

I. GENERAL

- A. GENERAL REFERENCE: ALL WORK MUST CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2012 EDITION, AND OSHA, LATEST EDITION.
B. THE GENERAL STRUCTURAL NOTES ARE AN INSTRUMENT OF THE STRUCTURAL DRAWINGS AND SHALL BE THOROUGHLY REVIEWED BY THE GENERAL CONTRACTOR AND ALL OTHER TRADES ASSOCIATED WITH THE PROJECT.
C. THE OWNER SHALL CONTRACT A QUALIFIED THIRD-PARTY INSPECTION AGENCY APPROVED BY THE AUTHORITY HAVING JURISDICTION. THE INSPECTION AGENCY SHALL PREPARE A QUALITY ASSURANCE AND TESTING PROGRAM IN ACCORDANCE WITH CHAPTER 17 OF THE IBC, LATEST EDITION.
D. SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WITH INSPECTION FREQUENCIES PER IBC 2012, TABLE 1705.3 W/ LOCAL AMENDMENTS.
E. DESIGN LOADS: 1. TOTAL LOAD (DEAD LOAD+LIVE LOAD+IMPACT LOAD) - 3000 PSF
F. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION.
G. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND ANY EXISTING STRUCTURES PRIOR TO START OF CONSTRUCTION.
H. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOFS.
I. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.
J. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.
K. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF CONTRACTOR CHOOSES AN OPTION AND CONTRACTOR SHALL COORDINATE ALL DETAILS.
L. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
M. TYPICAL DETAILS ARE NOT CUT ON DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.
N. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.
O. THE CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS PRIOR TO ORDERING MATERIALS AND STARTING CONSTRUCTION.
P. CALCULATIONS FOR DESIGN/BUILD ITEMS MUST BE SUBMITTED FOR REVIEW OF ARCHITECT/STRUCTURAL ENGINEER AND SHALL BEAR THE SEAL OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ARIZONA.
Q. ALL CONSTRUCTION BRACING AND SHORING MUST BE DESIGNED BY THE CONTRACTOR.
R. STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR ANY ASPECT OF THE GEOTECHNICAL DESIGN.
S. INSPECTIONS REQUIRED FOR PERMITTING AS MANDATED BY IBC SECTION 109 AND NON-SPECIAL INSPECTIONS MANDATED BY THE MUNICIPALITY, COUNTY, OR AUTHORITY HAVING JURISDICTION WHICH ARE ALSO REQUIRED FOR BUILDING PERMITTING SHALL BE COORDINATED BY THE GENERAL CONTRACTOR.
T. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW PRIOR TO CONSTRUCTION.

Table with 3 columns: YES, NO, N/A and 15 rows of checkboxes for design load and inspection items.

II. SOILS AND EARTHWORK

- A. FILL MATERIAL: 1. ANY IMPORTED ENGINEERING FILLS SHALL HAVE THE FOLLOWING GRADATION BY WEIGHT: 100% PASSING 6" SIEVE
B. FINISH GRADING SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO SLOPE GRADE (MINIMUM OF 5%) AWAY FROM FOUNDATIONS.
C. DRIP IRRIGATION SYSTEMS SHALL NOT BE LOCATED NEAR FOUNDATIONS.
D. EARTHWORK AND EXCAVATIONS SHALL BE PERFORMED, TESTED, AND EVALUATED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
E. BACKFILL AGAINST FOOTINGS, EXTERIOR WALLS, AND UTILITY AND/OR SPRINKLER LINE TRENCHES SHALL BE COMPACTED PER THE SOILS REPORT AND SHALL BE FREE OF CONSTRUCTION DEBRIS AND OTHER DELETERIOUS MATERIALS.
F. CONTRACTOR SHALL PROVIDE FOR PROPER DEWATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER, SEEPAGE, ETC.

