LOADING 4 INCHES PER HOUR
WIND LOAD PER IBC 2021 EDITION
BASIC WIND SPEED V_UT = 115 MPH Vads 3s = 90 MPH, CAT. II
CATEGORY II EXPOSURE C
INTERNAL PRESSURE COEFFICIENT GCpi + 0.55 –0.55
GAZING DESIGN PRESSURE DP = 15

A) EARTHQUAKE DESIGN PER IBC 2021 EDITION

RISK CATEGORY II
SEISMIC IMPORTANCE FACTOR IE=1
S3 = 0.037 S1 = 0.02
SITE CLASS D
Sds = 0.029 Sd1 = 0.02
SEISMIC DESIGN CATEGARY A
BASIC SEISMIC FOR RESISTANCE SYSTEM, A.15— LIGHT FRAME WOOD
DESIGN BASE SHEAR V=28.4K
SEISMIC RESPONSE COEFFICIENT, Cs=0.01
RESPONSE MODIFIER, R=6.5
ANALYSIS PROCEDURE, SIMPLE DESIGN PROCEDURE

MASONRY NOTES

- 1. ALL CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 GRADE N. NORMAL WEIGHT UNITS, TYPE 1 MOISTURE. UNITS SHALL NOT BE WET AT THE TIME OF PLACING. A LETTER CERTIFYING THAT THE MASONRY UNITS MEET OR EXCEED THE SPECIFIED COMPRESSIVE STRENGTH OF THE MASONRY UNITS SHALL BE PROVIDED BY THE MANUFACTURE PRIOR TO DELIVERY.
- 2. MORTAR FOR MASONRY WORK SHALL BE TYPE "S" (ASTM C270, LATEST EDITION). PROPORTIONS BY VOLUME SHALL BE 1 PART PORTLAND CEMENT, 1/2 PART HYDRATED LIME, AND 3 1/2 TO 4 1/2 PARTS SAND WITH WATER AS REQUIRED FOR WORKABILITY. RETEMPERING WILL NOT BE ALLOWED. MASONRY CEMENTS OR PRE-MIXED MORTARS WILL POSITIVELY NOT BE ALLOWED. LIME SHALL BE TYPE "S" ONLY. NO AIR ENTRAINMENT WILL BE ALLOWED.
- 3. GROUT USED IN MASONRY WORK SHALL BE COARSE GROUT (ASTM C476, LATEST EDITION). PROPORTIONS BY VOLUME SHALL BE 1 PART PORTLAND CEMENT, UP TO 1/10 PART HYDRATED LIME, 2 1/2 TO 3 PARTS FINE AGGREGATE, AND 1 TO 2 PARTS COARSE AGGREGATE WITH WATER AS REQUIRED FOR WORKABILITY. GROUT SHALL BE ADEQUATED CONSOLIDATED, BUT CARE SHALL BE TAKEN TO AVOID BLOW-OUTS WHEN VIBRATING. THE CAVITY SHALLL BE CLEANED OF ALL MORTAR DROPPINGS, DEBRIS. TRASH, ETC. PRIOR TO GROUTING.
- . ACCURATE MEASURING CONTAINERS, SUCH AS A "CUBIC FOOT BOX", SHALL BE PROVIDED AND USED AT ALL TIMES IN MIXING BOTH MORTAR AND GROUT USED IN MASONRY WORK.
- SEPARATE MIXERS SHALL BE PROVIDED FOR MORTAR AND GROUT USED IN MASONRY WORK.
- JOINT REINFORCEMENT, HORIZONTAL JOINT REINFORCEMENT SHALL BE LADDER OR TRUSS TYPE WITH A MINIMUM OF (2) #9 WIRES. JOINT REINFORCEMENT SHALL BE PLACED VERTICALLY AT 16" ON CENTER.
- 7. REFERENCE ARCHITECTURAL DRAWINGS FOR OPENING, ARCHES, AND ALL OTHER DETAILS IN MASONRY WORK.
- ALL RECOMMENDATION OF THE NATIONAL CONCRETE MASONRY ASSOCICATION SHALL BE FOLLOWED IN REGARDS TO WORKMANSHIP, COLD WEATHER PROCEDURES, FLASHING, LEVEL AND PLUMB TOLERANCES, ETC.
- ALL BOLTS, ANCHORS, ETC. INSERTED IN THE WALL SHALL BE GROUTED SOLID IN PLACE.
- 10. DESIGN STRESSES HAVE BEEN ADJUSTED TO PERMIT NON-CONTINUOUS INSPECTION WHERE ALL ALLOWED BY AHJ.
- 11. SPECIFIED COMPRESSIVE STRENGTH OF MASONRY , fm, SHALL NOT BE LESS THAN 1800 PSI.
- MASONRY LINTEL SHALL BE CONSTRUCTED ACCORDING TO THE FOLLOWING SCHEDULE.

