

Architect
Bohlin Cywinski Jackson
611 William Penn Place
Suite 1300
Pittsburgh, PA 15219
v. 412.765.3890 f. 412.765.2209

Civil Engineer
Langan Engineering,
2400 Arnsys Drive, Suite 403
Canonsburg, PA 15317-9540

Landscape Architects
OBJ Landscape Architecture
3502 Scotts Lane, Suite 1101
Philadelphia, PA 19129

Structural Engineer
KPFF Consulting Engineers
1630 Des Peres Rd, Suite 100
St. Louis, MO 63131

MEP Engineer
Affiliated Engineers, Inc.
10 S. La Salle St, Suite 2700
Chicago, IL 60603

AV/IT/Security Consultant
BrightTree Studios,
524 Alpha Drive
Pittsburgh, PA 15238

Lighting Design Consultant
Francis Krahe & Associates, Inc.
304 South Broadway, Suite 300
Los Angeles, CA 90013

Code Consultant
Holmes Keogh Associates, LLC
526 East 20th St, Unit 4D
New York, NY 10009

Acoustics Consultant
Babich Acoustics
1102 S Braddock Ave, Suite 4
Pittsburgh, PA 15218

Revisions		
No.	Description	Date
2	BULLETIN 004	04/14/2022

Bohlin Cywinski Jackson
Architecture Planning Interior Design
Wilkes-Barre Pittsburgh Philadelphia Seattle San Francisco
611 William Penn Place
Suite 1300
Pittsburgh
Pennsylvania 15219
v. 412.765.3890 f. 412.765.2209

© 2021 Bohlin Cywinski Jackson

Carnegie Mellon University
Highmark Center for Health, Wellness
and Athletics
100 Tech St, Pittsburgh, PA 15213

CONFORMED SET

ELECTRICAL POWER
SITE PLAN

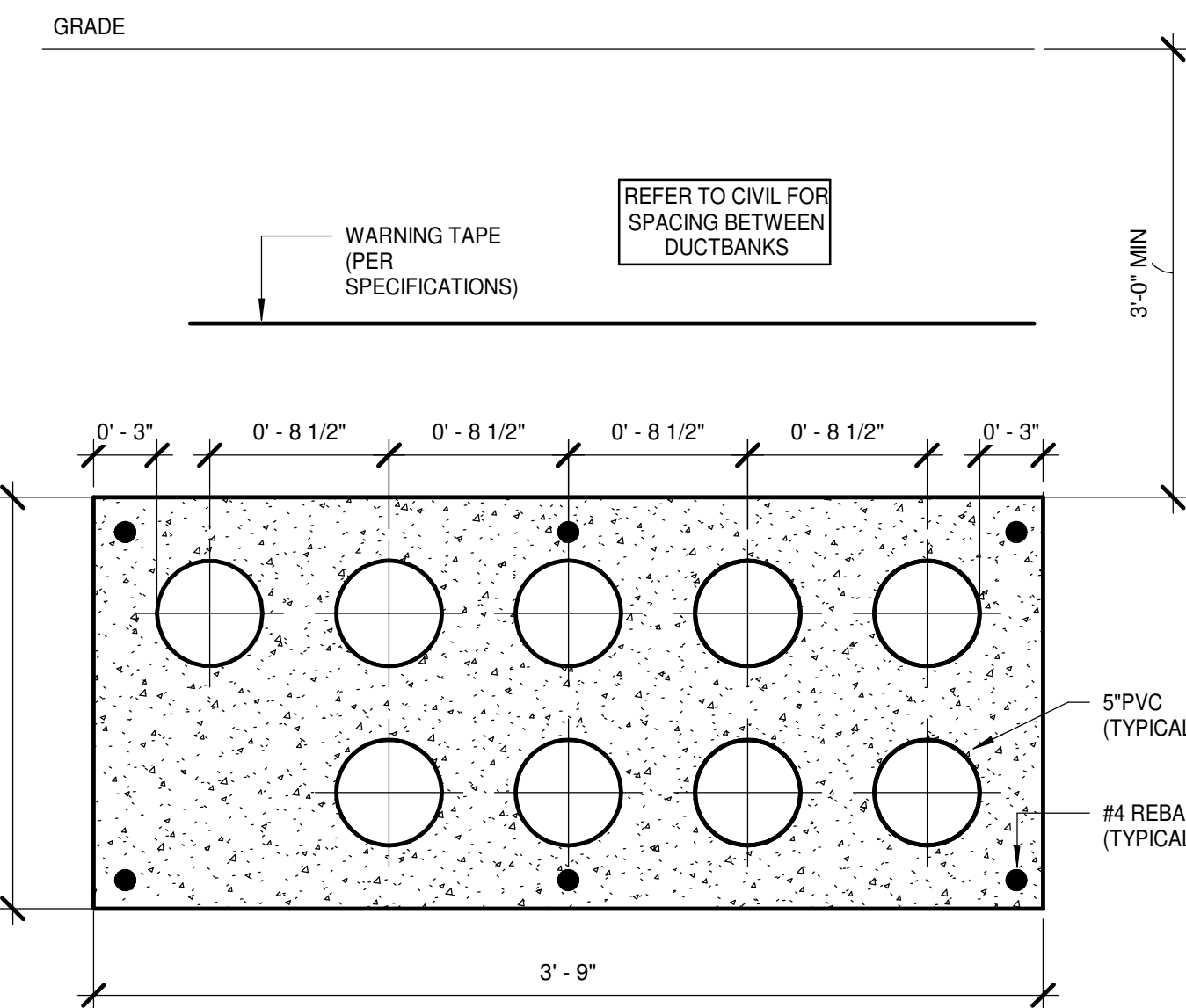
Scale	As indicated
Drawn By	SC
Checked By	FM
Date	JANUARY 28, 2022
BCJ Project Number	20201