III. CONCRETE

- A. ALL CONCRETE SHALL BE READY MIXED CONFORMING TO ASTM C94. IN ADDITION, ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE PROVISIONS OF THE FOLLOWING LATEST ACI STANDARDS:
B. CONCRETE MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:
C. CONCRETE MIXTURES: FOOTINGS
D. CONCRETE MIXTURES: SLABS ON GRADE
E. CONCRETE MIXTURES: BEAMS, WALLS, AND COLUMNS
F. ALL CONCRETE SHALL OBTAIN A 4000 PSI [27.6 MPa] MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS.
G. CONCRETE PLACEMENT:

III. CONCRETE (CONT.)

- H. MINIMUM CONCRETE REINFORCING OVER BARS SHALL BE AS FOLLOWS:
I. CONCRETE FOOTINGS AND PADS MAY BE POURED AGAINST NEAT EXCAVATIONS.
J. CORNERS OF COLUMNS AND BEAMS EXPOSED TO VIEW SHALL BE DETAILED WITH 3/4" [20mm] BY 45° CHAMFERS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
K. ALL REINFORCING BARS, ANCHOR BOLTS AND CONCRETE INSERTS SHALL BE SECURED IN POSITION AND LOCATED PER STRUCTURAL DRAWINGS PRIOR TO PLACING CONCRETE.
L. CAST IN PLACE ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36 OR ASTM A307, GRADE A, U.N.O.
M. SHEAR STUDS FOR EMBEDDED ITEMS SHALL CONFORM TO ASTM A108 AND SHALL BE WELDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
N. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING CONCRETE.
O. NO CONSTRUCTION JOINTS (OTHER THAN THOSE SHOWN ON DRAWINGS) SHALL BE INSTALLED WITHOUT APPROVAL OF THE ENGINEER.
P. CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER 24 HRS IN ADVANCE TO OBSERVE COMPLETED FOOTING EXCAVATION AND ALL REINFORCING BAR PLACEMENTS BEFORE ANY CONCRETE IS PLACED.
Q. NO WELDING OF STIRRUPS, TIES, INSERTS, OR OTHER SIMILAR ELEMENTS TO LONGITUDINAL REINFORCEMENT IS PERMITTED UNLESS NOTED OTHERWISE ON THESE DRAWINGS PER ACI-08, CHAPTER 21.1.7.2.
R. REINFORCING STEEL:
3. ALL REINFORCING IN CONCRETE SHALL BE CONTINUOUS OR LAPPED IN ACCORDANCE WITH THE AREMA MANUAL FOR RAILWAY ENGINEERING.

Table: SPICE LENGTH (STAGGERED) with columns for BAR SIZE, TOP BARS, OTHER BARS and rows for #6 and #8.

IV. CONCRETE REPAIR PROCEDURE

- A. REMOVE LOOSE OR DELAMINATED CONCRETE ABOVE REINFORCING STEEL.
B. CONCRETE SURFACES TO RECEIVE REPAIR MATERIALS SHOULD BE SATURATED SURFACE-DRY (SSD).
C. APPLY BONDING AGENT.
D. PLACE REPAIR MATERIAL INTO THE PREPARED CAVITY. SCREED, FLOAT, TROWEL, AND CURE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
E. USE "EUCCO RE-COVER" MORTAR OR APPROVED EQUAL.

