

1. GENERAL

1.1 ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF BUILDING CODES SHOWN LISTED .

1.2 VERIFY ALL EXISTING CONDITIONS RELATED TO THE WORK BEFORE COMMENCING WORK. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

1.3 CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; AND FOR THE COORDINATION OF ALL PORTIONS OF THE WORK.

1.4 THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND SAFETY OF ALL PERSONS, EXISTING FACILITIES AND EXISTING EQUIPMENT AND DISPLAY AT THE CONSTRUCTION SITE AND THROUGHOUT ALL AREAS AFFECTED BY THE NEW CONSTRUCTION. ANY PORTION OF EXISTING STRUCTURES NOT TO BE REMOVED UNDER THIS CONTRACT SHALL BE PROTECTED TO PREVENT DAMAGE DURING THE PERFORMANCE OF THIS CONTRACT AND ANY DAMAGE FOR ALTERATION RESULTING FROM CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE TO ITS ORIGINAL CONDITION AND TO THE SATISFACTION OF THE ENGINEER.

1.5 THE CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENT ALL DIMENSIONS, CURVATURES, AND ELEVATIONS OF EXISTING STRUCTURES THAT MAY BE REQUIRED TO LOCATE, ALIGN, DIMENSION, AND DETAIL THE CONSTRUCTION WITHIN SPECIFIED TOLERANCES. THE FIELD MEASUREMENT SHALL BE PERFORMED PRIOR TO THE PREPARATION OF SHOP DRAWINGS AND THE MANUFACTURING, FABRICATION, AND INSTALLATION OF ALL ITEMS OF CONSTRUCTION. ALL VARIATIONS FROM THE CONTRACT DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE PREPARATION OF SHOP DRAWINGS.

1.6 THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE PROVISIONS OF ALL CONTRACT DOCUMENTS(SPECIFICATIONS, MECHANICAL AND ELECTRICAL DRAWINGS ETC.)

1.7 TEMPORARILY BRACING AND/OR SHORING SHALL BE INTRODUCED WHERE NECESSARY TO SUPPORT ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED. CONTRACTOR SHALL SUBMIT PROCEDURE, DESIGN CALCULATIONS AND DETAIL SIGNED AND SEALED BY LICENSED PROFESSIONAL ENGINEER FOR THE COMPLETE PROPOSED SUPPORT SYSTEM.

1.8 COORDINATE WITH ALL OTHER DISCIPLINE DRAWINGS FOR CLEARANCES, DIMENSIONS, EQUIPMENT LOCATIONS, OPENING LOCATIONS AND CONDUIT PENETRATIONS PRIOR TO COMMENCING CONSTRUCTION WORK.

1.9 THESE DRAWINGS PRESENT THE COMPLETED PROJECT, WHICH HAS BEEN DESIGNED FOR THE WEIGHTS OF MATERIALS INDICATED ON THE DRAWINGS AND FOR OTHER LOADS INDICATED IN THE DESIGN DATA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGINGS, BRACING, SHEETING AND SHORING, ETC. THE CONTRACTOR MUST COMPLY WITH ALL DEPARTMENT OF BUILDINGS RULES REGARDING STRUCTURAL STABILITY INTEGRITY DURING CONSTRUCTION OPERATIONS.

2. DESIGN CRITERIA

2.1 APPLICABLE CODES AND SPECIFICATIONS:

- IBC – INTERNATIONAL BUILDING CODE, NEW YORK EDITION – VERSION IN EFFECT ON BID DATE
- NEW YORK STATE BUILDING CODE – VERSION IN EFFECT ON BID DATE
- AREMA MANUAL FOR RAILWAY ENGINEERING 2019 EDITION
- ASCE- 7-16, AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES
- AISC , AMERICAN INSTITUTE OF STEEL CONSTRUCTION, 15TH EDITION
- AISC 360-16, AMERICAN INSTITUTE OF STEEL CONSTRUCTION FOR STRUCTURAL STEEL BUILDINGS
- ACI 318-19, AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- AWS D1.1, AMERICAN WELDING SOCIETY STRUCTURES WELDING CODE- STEEL
- PCI - PRECAST CONCRETE INSTITUTE DESIGN HANDBOOK EDITION IN EFFECT ON BID DATE
- METRO-NORTH RAILROAD SUSTAINABLE DESIGN/DESIGN FOR THE ENVIRONMENT, GENERIC RECOMMENDATIONS AND GUIDELINES

2.2 DESIGN LOADS:

GRAVITY LOADS
DEAD LOAD AND SUPERIMPOSED DEAD LOADS ARE BASED ON THE ACTUAL WEIGHT OF CONSTRUCTION AND BUILDING MATERIAL.

LIVE LOADS:	
PLATFORMS	100 PSF
STAIRS AND STAIR LANDINGS	OR 1000 LB CONCENTRATED LOAD
	100 PSF
OR 1000 LB CONCENTRATED LOAD	

WIND LOADS:	
EXPOSURE CATEGORY	C
RISK CATEGORY	III
WIND IMPORTANCE FACTOR	Iw= 1.0
BASIC WIND SPEED (ULTIMATE)	120 MPH

SEISMIC LOADS:	
SITE CLASS	D
IMPORTANCE FACTOR	Ie= 1.25
0.2 SEC SPECTRAL RESPONSE COEFFICIENT	Sds= 0.267g
1.0 SEC SPECTRAL RESPONSE COEFFICIENT	Sd1= 0.096g
SEISMIC DESIGN CATEGORY	B

SNOW LOADS:	
GROUND SNOW LOAD	Pg= 30 PSF
SNOW EXPOSURE FACTOR	Ce= 0.9
IMPORTANCE FACTOR	Is= 1.10
THERMAL FACTOR	Ct= 1.1

3. CONCRETE:

3.1 ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF F'c=4000 PSI AT 28 DAYS.

3.2 DETAIL FABRICATE AND ERECT REINFORCEMENT BARS, INCLUDING BAR SUPPORTS, SPACES, ETC. IN ACCORDANCE WITH THE ACI-318 REQUIREMENTS.

3.3 HOLES AND OPENINGS, EXCEPT THOSE INDICATED, SHALL NOT BE PLACED THROUGH CONCRETE SLAB, WALL AND FOOTINGS WITHOUT APPROVAL.

3.4 ALL REINFORCEMENT STEEL SHALL BE ASTM A615 GRADE 60. ALL REINFORCING BARS SHALL CONFORM TO CURRENT CONCRETE REINFORCING STEEL INSTITUTE STANDARDS.

3.5 USE NON-SHRINK NON-METALLIC CEMENT GROUT BELOW ALL BASE PLATES, EQUIPMENT, AND RAIL SUPPORTS.

3.6 CONCRETE MIXING, PLACING AND ELEVATION FOR ACCEPTANCE SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE NEW YORK STATE BUILDING CODE AND ACI-318 CODE.

3.7 CHAMFER EXPOSED CONCRETE EDGES 3/4" x 3/4" UNLESS NOTED OTHERWISE.

3.8 REINFORCEMENT CLEAR COVER SHALL CONFIRM TO THE FOLLOWING REQUIRMENTS, UNLESS NOTED OTHERWISE ON THE DRAWINGS:	
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WATER:	
NO. 6 THROUGH NO. 11 BARS	2"
NO. 5 BARS AND SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
SLABS: NO. 11 BARS AND SMALLER	3/4"
ENCASEMENTS:	1 1/2"

3.9 UNLESS OTHERWISE NOTED, ALL HOOKS ON CONCRETE REINFORCIND DETAILS ARE STANDARD 90 DEGREE HOOK.

4. STRUCTURAL STEEL

4.1 ALL DIMENSIONS FOR SIGNAL HOUSES, SIGNAL CASES, SNOWMELTER EQUIPMENT, SIGNAL POWER EQUIPMENT, STANDBY GENERATORS, AND ALL OTHER EQUIPMENT AND DEVICES SHOWN TO BE INSTALLED ON STEEL STRUCTURES SHALL BE CONSIDERED PRELIMINARY AND FOR ESTIMATION PURPOSES ONLY. THE CONTRACTOR SHALL OBTAIN FINAL DIMENSIONS, WEIGHTS, MOUNTING REQUIREMENTS, CABLE ENTRY PROVISIONS, AND ALL OTHER INFORMATION FOR EACH ITEM TO BE INSTALLED AND SHALL PREPARE FINAL DETAILED DESIGN FOR ALL STEEL STRUCTURES.

4.2 WHERE NEW STRUCTURES INSTALLED UNDER THIS CONTRACT ARE ADJACENT TO AN EXTEND EXISTING STRUCTURES INSTALLED BY OTHERS (FOR EXAMPLE CP-33 CIL, CP-35 CIL), THE CONTRACTOR SHALL VERIFY THE ELEVATION AND LOCATION OF THE EXISTING STRUCTURES AND MAKE SUCH ADJUSTMENTS AS ARE NECESSARY TO MATCH.

4.3 STRUCTURAL STEEL WIDE FLANGE BEAMS, COLUMNS, AND MISCELLANEOUS FRAMING MEMBERS SHALL CONFORM TO A.S.T.M. A992 GRADE 50 OR A.S.T.M. A572 GRADE 50.

4.4 PLATES, BARS, AND ANGLES SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE.

4.5 STEEL ANGLES FOR SHEAR (WEB) CONNECTIONS BEAM-TO-BEAM AND BEAM-TO-COLUMN SHALL CONFORM TO ASTM A36.

4.6 HSS RECTANGULAR/SQUARE MEMBERS SHALL CONFORM TO A.S.T.M. A500 GRADE B. HSS ROUND MEMBERS SHALL CONFORM TO A.S.T.M. A500 GRADE B.

4.7 DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE LATEST A.I.S.C. CODES AND SPECIFICATIONS, INCLUDING THE A.I.S.C. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS.

4.8 ALL BOLTS, NUTS, AND WASHERS SHALL CONFIRM TO SPECIFICATIONS ASTM A325 TYPE 1, ASTM A563 GRADE DH, AND ASTM F436, RESPECTIVELY. ALL FASTENERS SHALL BE HOT DEEP GALVANIZED IN ACCORDANCE WITH ASTM A153. THREADS SHALL BE EXCLUDED FROM SHEAR PLANES FOR ALL CONNECTIONS. WASHER WHICH WILL INTERFERE WITH THE FILLETS OF WIDE FLANGES SECTION SHALL BE CLIPPED.