E0.02

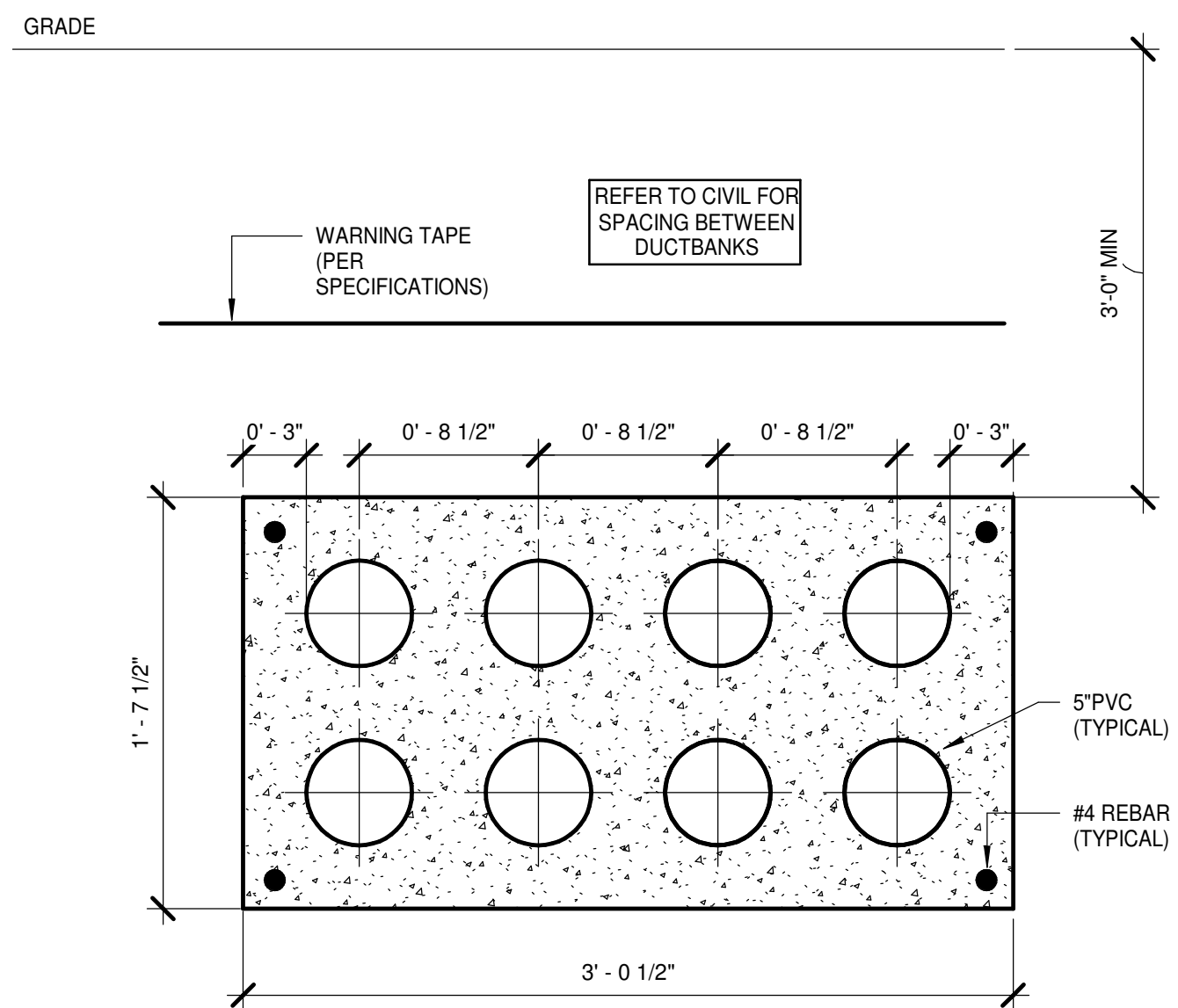
- GENERAL NOTES
1. ELECTRICAL CONTRACTOR REMAINS RESPONSIBLE FOR ADJUSTING DUCTBANK PROFILE TO ALLOW FOR INSTALLATION OF DUCTBANK. REFER TO CIVIL DRAWINGS AND SPECIFICATIONS FOR DUCTBANK ELEVATIONS. DEVIATIONS FROM DUCTBANK PROFILE INDICATED ON DESIGN DRAWINGS SHALL BE COORDINATED AND APPROVED BY CIVIL ENGINEER PRIOR TO INSTALLATION.
 2. HOMERUN RACEWAYS ARE TO BE BURIED 36" BELOW FINISHED GRADE.
 3. PROVIDE LIGHTNING ARRESTORS ON ALL CIRCUITS USED FOR SITE LIGHTING AND POWER.
 4. VERIFY EQUIPMENT LOCATIONS AND CONDUCTOR LENGTHS PRIOR TO INSTALLATION. CONSULT ENGINEER IF INCREASED CONDUCTOR LENGTHS RESULT IN UNACCEPTABLE VOLTAGE DROP (3% OR GREATER).
 5. ALL RACEWAYS ARE TO CONTAIN NO MORE THAN NINE CURRENT CARRYING CONDUCTORS AND A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.
 6. SEAL ALL RACEWAYS AND PENETRATIONS BOTH INTERNALLY AND EXTERNALLY WHERE TRANSITIONS ARE MADE FROM CONDITIONED SPACES TO OUTDOOR OR UNDERGROUND. RACEWAYS ARE TO BE SEALED TO PREVENT AIR, MOISTURE, AND RODENT MIGRATION THROUGH AND AROUND RACEWAYS.
 7. PROVIDE 6" CONCRETE HOUSEKEEPING PAD WITH 42" DEEP BASE FOR ALL GRADE MOUNTED ELECTRICAL EQUIPMENT. UNO.
 8. ALL WORK ON THIS SHEET IS INTENDED TO BE DIAGRAMMATIC. REFER TO CIVIL ENGINEER'S DRAWINGS FOR EXACT ROUTING, EQUIPMENT LOCATION, AND INVERT ELEVATIONS.