V. EPOXY SET BOLTS OR DOWELS

- A. EPOXY SET BOLTS OR DOWELS SHALL BE A THREADED ROD OR REINFORCING STEEL INSTALLED WITH THE "SET-XP" ADHESIVE BY SIMPSON PER ICC ESR-2508.
B. EXPANSION BOLTS SHALL BE "KWIK BOLT TZ" BY HILTI INSTALLED PER ICC ESR-1917.
C. THE CONTRACTOR MAY NOT USE SUBSTITUTES FOR EPOXY SET ANCHORS WITHOUT WRITTEN PRIOR APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
D. FOR MINIMUM EMBEDMENT LENGTH SEE DETAILS. INSTALL ALL BOLTS AS OUTLINED IN MANUFACTURER'S SPECIFICATIONS, UTILIZING PROPER SIZE AND TYPE OF DRILL, CLEANING HOLE, DRIVING AND TIGHTENING BOLT.
E. SPECIAL INSPECTION OF ALL EPOXY SET ANCHORS IS REQUIRED.
F. LOCATION(S) OF EXISTING REINFORCEMENT SHALL BE VERIFIED AND AVOIDED PRIOR TO DRILLING FOR EMBEDMENT, U.N.O.

VI. HANDRAIL

- A. HANDRAIL SHALL BE 1-1/4 INCH DIAMETER STANDARD BLACK PIPE.
B. HANDRAIL SHALL BE PRIMED WITH 2 MILS DRY-FILM THICKNESS (DFT) SHOP STANDARD APPLIED AFTER CLEANING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (POWER BRUSH CLEAN MINIMUM).
C. TOP COAT SHALL BE "OSHA YELLOW" WITH 3 MILS DRY-FILM THICKNESS SEMI-GLOSS ALKYD ENAMEL.

ABBREVIATIONS

Table mapping abbreviations (B.O.C., C.J., CLR., CONT., EL., ELEV., O.C., OIC, T.O.C., TYP.) to their full descriptions.

LEGEND

Table with columns SYMBOL and DESCRIPTION, showing symbols for EARTH and BALLAST.

KEYING SYMBOLS

Table with columns SYMBOL, SECTION LETTER, SHEET NUMBER, DETAIL NUMBER, KEYNOTE NUMBER and DESCRIPTION, showing symbols for GENERAL BUILDING SECTION, DETAIL CUT, and KEYNOTE.

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Revisions

Table with columns Description and Date, listing revisions for construction and comments.