 OPENING
 LINTEL AND REINFORCING

 TO 4'-0"
 8" LINTEL WITH (2)-#4's

 TO 6'-0"
 16" LINTEL WITH (2)-#4's

 TO 10'-0"
 16" LINTEL WITH (2)-#5's

PROVIDE #5 VERTICAL REINFORCEING AT 32" O.C. IN FULLY GROUTED CELLS
PROVIDE VERTICAL REBAR ON EACH SIDE OF ALL OPENINGS.

GENERAL MATERIAL NOTES

- 1. ALL CONCRETE SHALL CONFORM TO ASTM C94, NORMAL WEIGHT, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. EXPOSED CONCRETE SHALL BE AIR-ENTRAINED.
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A 615 (PLUS S1) GRADE 60, FY = 60KSI.
- 3. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE ASTM A36, FY = 36 KSI MIN. STRUCTURAL TUBES SHALL BE ASTM A500, GRADE B FY = 46 KSI MIN
- SELECT FILL SHALL BE CLAYEY SAND FREE OF ORGANIC MATERIALS WITH A PLASIC INDEX (PI) BETWEEN 8 AND 18, AND WITH A LIQUID LIMIT (LL) OF 35 OR LESS.

GENERAL FOUNDATION NOTES

2. REMOVE EXISTING SOILS TO A DEPTH TO SATISFACTORY BEARING SUBSTRAIT.

STRIP BUILDING SITE OF TOPSOIL AND ORGANIC MATERIAL

- SCARIFY EXPOSED SUB-GRADE TO 9 INCHES AND COMPACT EXPOSED GRADE MINIMUM OF 95% OF STANDARD PROCTOR DENSITY ASTM 698, AT OR ABOVE OPTIMUM MOISTURE CONTENT.
- PLACE FILL IN LOOSE LIFTS NOT EXCEEDING EIGHT (8) INCHES IN UN-COMPACTED THICKNESS. COMPACT FILL TO A MINIMUM OR 95% OF STANARD PROCTOR DENSITY AT OR ABOVE OPTIMUM MOISTURE CONTENT.
- 5. REPLACE EXCAVATED SOILS WITH EXISTING ONSITE SOILS COMPACTION MINIMUM OF 95% TO A MINIMUM OF +2% ABOVE OPTIMUM MOISTURE CONTENT AND FINISH WITH A MINIMUM OF 12" OF SELECT FILL AS REQUIRED TO ACHIEVE FINAL GRADES.
- 6. USE SAND PLATES AND CHAIRS TO SUPPORT REINFORCING.
- 7. LAP REINFORCEING BAR A MIN. OF 30 BAR DIAMETERS AT ALL SPLICES.
- 8. PROVIDE #4 DOWELS AT 12" O.C. AT ALL SIDEWALKS TO BUILDING ENTRANECES INTERFACES.
- SLABS ON GRADES SHALL BE A MINIMUM OF 5 INCHES THICK REINFORECED SLAB. REINFORCING SHALL BE #3 AT 18" O.C. EACH WAY.
- 10. PROVIDE 10 MIL VAPOR BARRIER UNDER BUILDING SLAB.
- COORDINATE ALL WORK (MECHANICAL, ELECTRICAL, SLEEVES, CONDUIT, CAST-IN-PLACE ITEMS, ETC.) PRIOR TO PLACING CONCRETE.