 9. CONTRACTOR SHALL COORDINATE TIMING OF ENERGIZATION OF NEW UTILITY EQUIPMENT WITH USING AGENCY.
 10. ALL UNDERGROUND RACEWAYS SHALL BE ENCASED IN MINIMUM 3" CONCRETE ENVELOPE, WHERE IDENTIFIED AS REQUIRED ON PLANS AND RISER DIAGRAMS.
 11. PROVIDE TRANSITION DUCTBANK PROFILE AS REQUIRED TO PAIR UP DUCTBANK WITH LOCATION OF SLEEVE/STUB LOCATIONS AT MANHOLES. FIELD COORDINATE ALL CHANGES IN DUCTBANK PROFILE WITH CIVIL ENGINEER PRIOR TO WORK.
 12. COORDINATE LOCATION OF RACEWAY ENTRANCE INTO BUILDING WITH ARCHITECT PRIOR TO INSTALLATION. ALL RACEWAYS SHALL SLOPE AWAY FROM BUILDING.
 13. COORDINATE ALL LOCATIONS OF HANDHOLES WITH CIVIL ENGINEER AND ARCHITECT PRIOR TO INSTALLATION.
 14. ALL DUCTBANK CONDUIT BENDS SHALL BE MINIMUM OF 48" RADIUS.
 15. PULL PROPER SIZE WIRE BRUSH MANDRELL THROUGH ALL DUCTS. LEAVE #8 GALVANIZED PULLING WIRE, NYLON CORD OR POLYPROPYLENE ROPE IN DESIGNATED DUCTS. SEAL DUCTS TEMPORARILY.
 16. COORDINATE ELEVATIONS OF DUCTS AND DUCTBANK ENTRANCES INTO MANHOLES AND HANDHOLES WITH FINAL PROFILES OF CONDUITS AS DETERMINED BY COORDINATION WITH OTHER UTILITIES AND UNDERGROUND OBSTRUCTIONS. REVISE LOCATIONS AND ELEVATIONS FROM THOSE INDICATED AS REQUIRED TO SUIT FIELD CONDITIONS AND TO ENSURE DUCT RUNS DRAIN TO MANHOLES AND HANDHOLES, AS APPROVED BY ARCHITECT AND THE UNIVERSITY.