Drawn: NCR Checked: JDM Issue Date: 2 MAR 15

Drawing Title: GENERAL STRUCTURAL NOTES

Sheet Number: SK-000 M3PN 150004



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Revisions

Description	Date
APPR. FOR CONST.	12 FEB 15
UP.P.R. COMMENTS	2 MAR 15

Drawn: NCR
Checked: NUB
Issue Date: 2 MAR 15

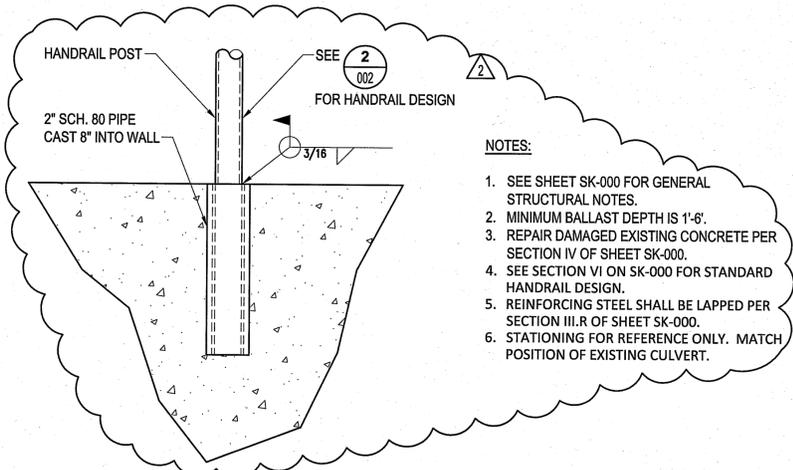
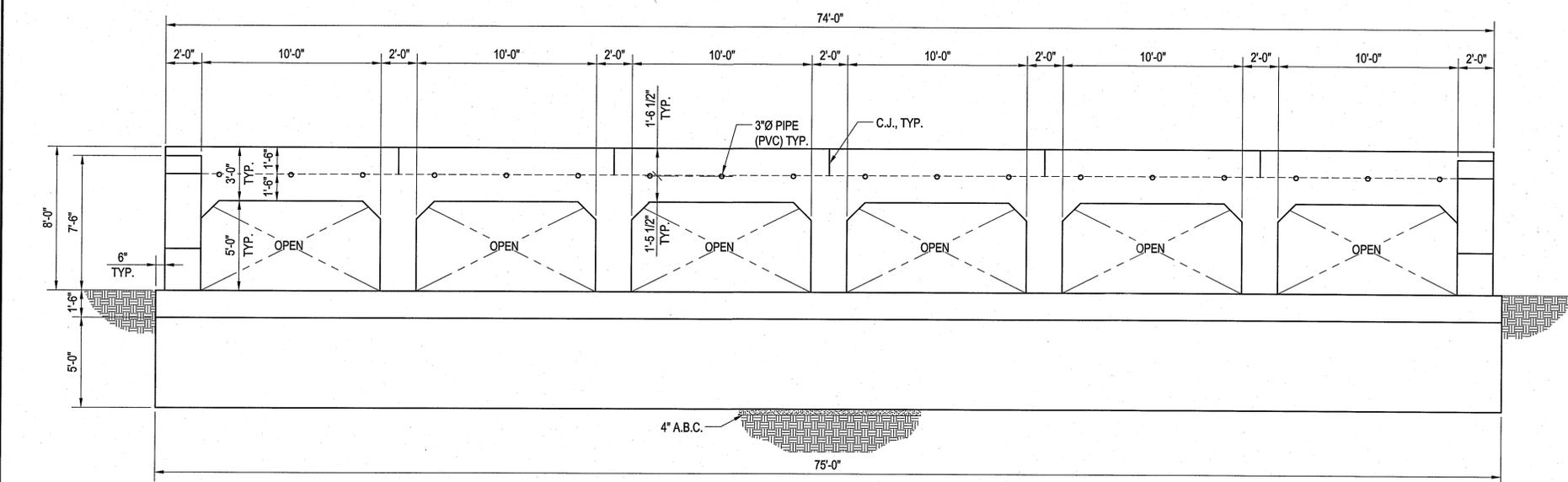
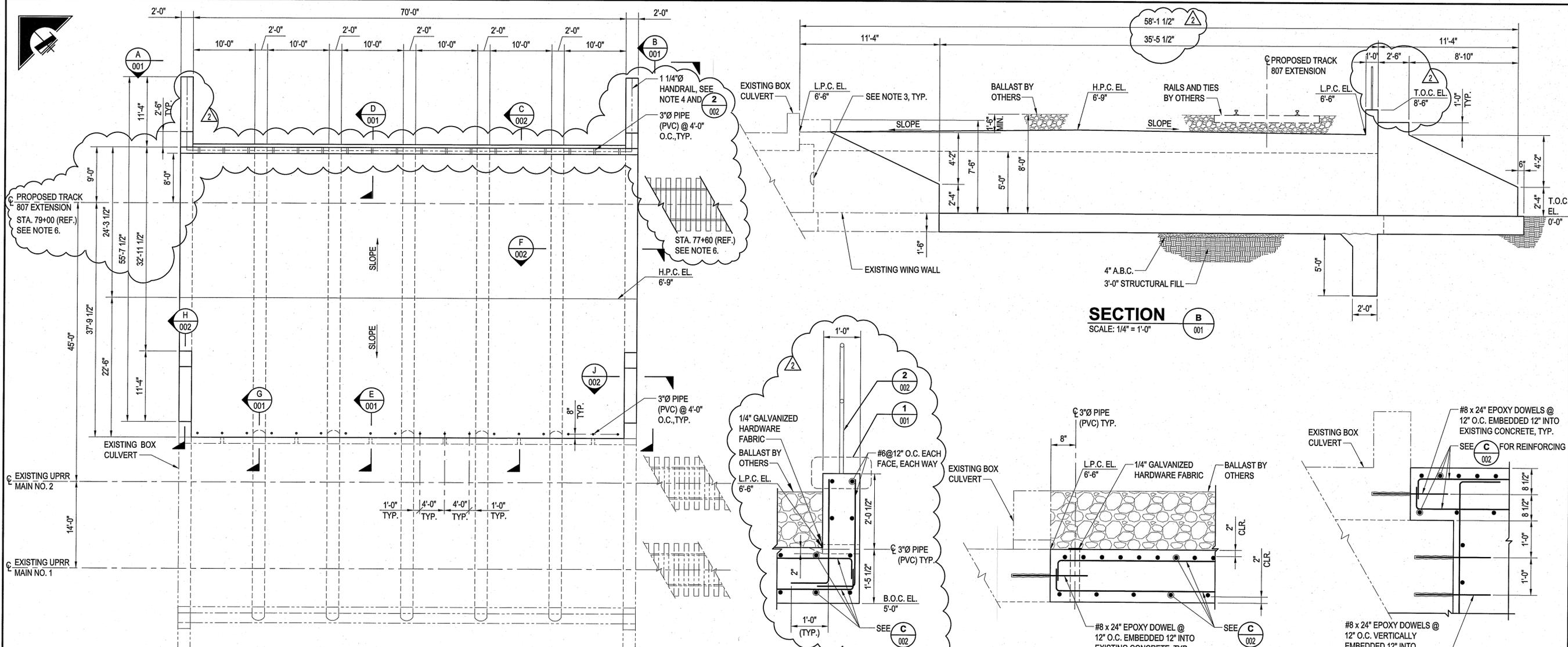
Drawing Title