4.9 ALL WELD SIZES, NOT INDICATED OR THOSE TO BE DESIGNED FOR MEMBER LOADS GIVEN ON THE DRAWINGS, SHALL COMPLY WITH THE LATEST A.W.S. D1.1 BUT IN NO CASE SHALL WELD SIZE BE LESS THAN 1/4 INCH. ALL WELDING ELECTRODES SHALL BE E70XX (LOW HYDROGEN) FOR CARBON STEEL. FIELD WELDING SHALL BE FINISHED GROUND SMOOTH.

4.10 ALL STEEL FOR ANCHOR RODS SHALL CONFORM TO A.S.T.M. F1554 GRADE 36.

4.11 ALL MEMBERS SHALL BE HOT DEEP GALVANIZED IN ACCORDANCE WITH ASTM A123 w/3.5 OZ ZINC PER SQ.FT. ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION.

4.12 MINIMUM OF TWO BOLTS SHALL BE INSTALLED PER CONNECTION.

5. GEOTECHNICAL:

5.1 ALL FOUNDATION TYPES AND DETAILS SHOWN SHALL BE CONSIDERED PRELIMINARY AND FOR ESTIMATION PURPOSE ONLY. FINAL FOUNDATION TYPES WILL BE INCLUDED IN THE 100% SUBMISSION, WHICH WILL BE BASED ON THE RESULTS OF A STRUCTURE-SPECIFIC GEOTECHNICAL INVESTIGATION.

5.2 CONSTRUCTON ACTIVITIES SHALL CONSIDER THE IMPACTS TO THE RAIL TRACKS, EXISTING STRUCTURES AND SURROUNDING UTILITIES WITHIN THE VICINITY OF THE PROPOSED FOUNDATIONS. THE CONTRACTOR IS RESPONSIBLE FOR MONITORING EXISTING RAIL TRACKS FOR VIBRATION AND SETTLEMENT AND RELOCATION OF ANY NECESSARY UTILITIES FOR THE CONSTRUCTION OF THE FOUNDATIONS.

5.3 IT IS THE CONTRACTOR'S RESPONSIBLTY TO IMPLEMENT ADEQUATE DEWATERING AND SUPPORT OF EXCAVATION MEASURES AND ENSURE THE STABILITY OF THE EXCAVATION DURING CONSTRUCTION. ALL EXCAVATIONS SHALL CONFORM TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS (I.E., 29 CFR PART 1926) AND OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

5.4 PERFORM ALL WORK IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE PROJECT.

6. METAL GRATING:

6.1 GRATING SHALL BE HOT DIP GALVANIZED AS PER A.S.T.M. A123 AND SHALL BE Banded AND TIED DOWN PER MANUFACTURERS RECOMMENDATIONS.

6.2 MINIMUM GRATING CONSTRUCTION TO BE WELDED GALVANIZED STEEL BEARING AND CROSS BARS. MAIN BEARING BARS TO BE 1 1/4" x 3/16" SPACED AT 0'-1 3/16" ON CENTER MAXIMUM. CROSS BARS TO BE 1/4" SQUARE WELDED AT RIGHT ANGLES BEARING BARS AND SPACED AT 0'-4" ON CENTER MAXIMUM.

6.3 SUBMIT COMPLETE SHOP AND ERECTION DRAWINGS FOR REVIEW PRIOR TO FABRICATION OR ERECTION.

6.4 CONNECT GRATING TO SUPPORTING STEEL MEMBERS PER MANUFACTURER'S RECOMMENDATIONS. MANUFACTURER TO SUPPLY CONNECTION HARDWARE AS REQUIRED.

7. STAIR AND RAILS:

7.1 DESIGN OF WORKING AND WALKING SURFACES SHALL COMPLY TO THE FOLLOWING OSHA REQUIREMENTS UNDER OSHA - 29 CFR 1910 SUBPART D
A. STANDARD NUMBER 1910.23
B. STANDARD NUMBER 1910.24

7.2 DESIGN OF STAIR SHALL COMPLY TO THE FOLLOWING OSHA REQUIREMENTS UNDER OSHA - 29 CFR 1926 SUBPART X
A. STANDARD NUMBER 1926.1052

7.3 RAILING SHALL CONFORM TO ASTM A53 GR. B UNLESS OTHERWISE NOTED.

7.4 GRATING SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE NOTED.

7.5 ALL STEEL SHALL BE HOT DEEP GALVANIZED AFTER FABRICATION PER ASTM A123.

7.6 ALL BOLTS, NUTS, AND WASHERS SHALL BE HOT DEEP GALVANIZED PER ASTM A153.

ABBREVIATIONS:

ARCH.	ARCHITECTURAL	O.C	ON CENTER
BOTT	BOTTOM	PJP	PARTIAL JOINT PENETRATION
CJP	COMPLETE JOINT PENETRATION	PL	PLATE
CL	CENTER LINE	REINF	REINFORCEMENT
CLR	CLEAR	REQ'D	REQUIRED
CMU	CONCRETE MASONRY UNIT	REV	REVERSE
COL	COLUMN	SCH	SCHEDULE
CONC	CONCRETE	SIM	SIMILAR
CONN	CONNECTION	SPA	SPACED AT
CONST	CONSTRUCTION	STR	STRUCTURAL
CONST	CONSTRUCTION	T.O	TOP OF
CONT	CONTINUOUS	T.O.S	TOP OF STEEL
DIA	DIAMETER	TYP.	TYPICAL
DWG	DRAWING	U.O.N	UNLESS OTHERWISE NOTED
DN	DOWN	U.O.N	UNLESS OTHERWISE NOTED
ELEC	ELECTRICAL	V.I.F	VERIFY IN FIELD
ELEV	ELEVATION	W.P.	WORKING POINT
EMBED.	EMBEDMENT		
EQUIP	EQUIPMENT		
FIN.	FINISHED		
FOU	FOUNDATION		
GA	GAUGE		
GC	GENERAL CONTRACTOR		
HOR	HORIZONTAL		
JT.	JOINT		
LDH	DEVELOPMENT LENGTH		
LG	LONG		
LLV	LONG LEG VERTICAL		
LLH	LONG LEG HORIZONTAL		
LSP	SPLICE LENGTH		
MAX.	MAXIMUM		
MECH.	MECHANICAL		
MIN.	MINIMUM		
NO.	NUMBER		

ELEVATION REFERENCE:

ELEVATIONS PROVIDED ARE USING THE FOLLOWING DATUM:

1. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. HORIZONTAL DATUM IS NORTH AMERICAN DATUM OF 1983 (NAD 83) NEW YORK STATE PLANE COORDINATE SYSTEM EAST ZONE IN U.S. SURVEY FEET.



DESIGNATES THE PLATFORM NORTH. PLATFORM NORTH TO BE IN THE GENERAL DIRECTION OF NORTHBOUND ALBANY.

95% SUBMISSION

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DESIGNED	G.C.P.
DRAWN	G.C.P.
CHECKED	S.H.V.
APPROVED	A.I.A.



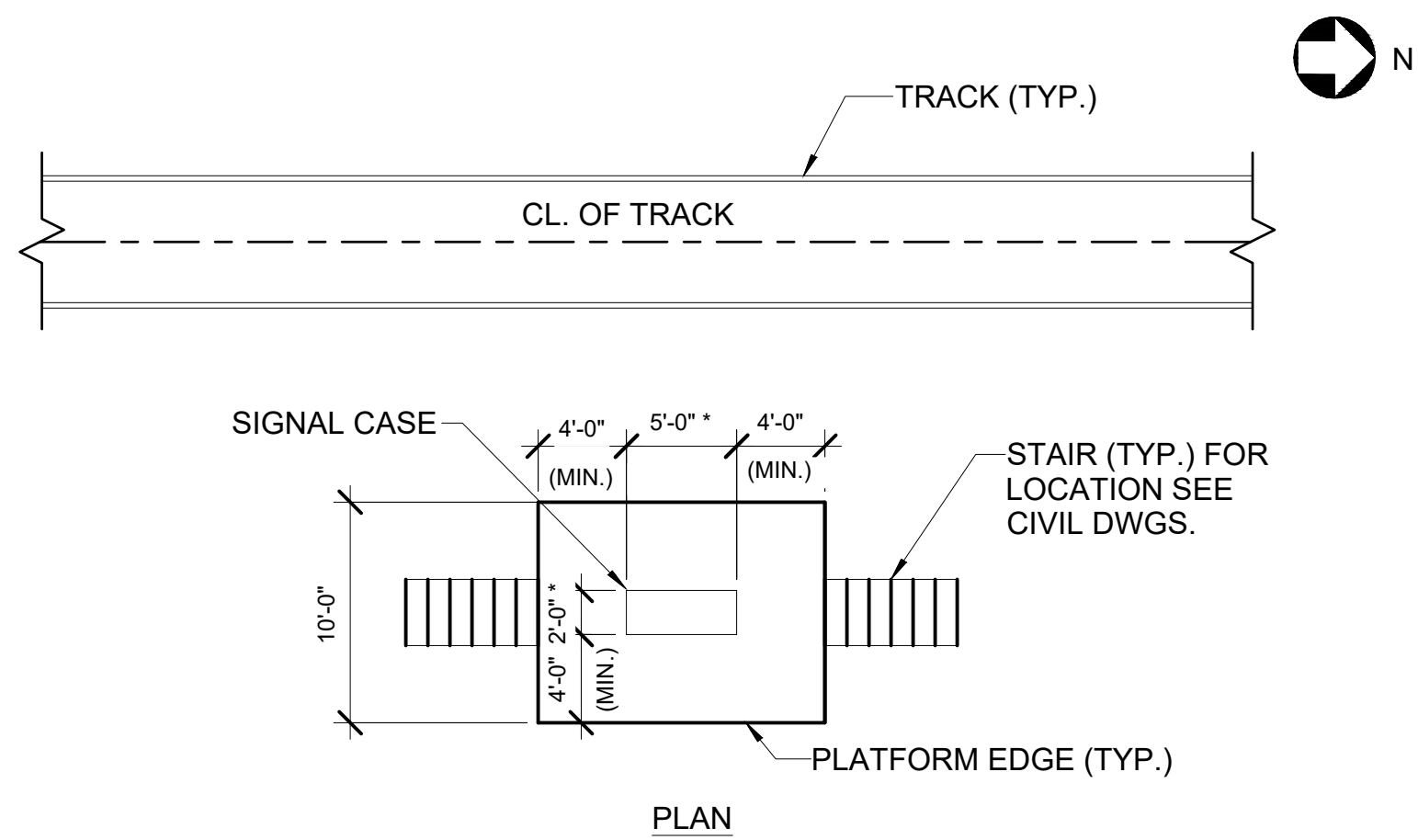
GANNETT FLEMING/CWA, a joint venture
TWO PENN PLAZA, SUITE 552
380 SEVENTH AVENUE
NEW YORK, NY 10121-0101
PRJ: 059824