 17. RESTORE ALL AREAS DISTURBED BY TRENCHING, STORING OF DIRT, CABLE LAYING, AND OTHER WORK. RESTORE VEGETATION AND INCLUDE NECESSARY TOP-SOILING, FERTILIZING, LIMING, SEEDING, SODDING, SPRIGGING, AND MULCHING. COMPLY WITH SPECIFICATIONS.
 18. BUILDING ENTRANCES: MAKE A TRANSITION FROM UNDERGROUND DUCT TO CONDUIT AT LEAST 10 FEET OUTSIDE THE BUILDING WALL. USE FITTINGS MANUFACTURED FOR THIS PURPOSE. FOLLOW THE APPROPRIATE INSTALLATION INSTRUCTIONS BELOW:
 - a. CONCRETE-ENCASED DUCTS: INSTALL REINFORCEMENT IN DUCT BANKS PASSING THROUGH DISTURBED EARTH NEAR BUILDINGS AND OTHER EXCAVATIONS. COORDINATE DUCT BANK WITH STRUCTURAL DESIGN TO SUPPORT DUCT BANK AT WALL WITHOUT REDUCING STRUCTURAL OR WATERTIGHT INTEGRITY OF BUILDING WALL.
 - b. DIRECT-BURIED, NON-ENCASED DUCTS AT NON-WATERPROOFED WALL PENETRATIONS: INSTALL A SCHEDULE 40 GALVANIZED STEEL PIPE SLEEVE FOR EACH DUCT. CAULK SPACE BETWEEN CONDUIT AND SLEEVE WITH DUCT-SEALING COMPOUND ON BOTH SIDES FOR MOISTURE-TIGHT SEAL.
 - c. WATERPROOFED WALL AND FLOOR PENETRATIONS: INSTALL A WATERTIGHT ENTRANCE-SEALING DEVICE WITH SEALING GLAND ASSEMBLY ON THE INSIDE. ANCHOR DEVICE INTO MASONRY CONSTRUCTION WITH ONE OR MORE INTEGRAL FLANGES. SECURE MEMBRANE WATERPROOFING TO THE DEVICE TO MAKE PERMANENTLY WATERTIGHT.