STEEL NOTES

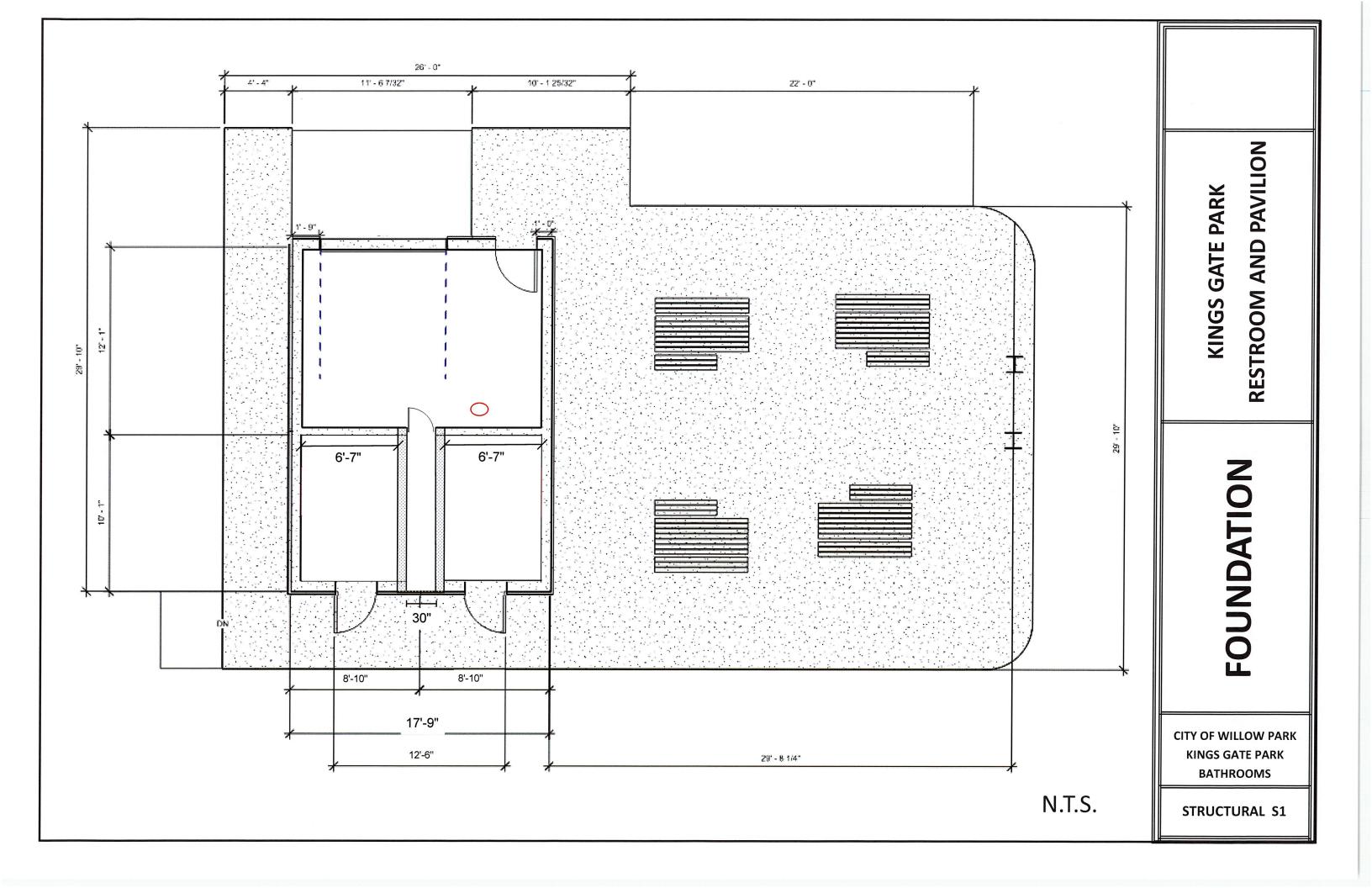
- STRUCTURAL STEEL: ALL WIDE FLANGE SECTIONS SHALL BE ASTM A572 GRADE 50. ALL ANGLES, CHANNELS, AND PLATES SHALL BE ASTM A36. ALL STRUCTURAL STEEL PIPE SHALL BE ASTM A 53 GRADE B. ALL TUBE STEEL SECTIONS SHALL BE ASTM A500 GRADE B. STRUCTURAL STEEL SECTIONS SHALL BE DESIGNED, DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC "MANUAL OF STEEL CONSTRUCTION", NINTH EDITION. ALL STRUCTURAL STEEL SHAL BE PAINTED WITH A SHOP PRIME COAT AND FIELD RETOUCHED WHERE THE SHOP COAT HAS BEEN DAMAGED DUE TO PLACING, HANDLING, AND WELDING.
- CONNECTIONS SHALL BE DESIGNED AND DETAILED FOR 1/2 OF THE ALLOWABLE UNIFORM LOAD OF AISC TABLES FOR THE SPAN OF A BEAM.
- 3. ALL STEEL BEAMS SHALL BE FABRICATED WITH NATURAL CAMBER UP.
- ALL BOLTED CONNECTIONS FOR STRUCTURAL STEE SHAL USE 3/4" DIAMETER ASTM A325 HIGH STRENGTH BOLTS EXCEPT FOR JOIST BEARING AND BRIDGING, WHICH SHALL BE 5/8" DIAMETER ASTM HIGH STRENGTH BOLTS. CONNECTIONS SHALL BE BEARING TYPE WITH THREADS. NOT ALLOWED IN SHEAR PLANE.
- . ALL ANCHOR BOLTS SHALL BE 3/4" DIA. ASTM A 307 UNFINISHED WITH SUITABLE NUTS AND WASHERS, UNLESS OTHERWISE NOTED.
- 6. ALL WELDS SHALL USE E70XX LOW HYDROGEN ELECTRODES AND SHALL BE MADE IN ACCORDANCE WITH AISC AND AWS.