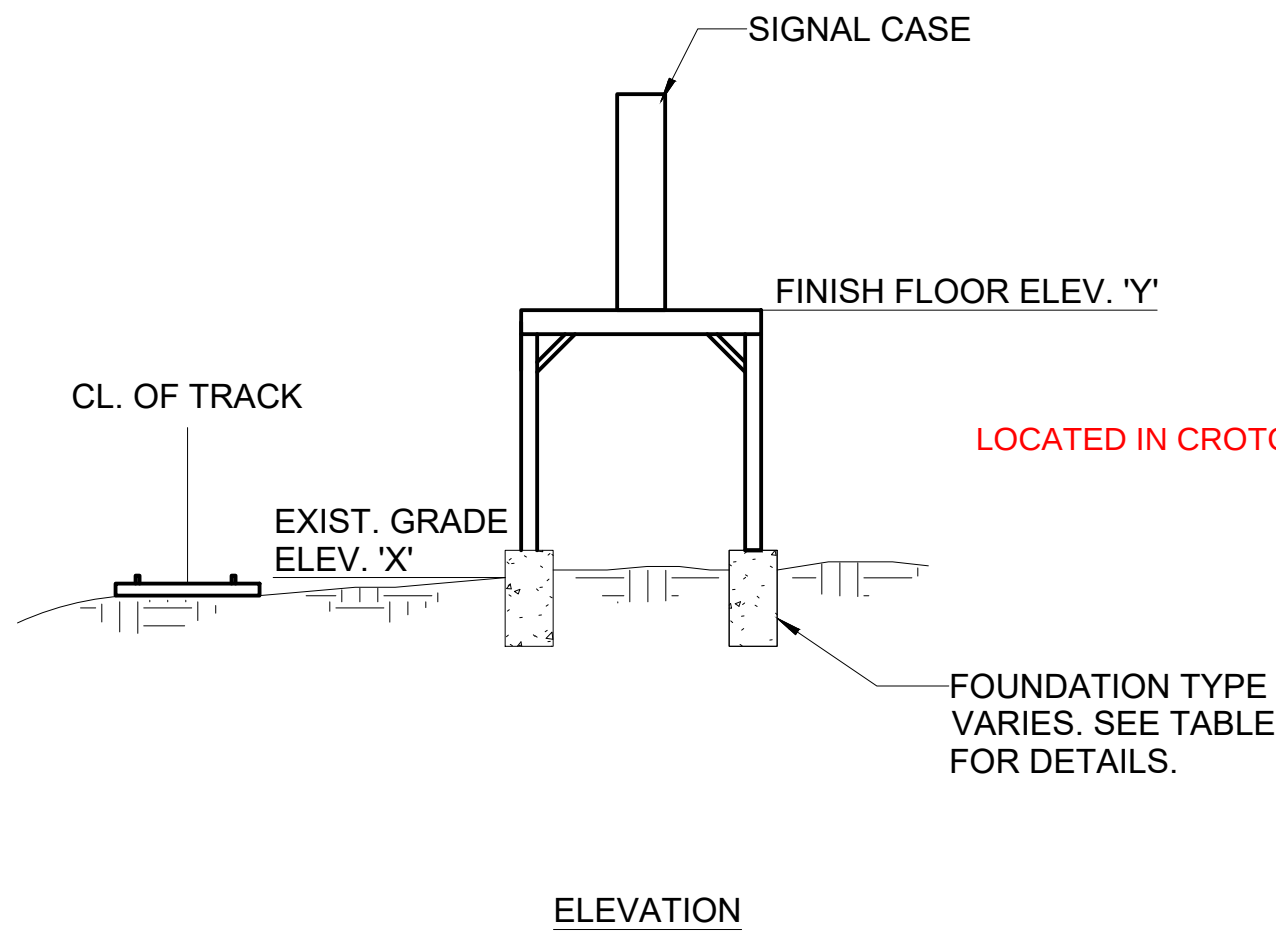
HUDSON LINE C&S IMPROVEMENTS
EQUIPMENT INSTALLATIONS
MP-32 TO MP-76

STRUCTURAL PLATFORMS
GENERAL NOTES

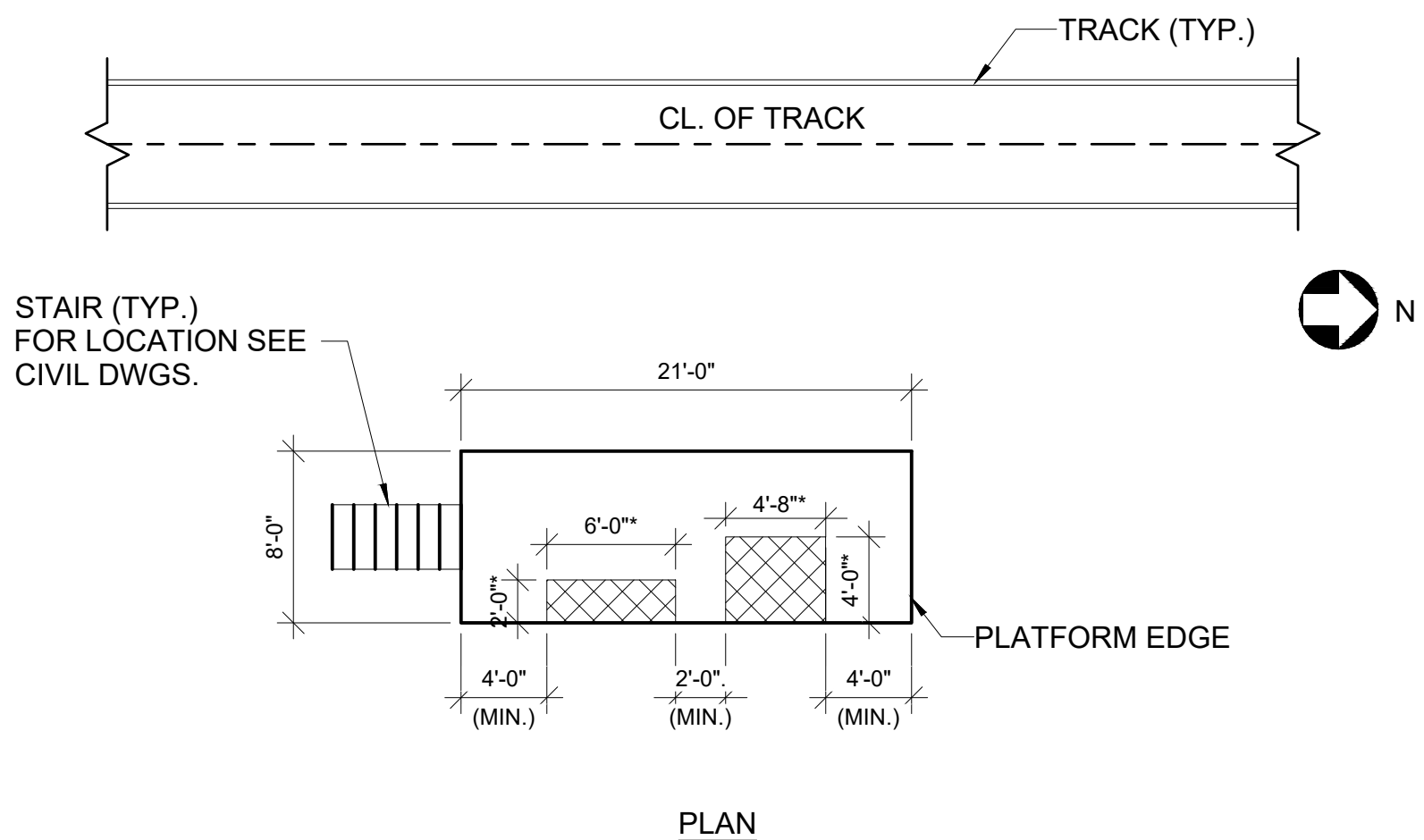
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SCALE:	AS SHOWN	DATE: 11/04/2022
DRAWING NUMBER		STR-001
SHEET	185	OF 610



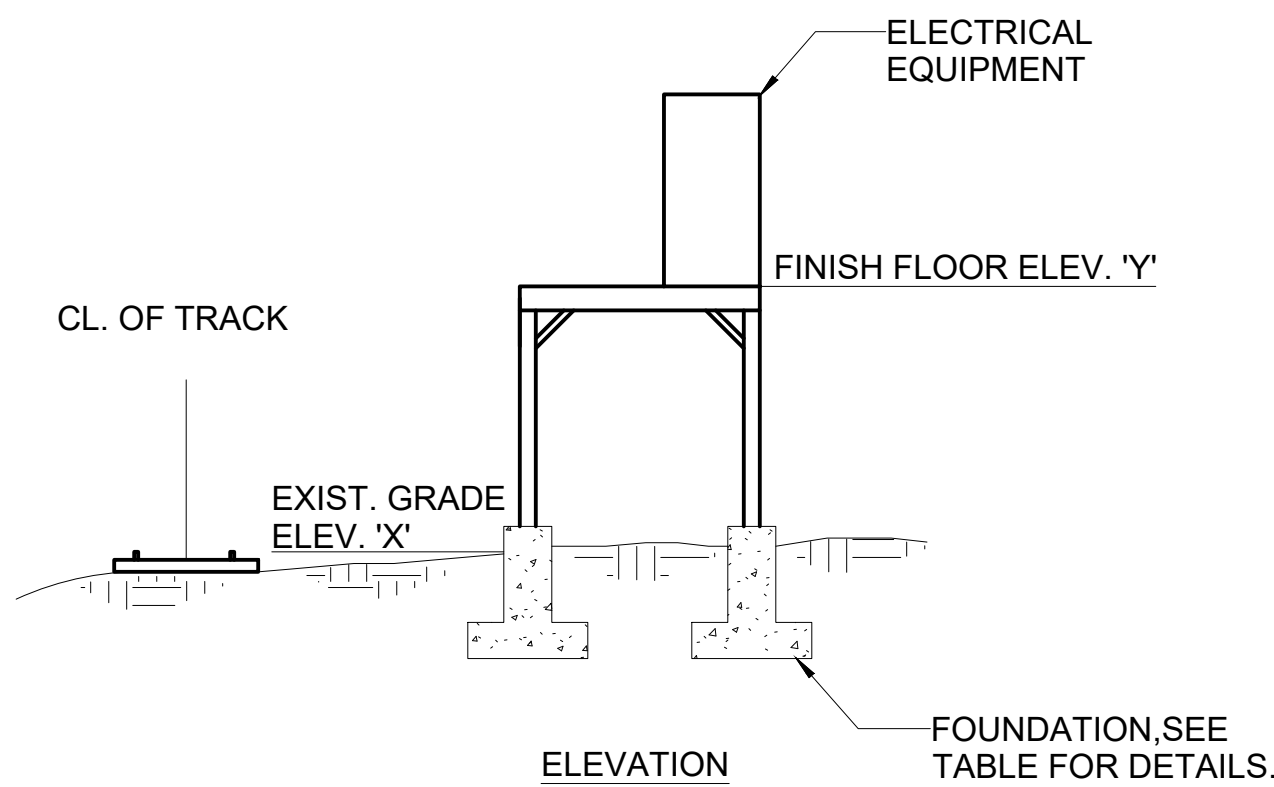
1 OVERALL PLATFORM PLAN AND ELEVATION - TYPE 4
SCALE: 1/8" = 1'-0"