SHEET NOTES

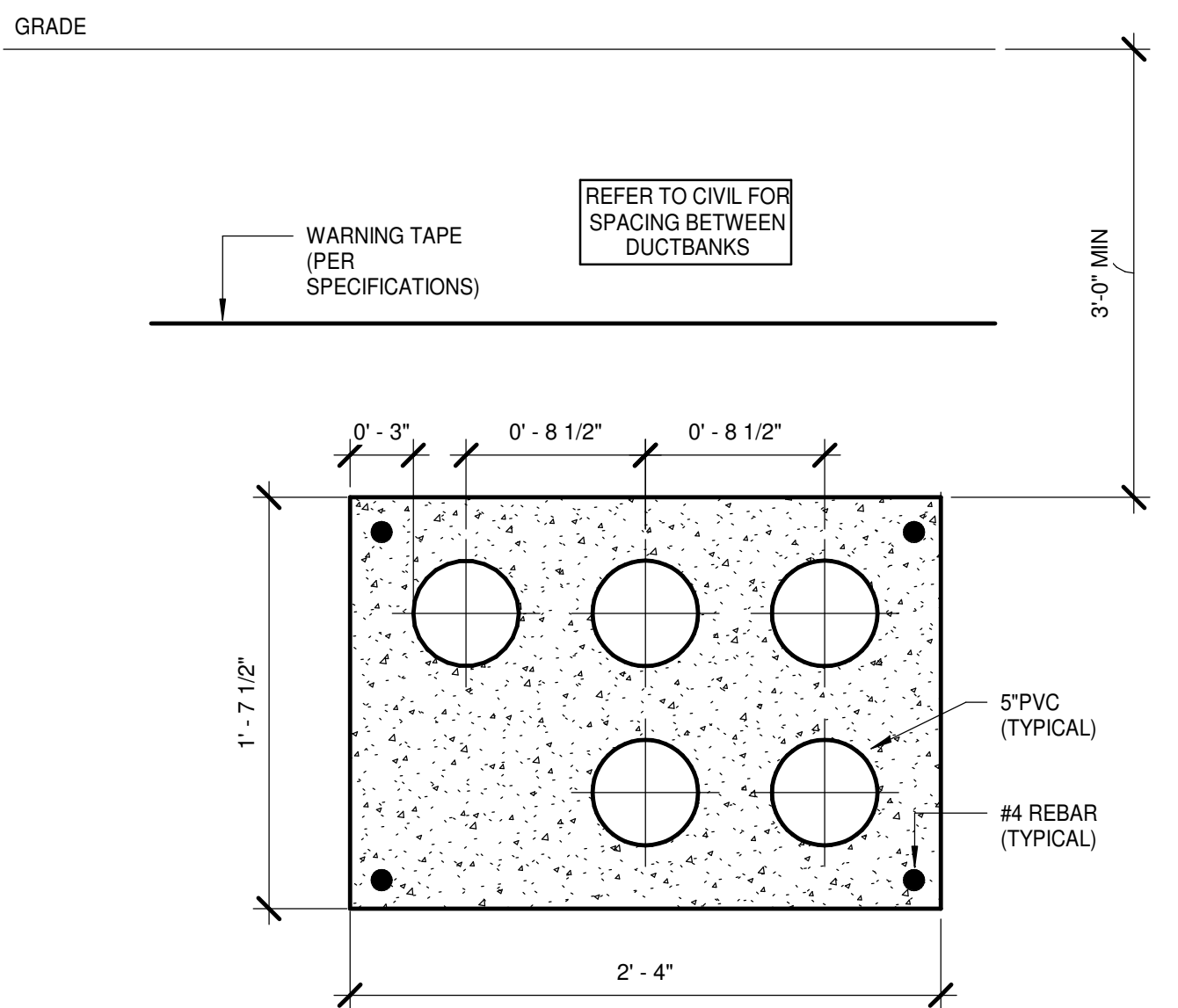
1. PROVIDE (1) 1-1/2" CONDUIT FROM LOCATION OF EMERGENCY PHONE AND STUB INTO MAIN ELECTRICAL ROOM.
2. PROVIDE POWER AT SELF ILLUMINATED SIGNAGE.
3. COORDINATE EXACT LOCATION OF VEHICLE CHARGERS AND SITE RECEPTACLES WITH ARCHITECT TO ENSURE GENERATOR CONNECTION CABINET IS NOT BLOCKED.