**PLAN, DETAILS
AND SECTIONS**

Sheet Number

SK-001

M3PN 150004



- NOTES:**
- SEE SHEET SK-000 FOR GENERAL STRUCTURAL NOTES.
 - MINIMUM BALLAST DEPTH IS 1'-6".
 - REPAIR DAMAGED EXISTING CONCRETE PER SECTION IV OF SHEET SK-000.
 - SEE SECTION VI ON SK-000 FOR STANDARD HANDRAIL DESIGN.
 - REINFORCING STEEL SHALL BE LAPPED PER SECTION III.R OF SHEET SK-000.
 - STATIONING FOR REFERENCE ONLY. MATCH POSITION OF EXISTING CULVERT.

**APPROVED
FOR CONSTRUCTION**

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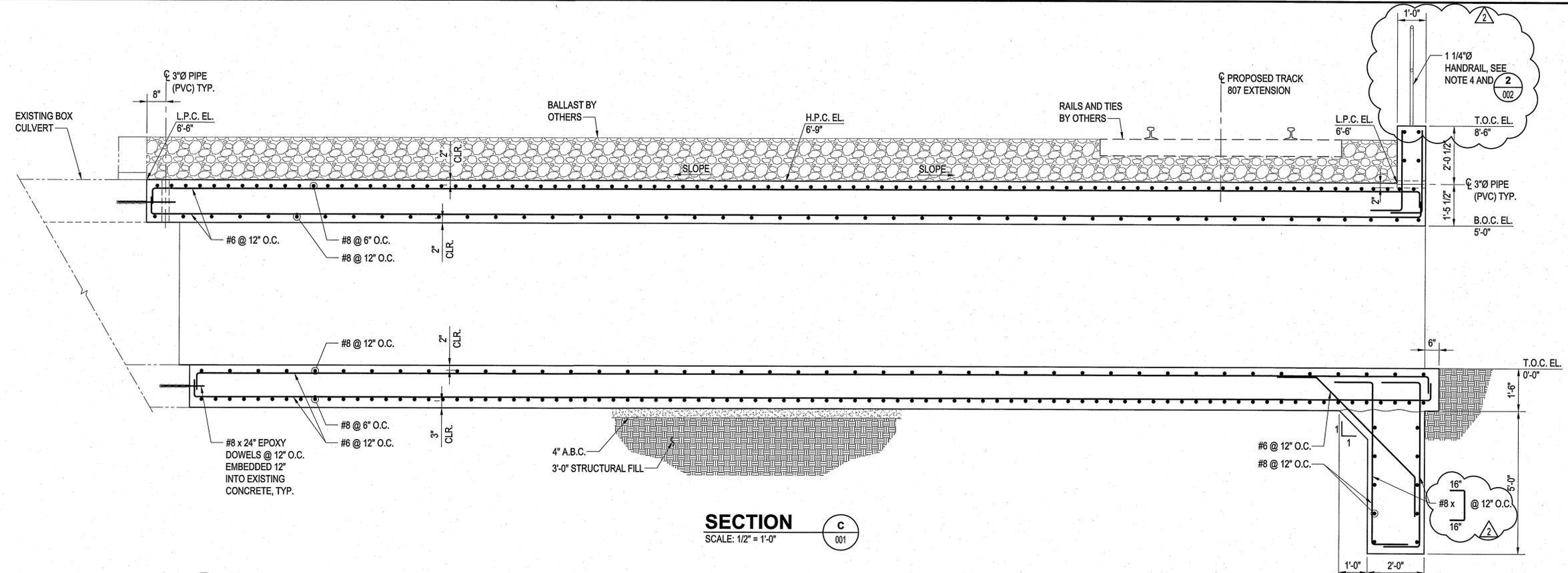
Revisions

Description	Date
APPR. FOR CONST.	12 FEB 15
U.P.R.R. COMMENTS	2 MAR 15

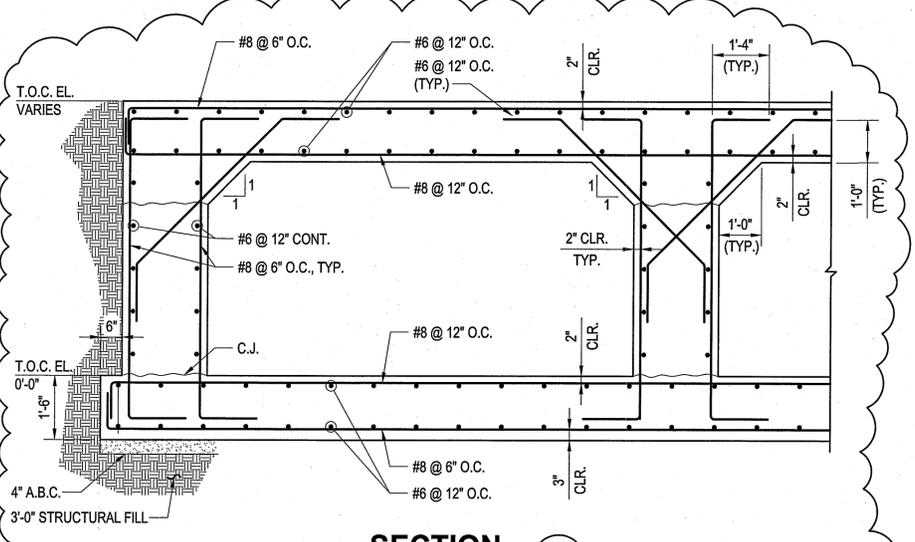
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Checked: JDM
Issue Date: 2 MAR 15