2 OVERALL PLATFORM PLAN AND ELEVATION - TYPE 5
SCALE: 1/8" = 1'-0"



3 OVERALL PLATFORM PLAN AND ELEVATION - TYPE 6
SCALE: 1/8" = 1'-0"



PLATFORM TYPE-4						
LOCATION	TRACK LOCATION	SIGNAL CASE DIM.	'X' EXIST. GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV.	STAIR SIDE	FOUNDATION TYPE
EL-345	AS DRAWN	2'-0" x 5'-0"	7.0/8.0'	18.0'	NORTH	SPREAD FOOTING ON SOIL
EL-610	AS DRAWN	2'-0" x 5'-0"	10.5/14.0'	17.0'	SOUTH	DRILLED SHAFT IN SOIL
EL-632	AS DRAWN	2'-0" x 5'-0"	10.0/11.0'	17.0'	SOUTH	DRILLED SHAFT IN SOIL
EL-650	OPPOSITE HAND	2'-0" x 5'-0"	10.0/11.0'	17.0'	NORTH	DRILLED SHAFT IN SOIL
EL-697	AS DRAWN	2'-0" x 5'-0"	8.0/9.0'	17.0'	NORTH	DRILLED SHAFT WITH ROCK SOCKET

PLATFORM TYPE-5						
LOCATION	TRACK LOCATION	SIGNAL CASE DIM.	'X' EXIST. GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV.	ACCESS SIDE (LADDER)	FOUNDATION TYPE
LOC-409/NB START	AS DRAWN	1'-0" x 2'-0"	12.0/13.0'	14.0' (SEE NOTE)	SOUTH	MAT
LOC-418/SB START	AS DRAWN	1'-0" x 2'-0"	6.0/7.0'	14.0' (SEE NOTE)	SOUTH	MAT
LOC-455/NB START	OPPOSITE HAND	1'-0" x 2'-0"	1.0/8.0'	13.0' (SEE NOTE)	NORTH	MAT
LOC-634/SB START	OPPOSITE HAND	1'-0" x 2'-0"	10.0'	13.0' (SEE NOTE)	SOUTH	MAT
LOC-707/NB START	AS DRAWN	1'-0" x 2'-0"	8.0'	13.0' (SEE NOTE)	NORTH	MAT

NOTE: FOR ALL LOCATIONS, BOTTOM OF THE SIGNAL CASE SHALL BE 4' ABOVE FIN. FLOOR EL.

PLATFORM TYPE-6						
LOCATION	TRACK LOCATION	SIGNAL CASE/ EQUIP. DIM.	'X' EXIST. GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV.	STAIR SIDE	FOUNDATION TYPE
SHP-8/MONKS BR	OPPOSITE HAND	VARIES, SEE NOTES	14.0'	17.0'	SOUTH	DRILLED SHAFT IN SOIL
POLICE, MONK BR MW	AS DRAWN	VARIES, SEE NOTES	8.0'	17.0'	NORTH	DRILLED SHAFT IN SOIL
SHP-9A	AS DRAWN	VARIES, SEE NOTES	6.0/7.0'	17.0'	SOUTH	DRILLED SHAFT IN SOIL
SHP-10	AS DRAWN	VARIES, SEE NOTES	8.0'	17.0'	SOUTH	DRILLED SHAFT IN SOIL
SHP-12/HU-580	OPPOSITE HAND	VARIES, SEE NOTES	10.0'	17.0'	SOUTH	DRILLED SHAFT IN SOIL
SHP-16	AS DRAWN	VARIES, SEE NOTES	9.0'	17.0'	SOUTH	DRILLED SHAFT IN SOIL
SHP-17	AS DRAWN	VARIES, SEE NOTES	9.0'	17.0'	SOUTH	DRILLED SHAFT IN SOIL

NOTES:

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- FOR PLATFORM FRAMING PLANS, SEE SHEETS STR-111 THROUGH STR-121.
- FOR FOUNDATION INFORMATION, SEE SHEETS STR-201 THROUGH STR-204.
- XXXX DENOTES COMMUNICATIONS AND ELECTRICAL EQUIPMENT OVERALL DIMENSIONS & LOCATION ON PLATFORM. SEE SYSTEMS, SIGNAL POWER, AND SNOWMELTER DRAWINGS FOR MORE INFORMATION.
- EXISTING GRADE VARIES. TOP OF FOUNDATION VARIES WITH RESPECT TO EXISTING GRADE. SEE FOUNDATION DETAILS ON SHEETS STR-201 THROUGH STR-204 FOR MORE INFORMATION.
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95% SUBMISSION

NO.	DATE	MODIFICATION	DRAWN	CHKD.	APPRVD.	NO.	DATE	MODIFICATION	DRAWN	CHKD.	APPRVD.
REVISIONS						REVISIONS					

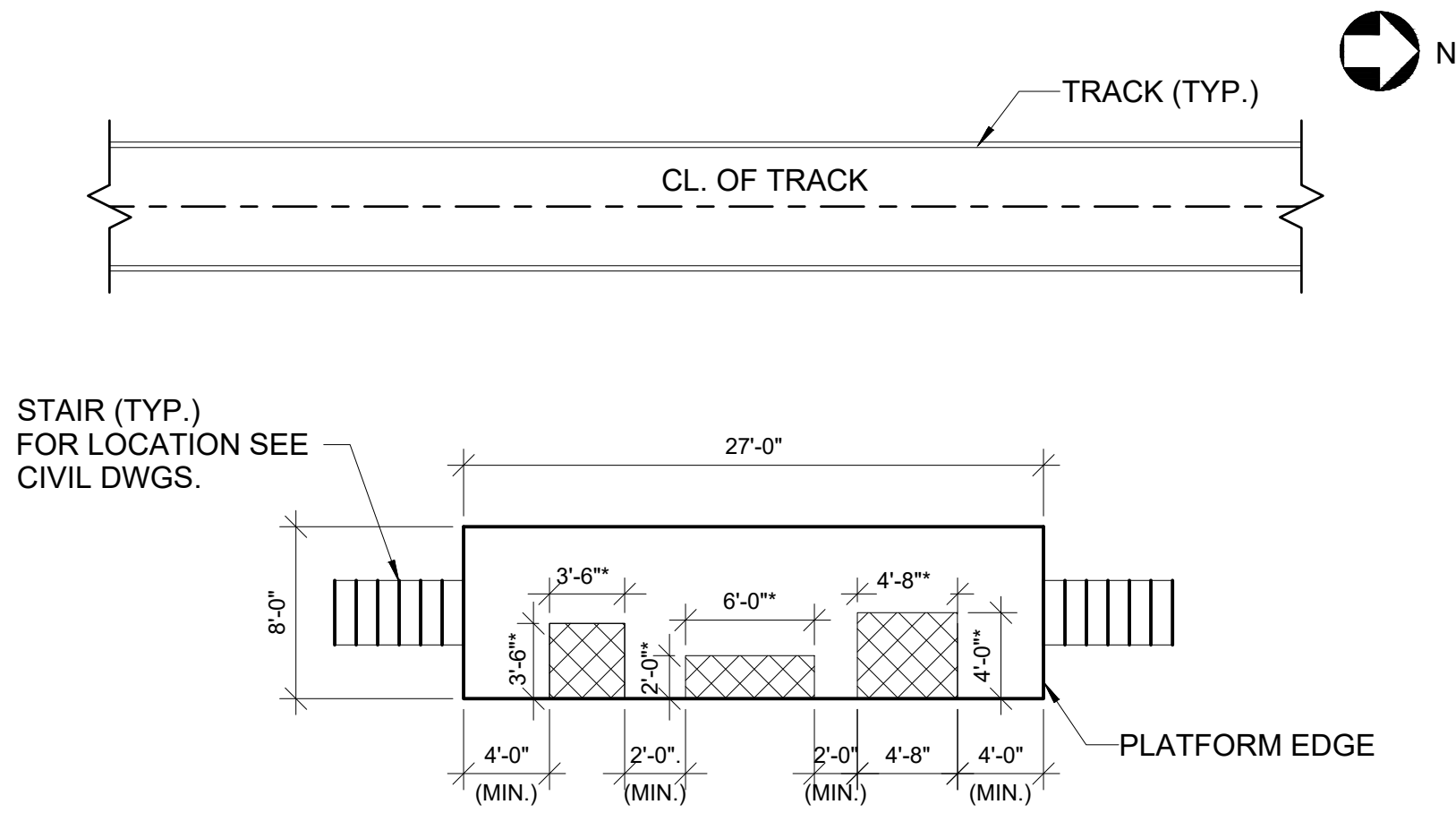
DISCLAIMER
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DESIGNED	G.C.P.
DRAWN	G.C.P.
CHECKED	S.H.V.
APPROVED	A.I.A.