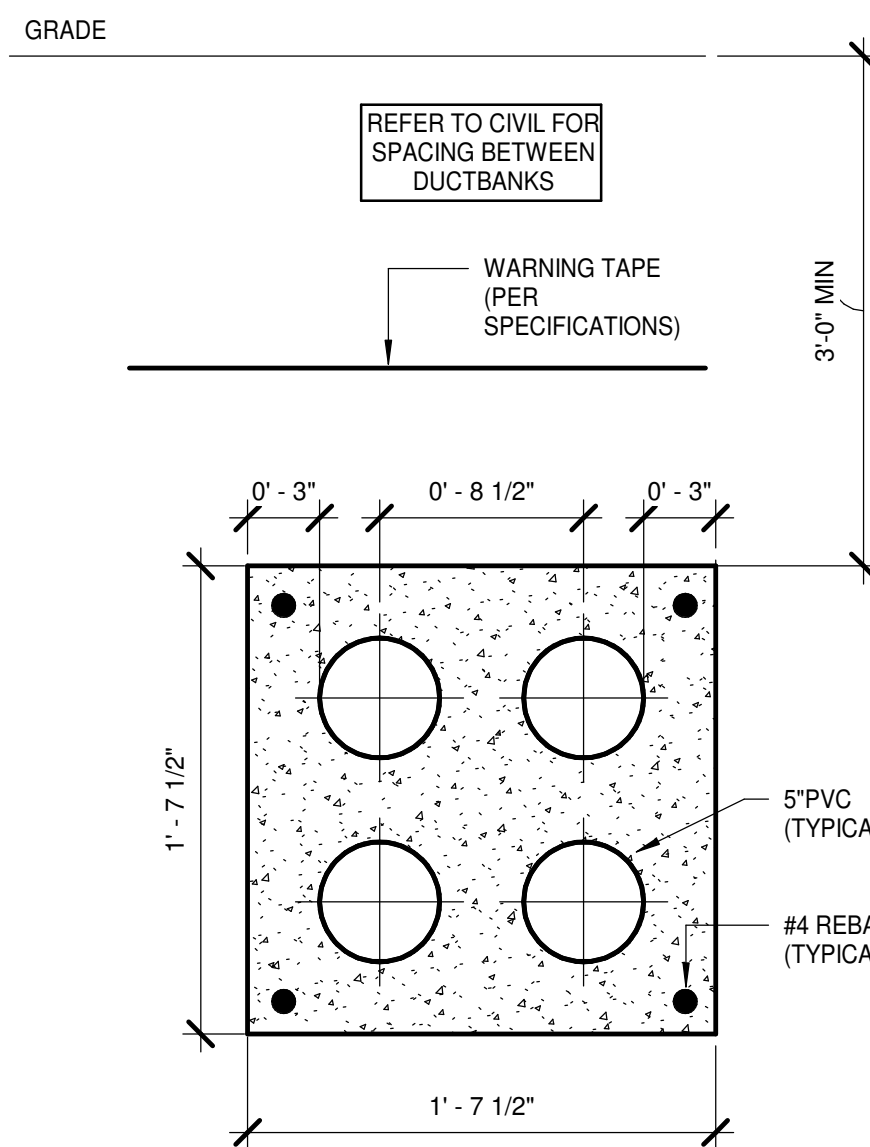
5 9-5" CONCRETE ENCASED DUCTBANK SECTION
SCALE: 1 1/2" = 1'-0"