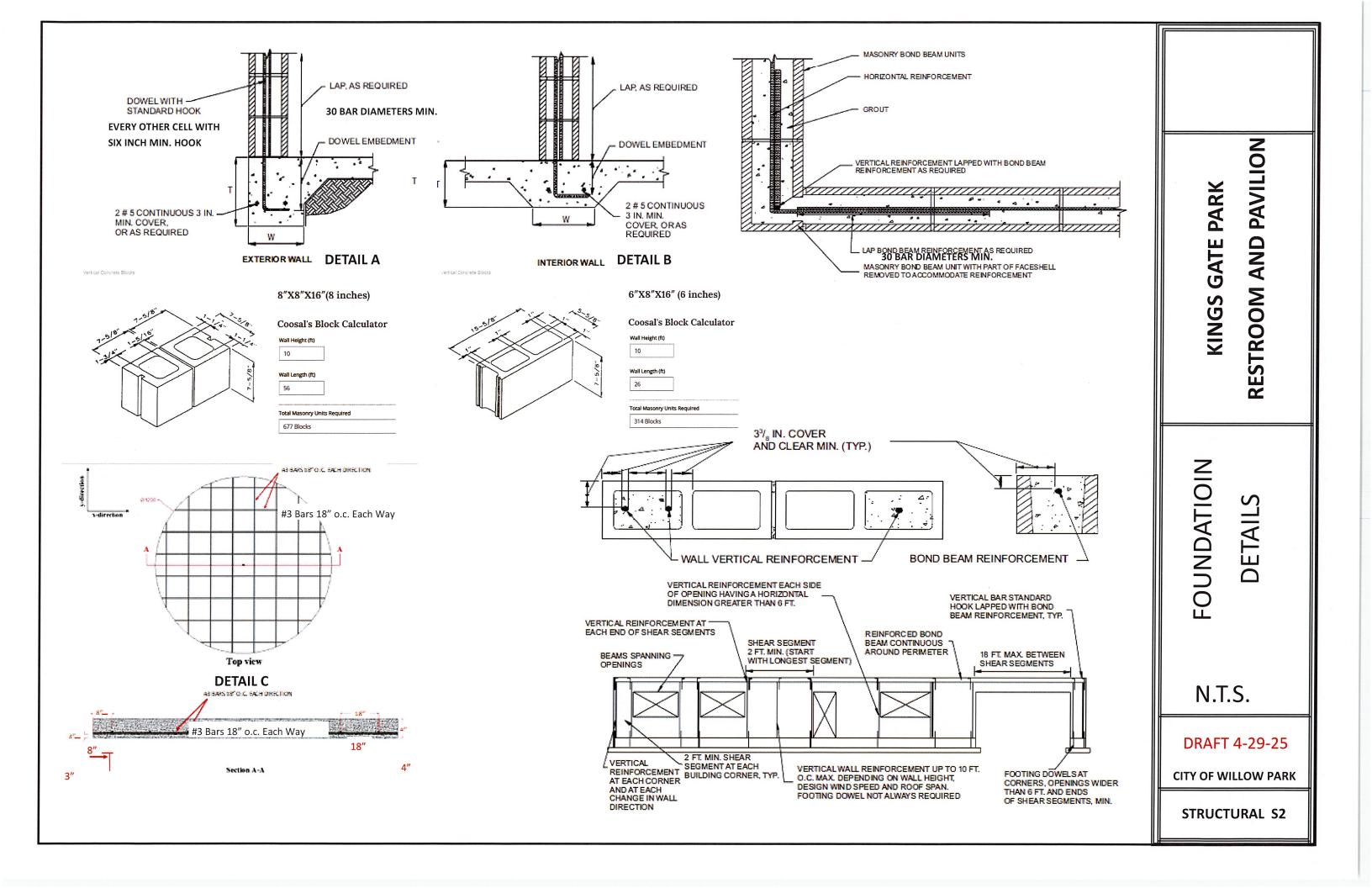
KINGS GATE PARK RESTROOM AND PAVILION

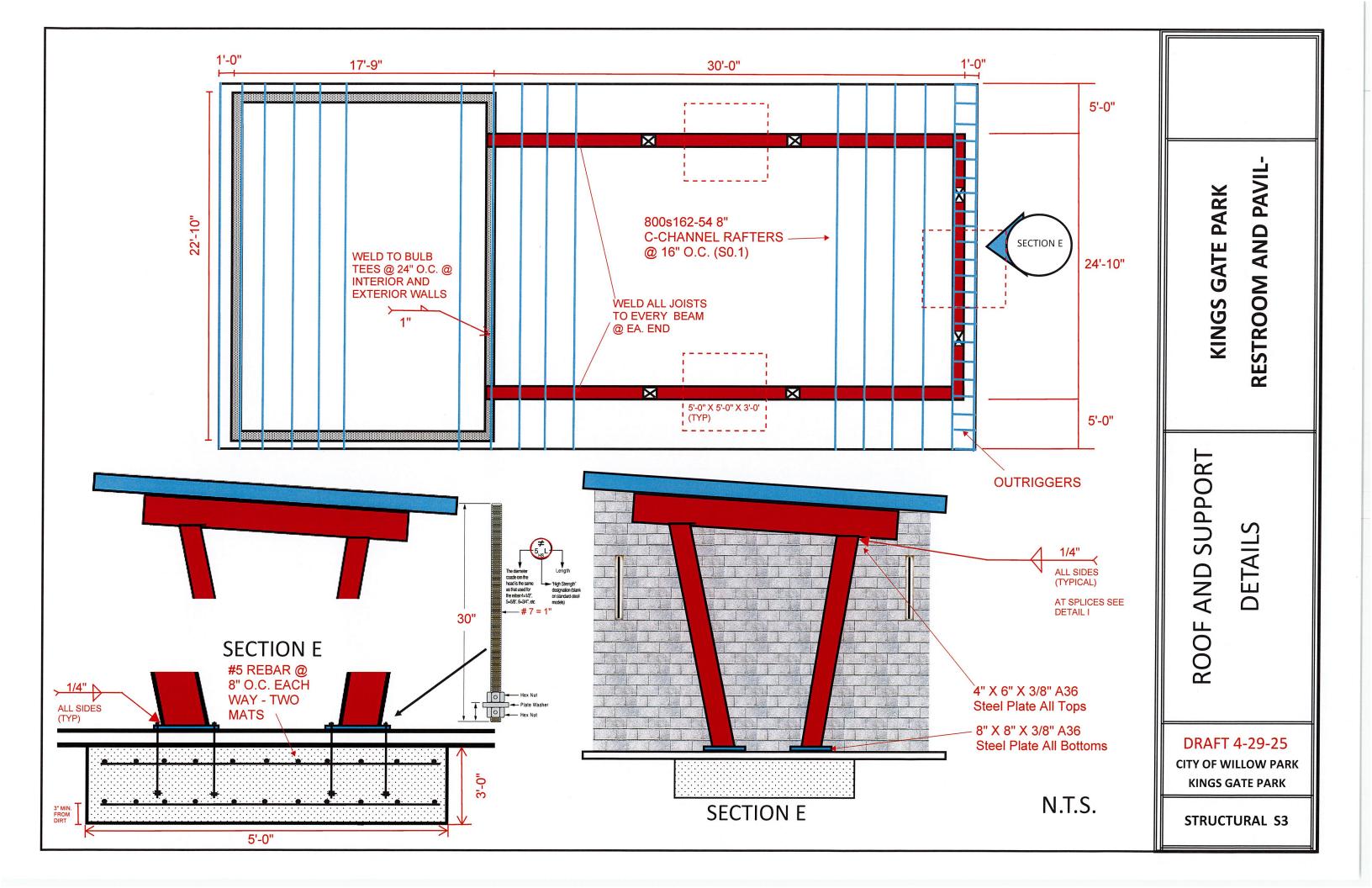
GENERAL NOTES

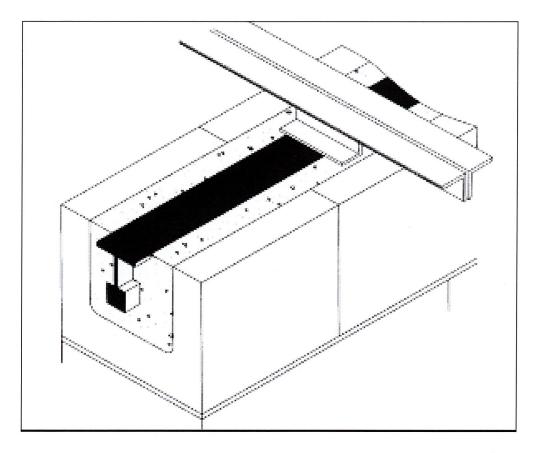
CITY OF WILLOW PARK
KINGS GATE PARK

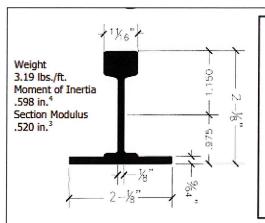
SO











#218 Bulb Tees

High Strength Structural Subpurlins & Bond Beams

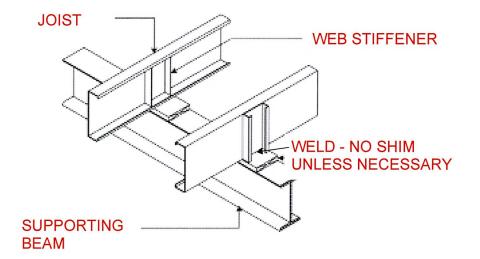
Bulb Tees are high strength, lightweight, steel sections for use as structural subpurlins in specialty roof decks such as Tectum Wood Fiber Decks, Poured Gypsum Decks and Span-Rock Gypsum Plank Decks. Bulb Tees also make excellent bond beams for anchoring structural members, providing a continuous steel strip for attachment and reinforcement.