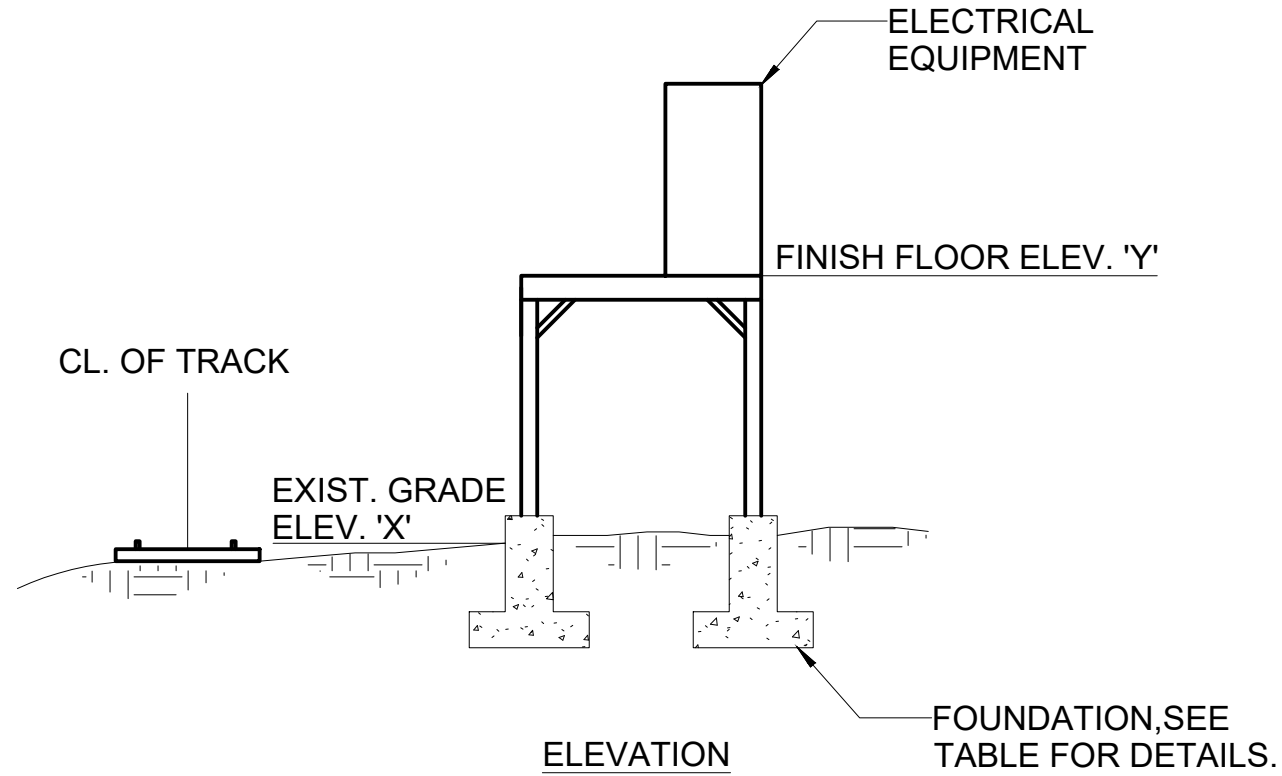
GANNETT FLEMING/CWA, a joint venture
TWO PENN PLAZA, SUITE 552
380 SEVENTH AVENUE
NEW YORK, NY 10121-0101
PRJ: 059824

Metro-North Railroad
367 MADISON AVENUE
NEW YORK, N.Y. 10017

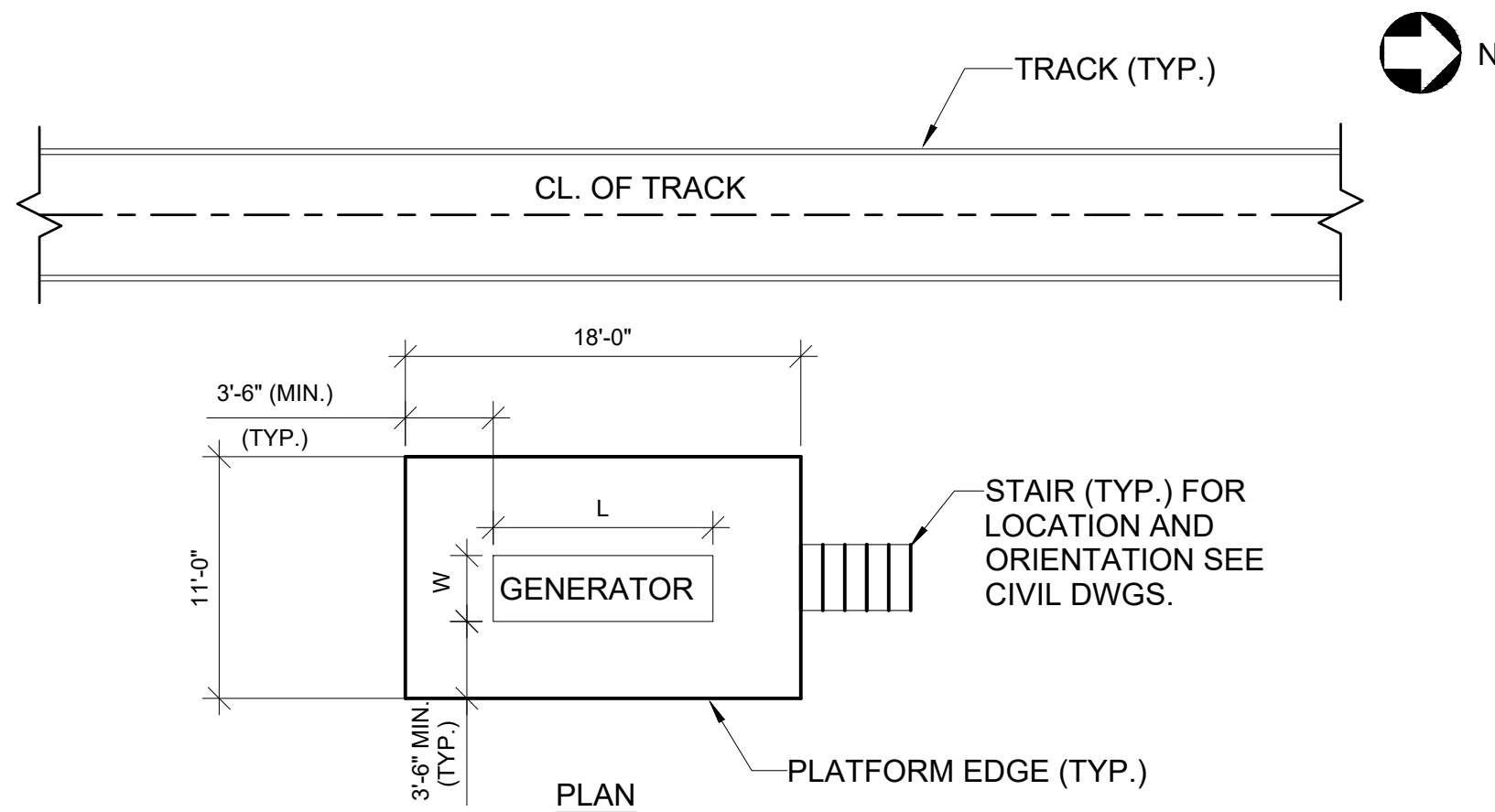
HUDSON LINE C&S IMPROVEMENTS EQUIPMENT INSTALLATIONS MP-32 TO MP-76		CONTRACT NUMBER 39462	
STRUCTURAL PLATFORMS OVERALL PLATFORM PLAN AND ELEVATION - II		SCALE: AS SHOWN	DATE: 11/04/2022
		DRAWING NUMBER STR-102	
		SHEET 187	OF 610



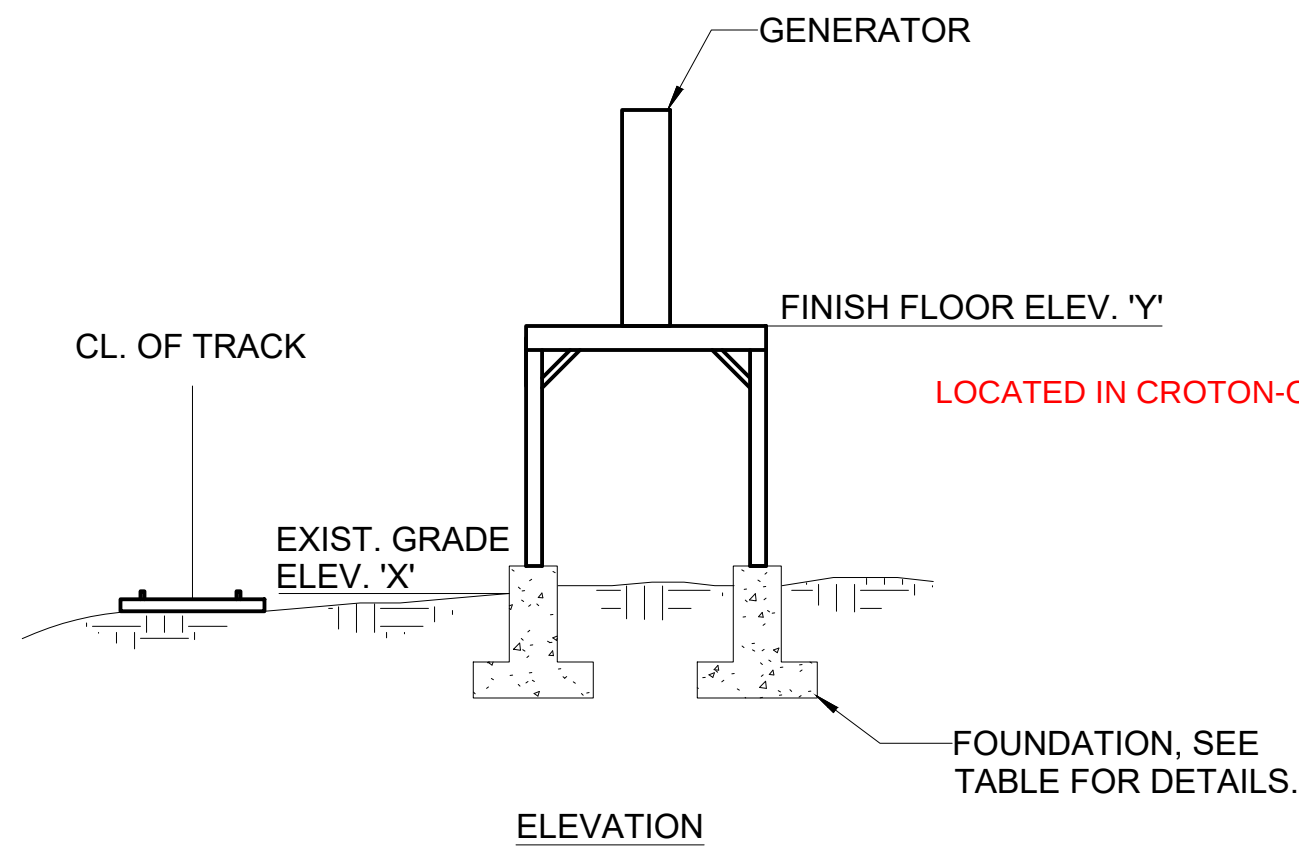
1 OVERALL PLATFORM PLAN AND ELEVATION - TYPE 7
SCALE: 1/8" = 1'-0"