SECTIONS

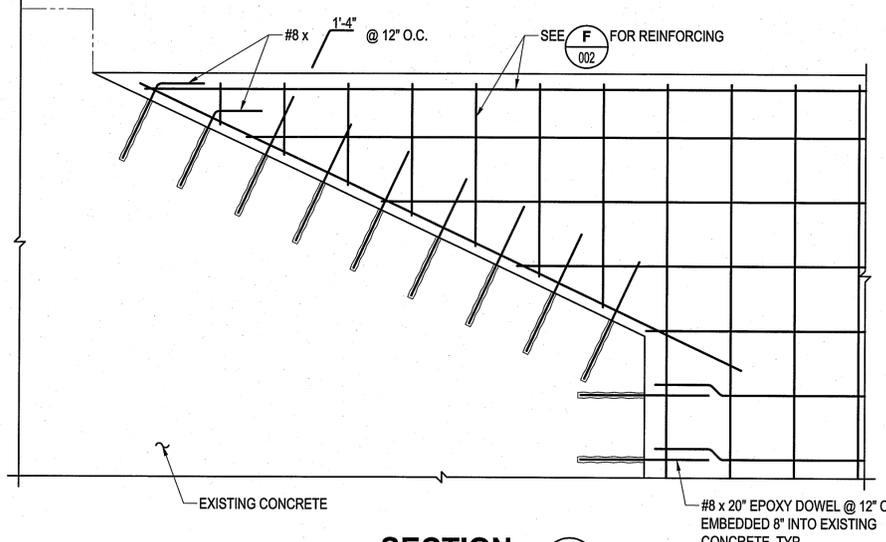
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SK-002
M3PN 150004



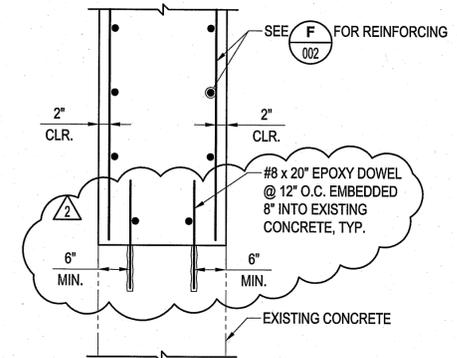
SECTION C
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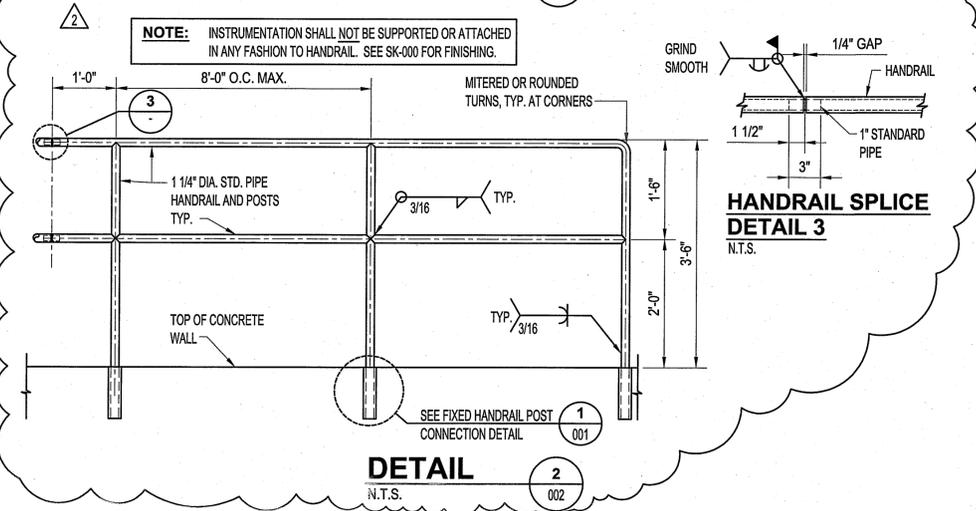
SECTION F
SCALE: 1/2" = 1'-0"



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



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



DETAIL 3
N.T.S.

NOTE: INSTRUMENTATION SHALL NOT BE SUPPORTED OR ATTACHED IN ANY FASHION TO HANDRAIL. SEE SK-000 FOR FINISHING.

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 - SEE SECTION VI ON SK-000 FOR STANDARD HANDRAIL DESIGN.
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APPROVED FOR CONSTRUCTION

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