Total Safe Uniform Load - psf

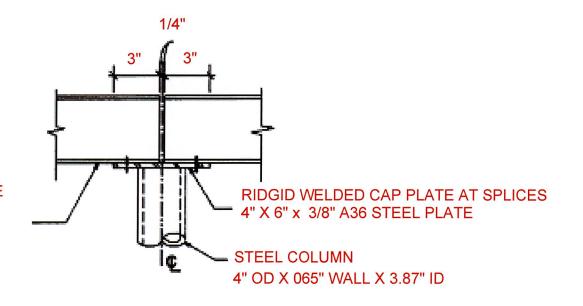
Span										
	7'0"	7'6"	810"	8'6"	90″	9'6"	10'0"	10'6"	11'0"	Max. Eave Overhang
#218	119	103	91	80	72	64	58	52	48	4'10"

Note: Above loads are based on a three span condition, 32 5/8" tee spacing. Design stress as given in the "Specification and Design Properties" table below, are for the bulb tee acting alone. That is, they ignore any contribution to flexural strength from the deck material. Capacities may be adjusted for bulb tee spacing other than 32 5/8" as follows: for 24 5/8" spacing, multiply allowable total safe uniform load by a factor of 1.32; for 42 5/8" spacing, multiply by .77; for 48 5/8" spacing, multiply by .67. Capacities may be adjusted for different support configurations as follows; for two span condition, multiply allowable total safe uniform load by 1.13, for a single span condition, multiply by .64. Maximum eave overhang has been calculated based on a uniform load of 45 psf only. If blocking, gutters, angles, soffits, etc., are to be suspended from the end of an overhang, the effect of these additional superimposed loads should be calculated separately. All total safe uniform loads given above are calculated on the basis of allowable flexural stress only, and ignore deflection. The designer/specifier is urged to check the theoretical deflection of any section, under the loads, and support conditions which are expected to be encountered.