PLATFORM TYPE-7						
LOCATION	TRACK LOCATION	SIGNAL CASE/ EQUIP. DIM.	'X' EXIST. GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV.	STAIR SIDE	FOUNDATION TYPE
SHP-2	AS DRAWN	VARIES, SEE NOTES	9.0'/12.0'	18.0'	NORTH	SPREAD FOOTING ON SOIL
SHP-5	AS DRAWN	VARIES, SEE NOTES	7.0'	18.0'	SOUTH	SPREAD FOOTING ON SOIL
SHP-6	AS DRAWN	VARIES, SEE NOTES	7.0'/9.0'	17.0'	BOTH	SPREAD FOOTING ON SOIL
SHP-15	AS DRAWN	VARIES, SEE NOTES	7.0'/8.0'	17.0'	SOUTH	SPREAD FOOTING ON SOIL



2 OVERALL PLATFORM PLAN AND ELEVATION - TYPE 8
SCALE: 1/8" = 1'-0"



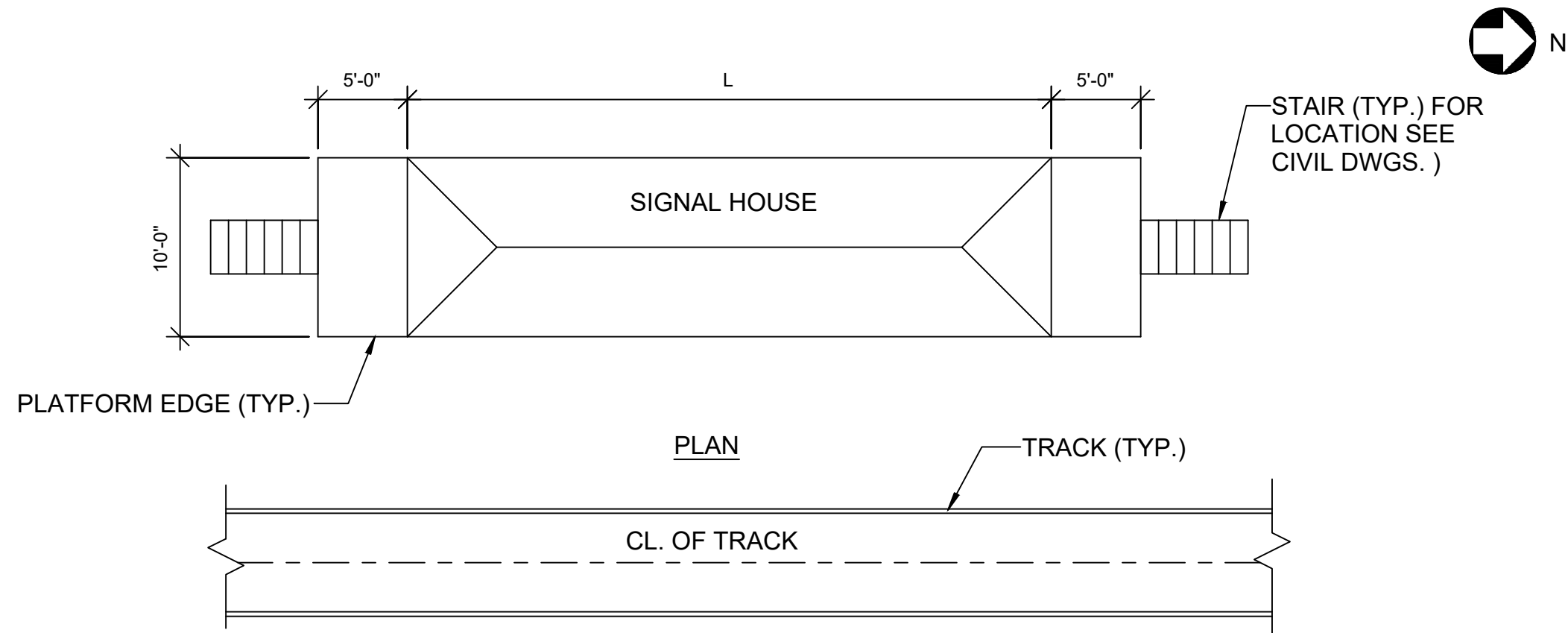
PLATFORM TYPE-8						
LOCATION	TRACK LOCATION	GENERATOR OVERALL DIM. (LxW)	'X' EXIST. GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV.	STAIR SIDE	FOUNDATION TYPE
CP-36 CIL GENERATOR	AS DRAWN	9'-10"x3'-2"	8.0'/9.0'	18.0'	NORTH	SPREAD FOOTING ON SOIL
CP-58 CIL GENERATOR	AS DRAWN	9'-10"x3'-2"	7.0'/8.0'	17.0'	SOUTH	SPREAD FOOTING ON SOIL
CP-61 CIL GENERATOR	AS DRAWN	9'-10"x3'-2"	7.0'/8.0'	17.0'	NORTH	SPREAD FOOTING ON SOIL

NOTES:

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- FOR PLATFORM FRAMING PLANS, SEE SHEETS STR-111 THROUGH STR-121.
- FOR FOUNDATION INFORMATION, SEE SHEETS STR-201 THROUGH STR-204.
-  DENOTES COMMUNICATIONS AND ELECTRICAL EQUIPMENT OVERALL DIMENSIONS & LOCATION ON PLATFORM. SEE SYSTEMS, SIGNAL POWER, AND SNOWMELTER DRAWINGS FOR MORE INFORMATION.
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- " * " DIMENSIONS REPRESENT MINIMUM REQUIRED CLEARANCES FOR METRO NORTH AND VENDOR SUPPLIED EQUIPMENT. CONTRACTOR TO COORDINATE CLEARANCES WITH VENDOR APPROVED DRAWINGS AND REQUIRED DIMENSIONS AND CLEARANCES FOR CONTRACTOR SUPPLIED EQUIPMENT.

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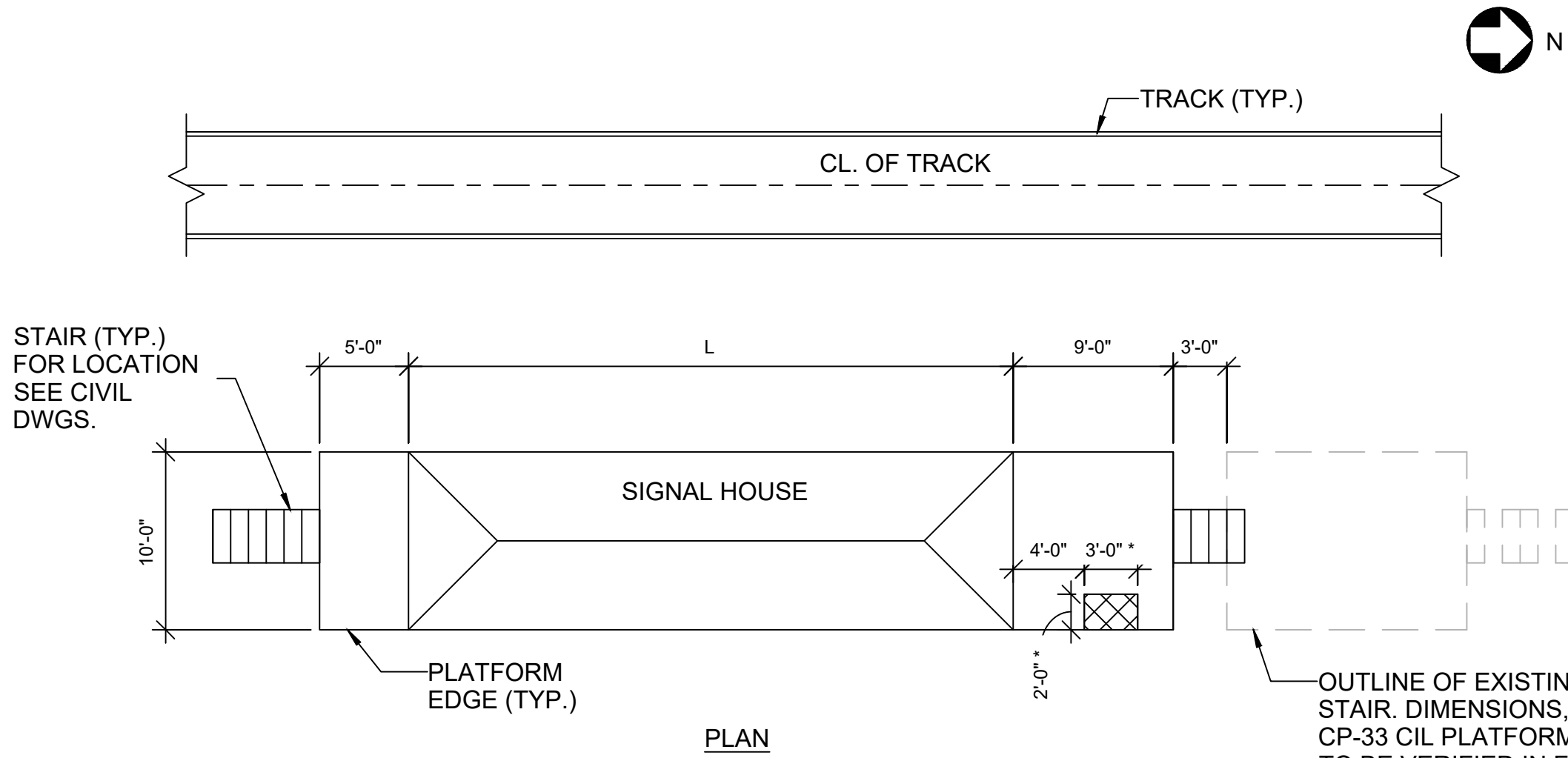
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1 OVERALL PLATFORM PLAN AND ELEVATION -CP-33 LOC C
SCALE: 1/8" = 1'-0"

PLATFORM TYPE CP-33 LOCATION C						
LOCATION	TRACK	SIGNAL HOUSE DIM. "X" x "L"	"X" EXIST. GRADE ELEV. (LOW/HIGH)	"Y" FIN. FLOOR ELEV.	STAIR SIDE	FOUNDATION TYPE
CP-33 LOC C	AS DRAWN	10'-0" x 40'-0"	2.0'/4.0'	18.0'	BOTH	MICROPILE IN SOIL

