

NEW DETAIL 5/30/15

GENERAL STRUCTURAL NOTES

BUILDING CODE:

2012 EDITION OF THE UNIFORM BUILDING CODE, WITH CITY OF SCOTTSDALE AMENDMENTS.

LOADS:

LATERAL:

WIND LOAD = 120 MPH WIND SPEED, EXPOSURE C.

FOUNDATIONS:

COMPACT SUB GRADE AND BASE MATERIAL TO 95% OF THE ASTM D698 MAXIMUM DRY DENSITY.

CONCRETE:

MINIMUM 28 DAY STRENGTH 3,000 PSI

ALL CAST-IN-PLACE CONCRETE CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE ACI. FOR CONCRETE WITHOUT PLASTICIZER, MAXIMUM SLUMP 4 1/2" AT POINT OF PLACEMENT U.N.O. IF PLASTICIZER IS USED, A HIGHER FINAL SLUMP MAY BE ALLOWED UPON STRUCTURAL ENGINEER'S APPROVAL.

STRUCTURAL STEEL:

ALL CONSTRUCTION PER LATEST AISC STEEL CONSTRUCTION HANDBOOK. ALL STRUCTURAL STEEL SHALL BE ASTM A-36 EXCEPT AS FOLLOWS:

PIPE STEEL: ASTM A-53 GRADE B OR A-501

TUBE STEEL: ASTM A-500 GRADE B (Fy=46 KSI)

BOLTS EMBEDDED IN CONCRETE: ASTM A-307.

ALL FASTNERS, NUTS, BOLTS, SCREWS AND WASHERS SHALL BE BLACK ANODIZED AND TAMPER RESISTANT.

UNLESS NOTED OTHERWISE, ALL WELDS PER LATEST EDITION OF THE AWS STANDARDS. ALL WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES. CERTIFICATES SHALL BE THOSE ISSUED BY AN ACCEPTED TESTING AGENCY. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS PER AWS D1.1 UNLESS NOTED OTHERWISE. THESE DRAWINGS DO NOT DISTINGUISH BETWEEN SHOP AND FIELD WELDS; THE CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW.

SPECIAL INSPECTIONS:

POST INSTALLED ANCHORS

SHOP DRAWINGS:

SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS.

THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON CONTRACTOR'S REVIEW.

MANUFACTURER OR FABRICATOR SHALL CLOUD ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DOCUMENTS. ANY OF THE AFOREMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY.

THE ENGINEER HAS THE RIGHT TO APPROVE OR DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANYTIME BEFORE OR AFTER SHOP DRAWING REVIEW.

THE SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER OR ARCHITECT SHALL NOT BE CONSIDERED CHANGES TO CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ITEMS ARE CONSTRUCTED TO CONTRACT DOCUMENTS. THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY.

REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR.

SUPPLEMENTARY NOTES:

1. CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.
2. CONTRACTOR SHALL ESTABLISH AND VERIFY IN FIELD ALL EXISTING CONDITIONS AFFECTING NEW CONSTRUCTION, CONTACT CITY INSPECTOR IMMEDIATELY IF CONDITIONS ARE NOT AS DEPICTED IN DRAWINGS.
3. SHELTER SLAB SHALL BE CLASS "B" CONCRETE PER MAG SECTION 725.

SPECIAL REQUIREMENTS

1. AN ARTIST-DESIGNED SHELTER MAY BE SUBSTITUTED FOR STANDARD SHELTER BY APPROVAL OF THE CITY OF SCOTTSDALE TRANSIT SECTION. HOWEVER, IT MUST INCORPORATE ALL THE FUNCTIONAL ELEMENTS INCLUDED IN THE STANDARD SHELTER. SEE TRANSIT & DESIGN REVIEW STAFF FOR DETAILS.

2. STANDARD BUS STOP SIGN LOCATION, NEW OR RELOCATED SIGNS SHALL BE APPROVED BY THE TRAFFIC/TRANSIT STAFF.

3. ADDITIONAL REQUIREMENTS MAY INCLUDE:

A) LEANING RAIL.

B) LED REAL TIME BUS INFORMATION SIGN.

C) BUS ROUTE/TRAFFIC INFORMATION KIOSKS.

D) PEDESTRIAN RAILING AROUND THE BACK OF SHELTER ADJACENT TO STEEP SLOPES OR DROP-OFFS.

4. CITY OF SCOTTSDALE TRANSIT BUS SHELTERS SHALL BE PROVIDED WITH A GROUNDING SYSTEM THAT MAY CONSIST OF ONE OF THE FOLLOWING METHODS:

A) 25 FEET OF #4 STANDARD COPPER (UNINSULATED) INSTALLED IN THE BASE OF ONE OF THE UPRIGHT FOUNDATIONS. THE GROUNDING CONDUCTOR WILL EXTEND OUT OF THE POURED CONCRETE FOUNDATION WITH A LENGTH NOT TO EXCEED 3 FEET. THE GROUNDING CONDUCTOR WILL BE WRAPPED IN A CLOCKWISE ROTATION, ONE WRAP, AROUND ON THE THE UPRIGHT ANCHOR BOLTS. A FLAT FENDER WASHER WILL BE INSTALLED ON TOP OF THE CONDUCTOR WITH THE ANCHOR BOLT NUT ON TOP OF THE FLAT WASHER AND SECURED.

B) A SECOND METHOD WILL CONSIST OF A 5/8"x 8'-0" GROUND ROD DRIVEN IN THE ELECTRICAL PULLBOX ADJACENT TO THE BUS SHELTER. A GROUND ROD TERMINAL NUT (ACORN NUT) WILL BE INSTALLED ON TOP OF THE GROUND ROD SECURING A #8 AWG BARE SOLID COPPER WIRE. THE GROUND WIRE WILL BE INSTALLED FROM THE JUNCTION BOX, UNBROKEN AND UNSPLICED, TO THE BUS SHELTER UPRIGHT WHERE IT WILL BE TERMINATED. A SET-SCREW TERMINAL LUG WILL BE FASTENED TO THE STRUCTURE UPRIGHT UNDER THE BOTTOM KICKPANEL. THE AREA UNDER THE TERMINAL LUG WILL BE CLEANED OF ALL RUST, SCALE AND PAINT. THE #8 BARE BOND CONDUCTOR WILL BE TERMINATED IN THE SET-SCREW TERMINAL LUG.

BOTH GROUNDING METHODS WILL BE DONE IN ACCORDANCE WITH ARTICLE 250 OF NATIONAL ELECTRICAL CODE.

DETAIL NO.

2263-7

**City of Scottsdale
Standard Details**

APPROVED BY:

**Scottsdale Standards &
Specifications Committee**

BUS SHELTER

DETAIL NO.

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