DETAIL F



SIMPLE BEAM SPAN



DETAIL G

DETAIL I

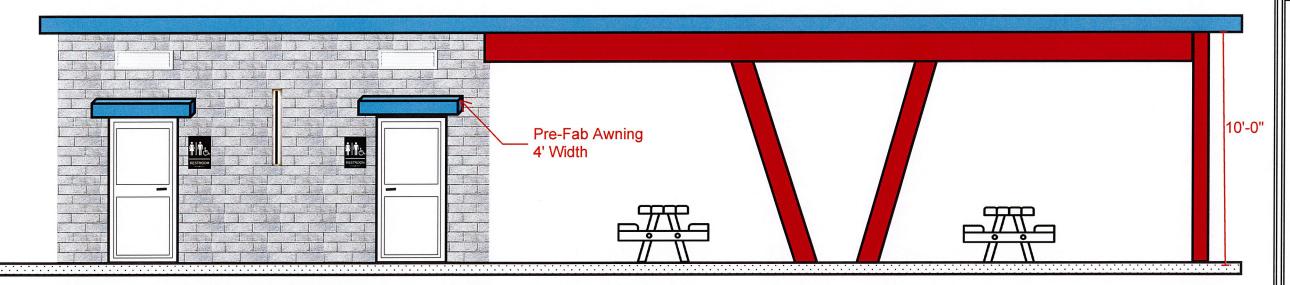
KINGS GATE PARK RESTROOM AND PAVIL-

DETAILS

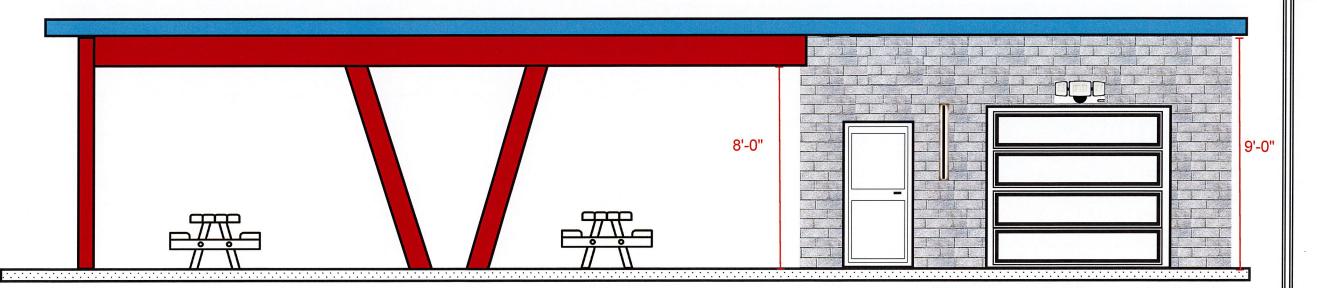
DRAFT 4-29-25 CITY OF WILLOW PARK

KINGS GATE PARK

STRUCTURAL S4



SOUTH



NORTH



N.T.S.

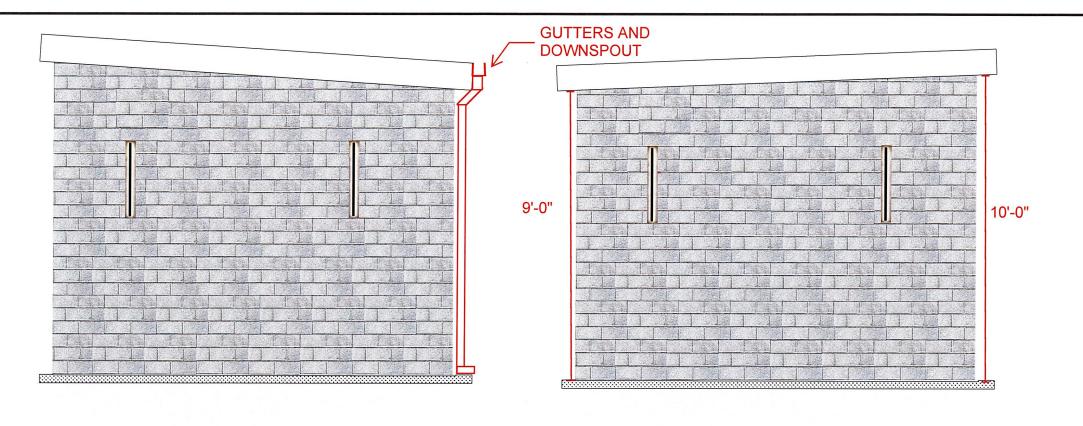