LOCATED IN CROTON-ON-HUDSON

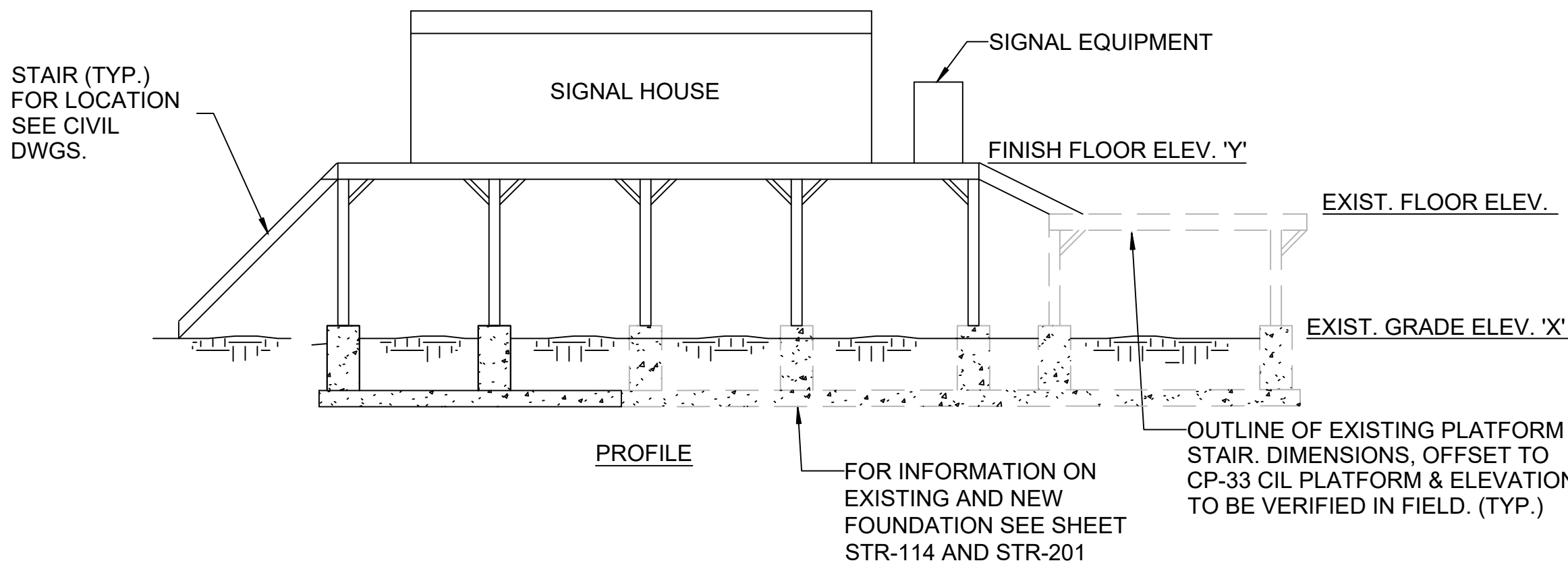


2 OVERALL PLATFORM PLAN AND ELEVATION - CP-33 CIL
SCALE: 1/8" = 1'-0"

PLATFORM TYPE CP-33 CIL						
LOCATION	TRACK	SIGNAL HOUSE DIM. "X" x "L"	"X" EXIST. GRADE ELEV.	"Y" FIN. FLOOR ELEV.	STAIR SIDE	FOUNDATION TYPE
CP-33 CIL	AS DRAWN	10'-0" x 44'-0"	6.0'	18.0' (SEE NOTE)	BOTH	MAT

NOTE: WHERE NEW STRUCTURE BEING INSTALLED IS ADJACENT TO EXISTING STRUCTURE INSTALLED BY OTHERS, THE CONTRACTOR SHALL VERIFY THE ELEVATION AND LOCATION OF THE EXISTING STRUCTURE AND MAKE SUCH ADJUSTMENTS AS ARE NECESSARY TO CONSTRUCT NEW STRUCTURE AS DEPICTED.

LOCATED IN CROTON-ON-HUDSON



3 OVERALL PLATFORM PLAN AND ELEVATION PROFILE - CP-33 CIL
SCALE: 1/8" = 1'-0"

NOTES:

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- FOR PLATFORM FRAMING PLANS, SEE SHEETS STR-111 THROUGH STR-121.
- FOR FOUNDATION INFORMATION, SEE SHEETS STR-201 THROUGH STR-204.
- DENOTES COMMUNICATIONS AND ELECTRICAL EQUIPMENT OVERALL DIMENSIONS & LOCATION ON PLATFORM. SEE SYSTEMS, SIGNAL POWER, AND SNOWMELTER DRAWINGS FOR MORE INFORMATION.
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NO.	DATE	MODIFICATION	DRAWN	CHKD.	APPRVD.	NO.	DATE	MODIFICATION	DRAWN
REVISIONS					REVISIONS				

DESIGNED	G.C.P.
DRAWN	G.C.P.
CHECKED	S.H.V.
APPROVED	A.I.A.

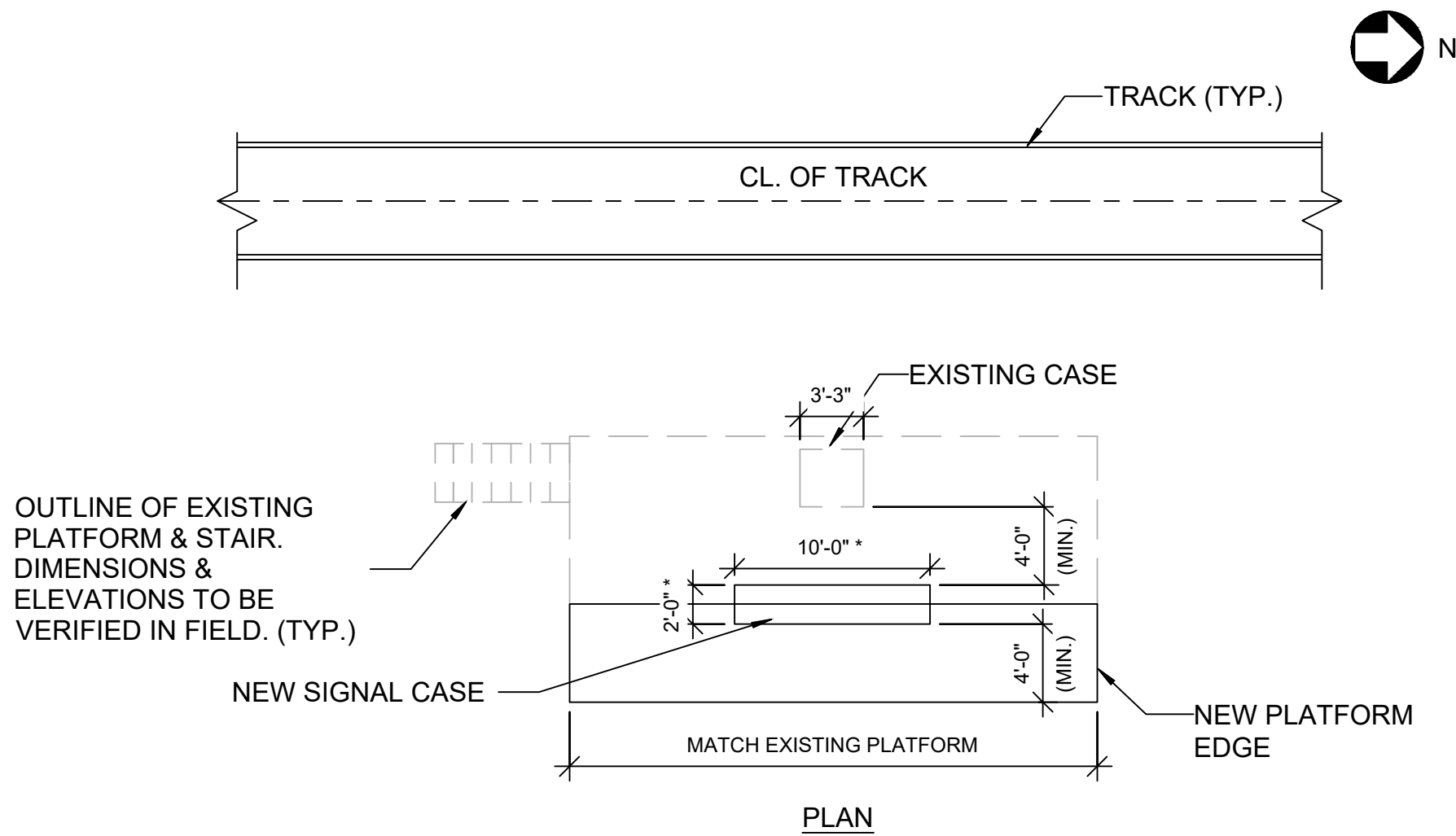
Gannett Fleming
Transit & Rail Systems
GANNETT FLEMING/CWA, a joint venture
TWO PENN PLAZA, SUITE 552
380 SEVENTH AVENUE
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PRJ: 059824

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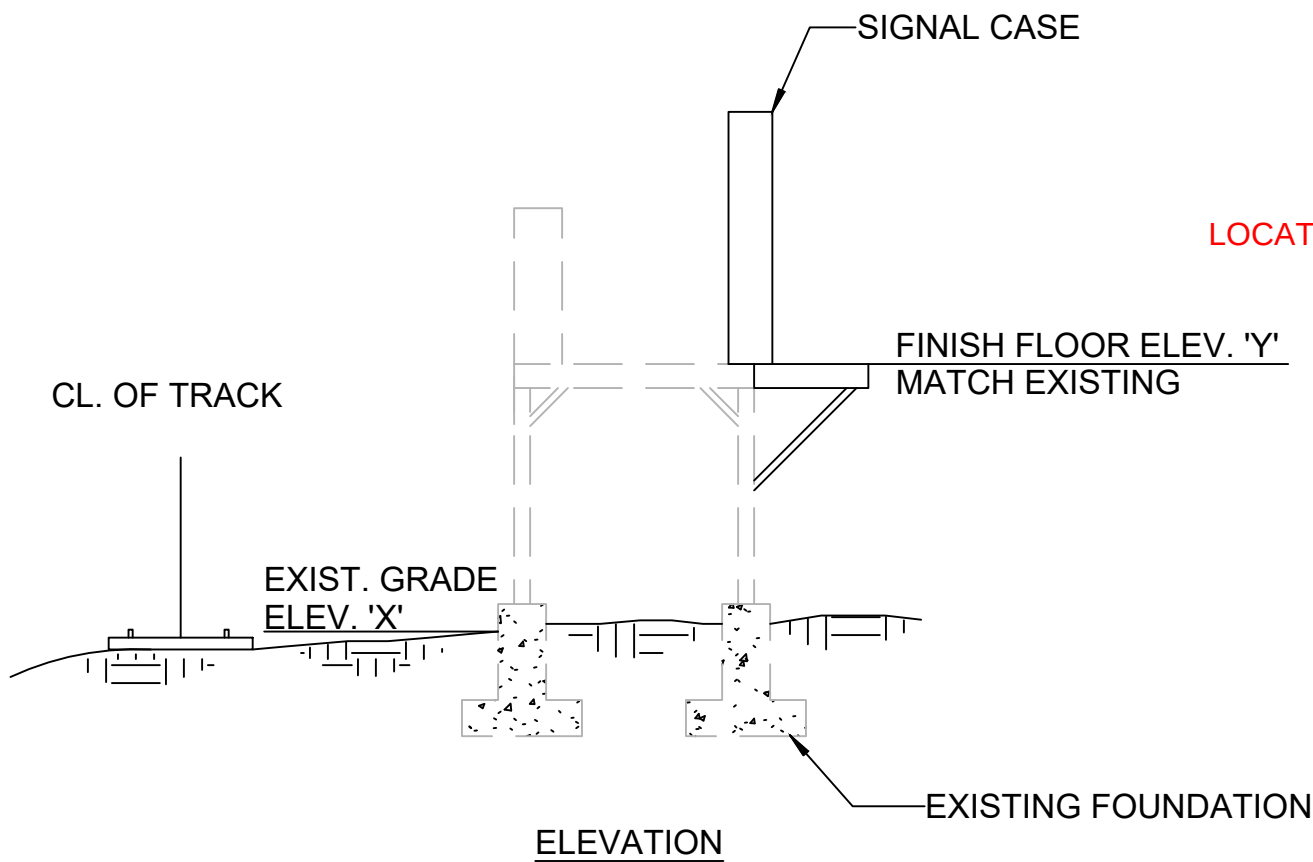
HUDSON LINE C&S IMPROVEMENTS
EQUIPMENT INSTALLATIONS
MP-32 TO MP-76