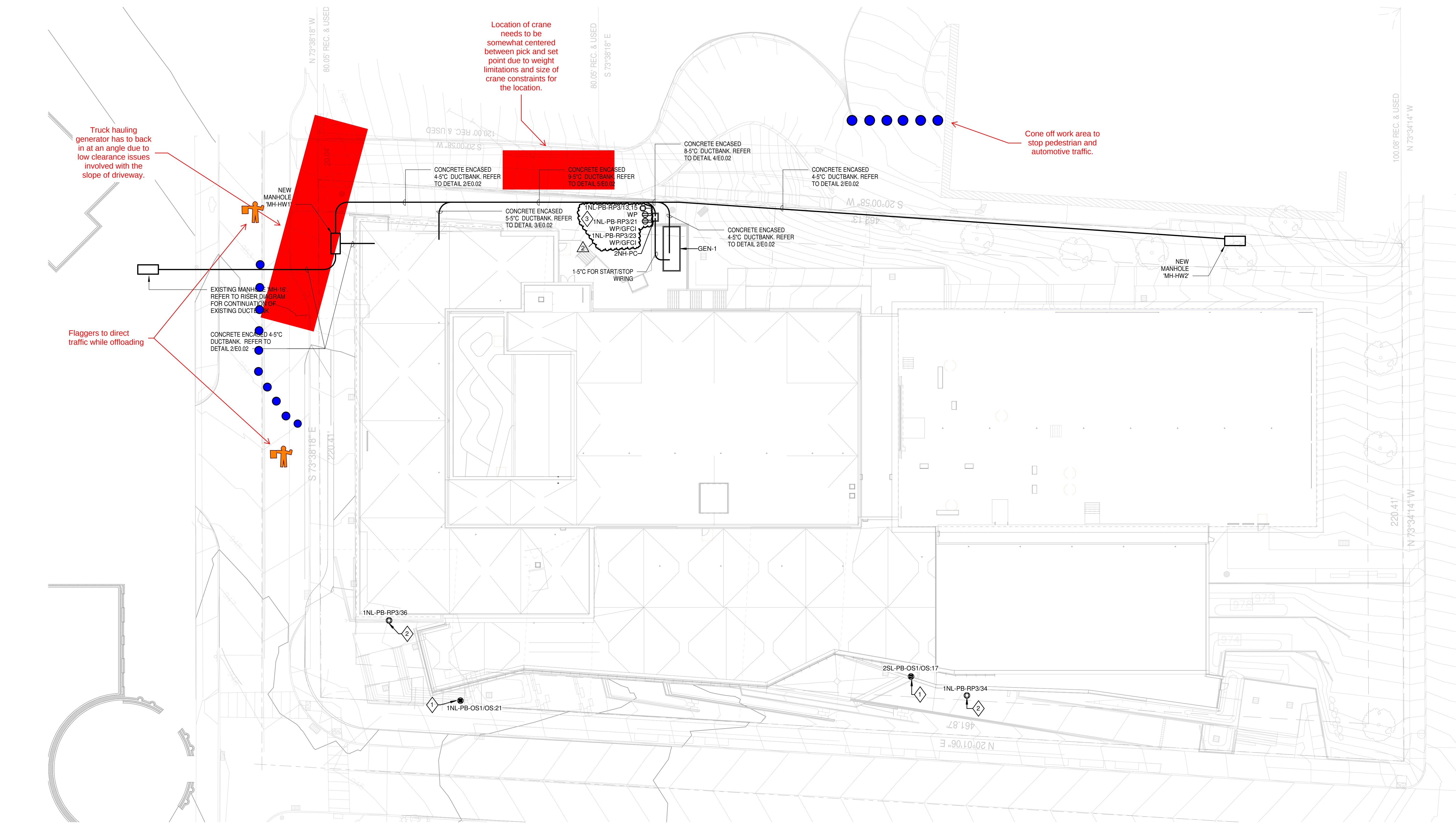
4 8-5" CONCRETE ENCASED DUCTBANK SECTION
SCALE: NOT TO SCALE



3 5-5" CONCRETE ENCASED DUCTBANK SECTION
SCALE: 1 1/2" = 1'-0"



2 4-5" CONCRETE ENCASED DUCTBANK SECTION
SCALE: NOT TO SCALE



1 SITE ELECTRICAL POWER PLAN
SCALE: 1" = 20'-0"