KINGS GATE PARK
RESTROOM AND PAVILION

NORTH AND SOUTH ELEVATIONS

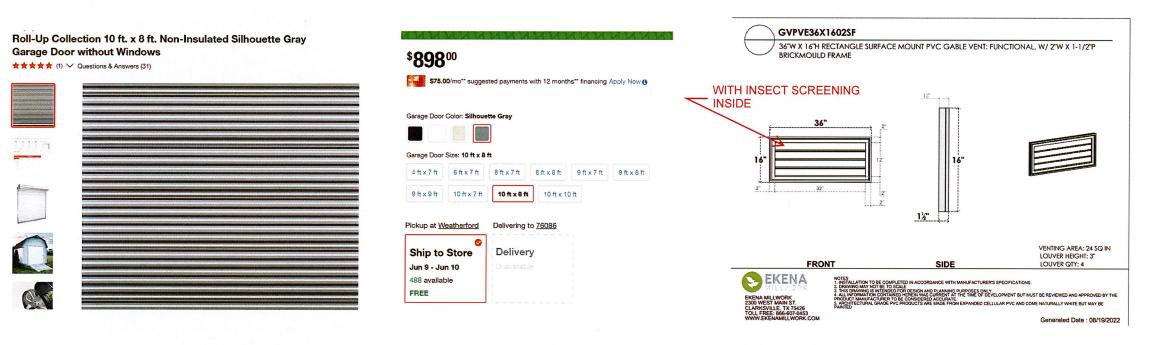
DRAFT 4-29-25

CITY OF WILLOW PARK
KINGS GATE PARK

STRUCTURAL S5







DETAIL J

DETAIL K

WEST ELEVATION

N.T.S.

KINGS GATE PARK RESTROOM AND PAVILION

DRAFT 4-29-25

CITY OF WILLOW PARK
KINGS GATE PARK

STRUCTURAL S6