STRUCTURAL PLATFORMS
OVERALL PLATFORM
PLAN AND ELEVATION - IV

CONTRACT NUMBER		39462
SCALE:	AS SHOWN	DATE: 11/04/2022
DRAWING NUMBER		STR-104
SHEET	189	OF 610

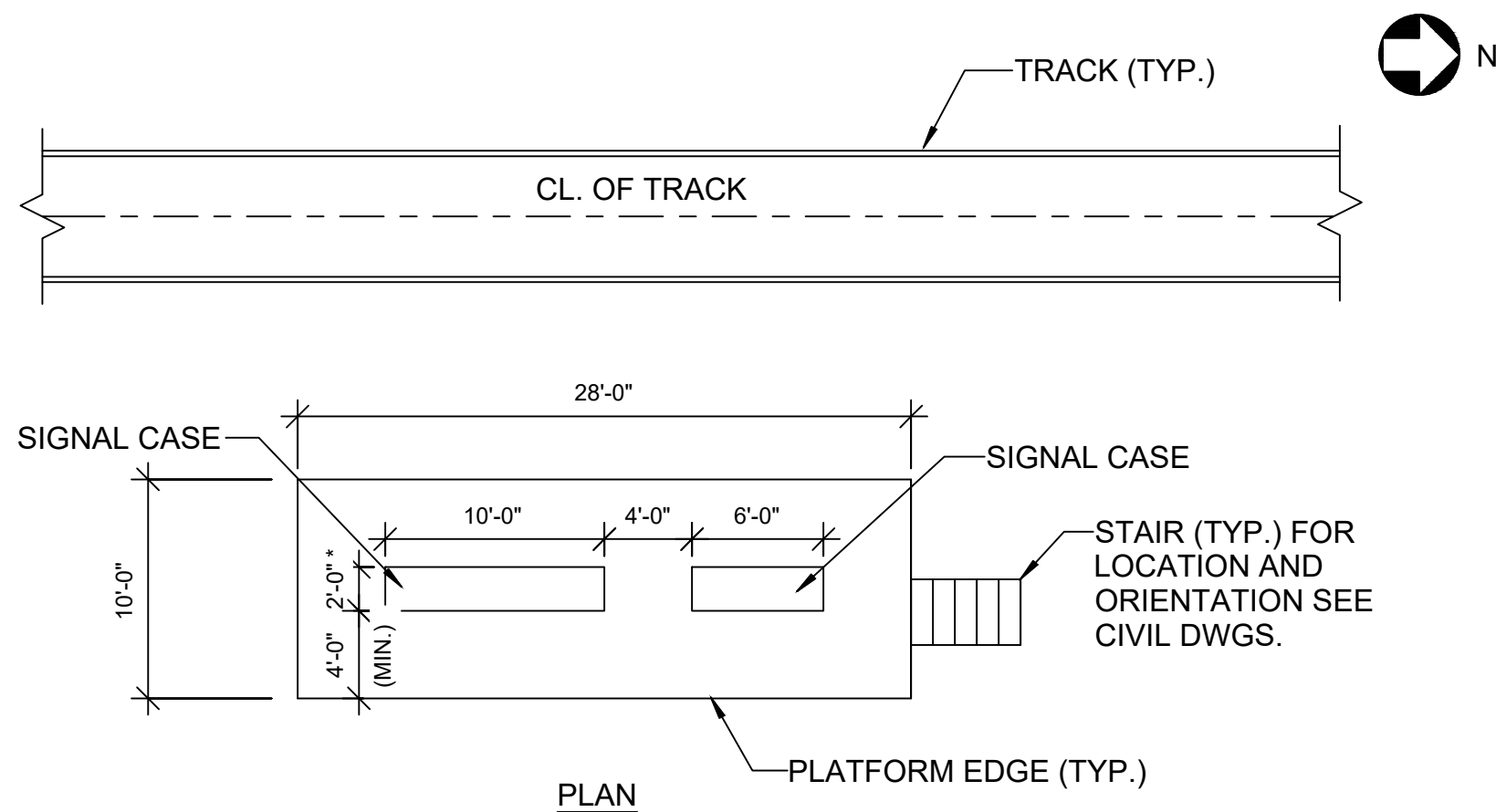


① **OVERALL PLATFORM PLAN AND ELEVATION - CP-33 LOC. G**
SCALE: 1/8" = 1'-0"

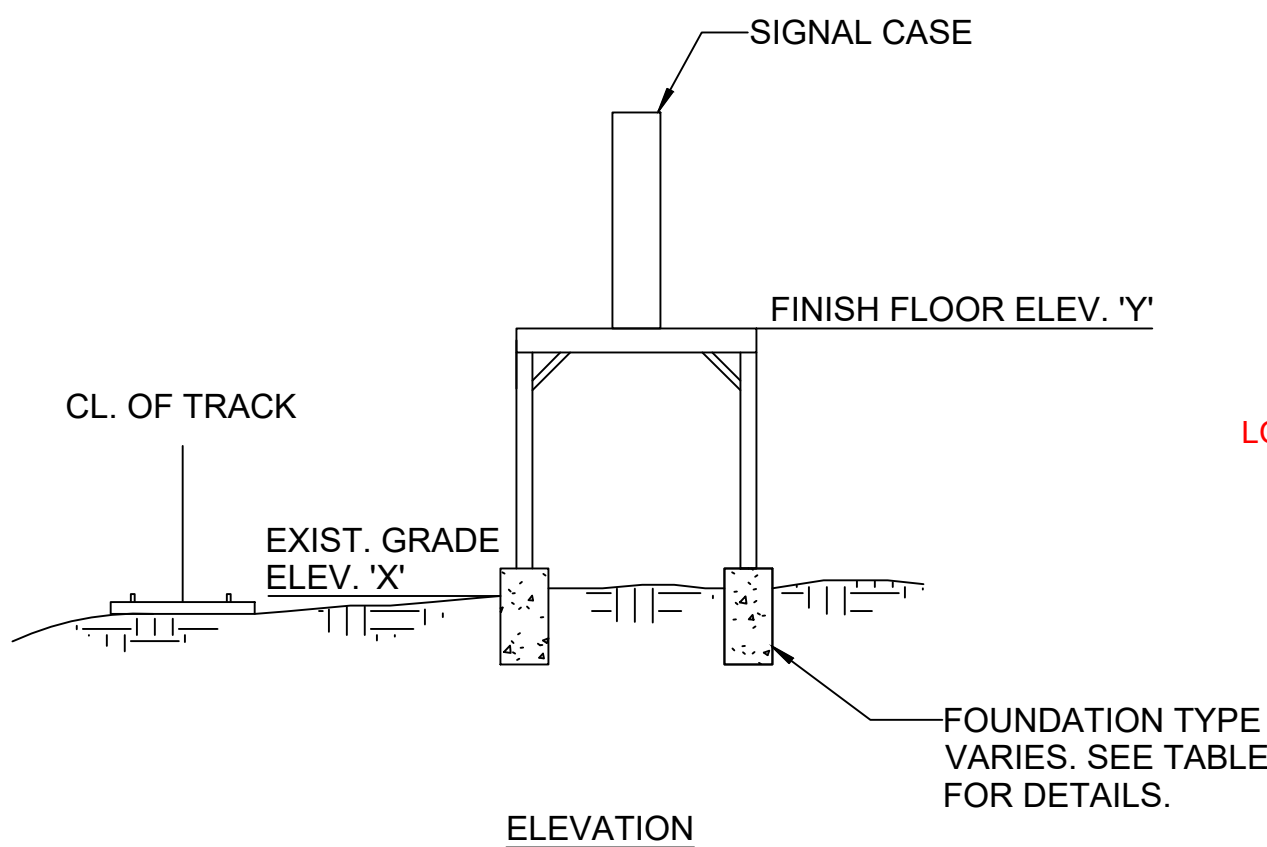


PLATFORM TYPE CP-33 LOC. G						
LOCATION	TRACK	SIGNAL CASE DIM. "X" X "Y"	'X' EXIST GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV.	STAIR SIDE	FOUNDATION TYPE
CP-33 LOC. G	AS DRAWN	2'-0" X 10'-0"	6.0'	15.0'	SOUTH (EXISTING)	EXISTING

LOCATED IN CROTON-ON-HUDSON



② **OVERALL PLATFORM PLAN AND ELEVATION - CP-34 LOC. A**
SCALE: 1/8" = 1'-0"



PLATFORM TYPE CP-34 LOC. A						
LOCATION	TRACK	SIGNAL CASE/EQUIP. DIM.	'X' EXIST GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV.	STAIR SIDE	FOUNDATION TYPE
CP-34 LOC. A	AS DRAWN	VARIES	12.0'	18.0'	NORTH	MICROPILE IN SOIL

LOCATED IN CROTON-ON-HUDSON

NOTES:

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95% SUBMISSION

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REVISIONS																																															

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DESIGNED	G.C.P.
DRAWN	G.C.P.
CHECKED	S.H.V.
APPROVED	A.I.A.



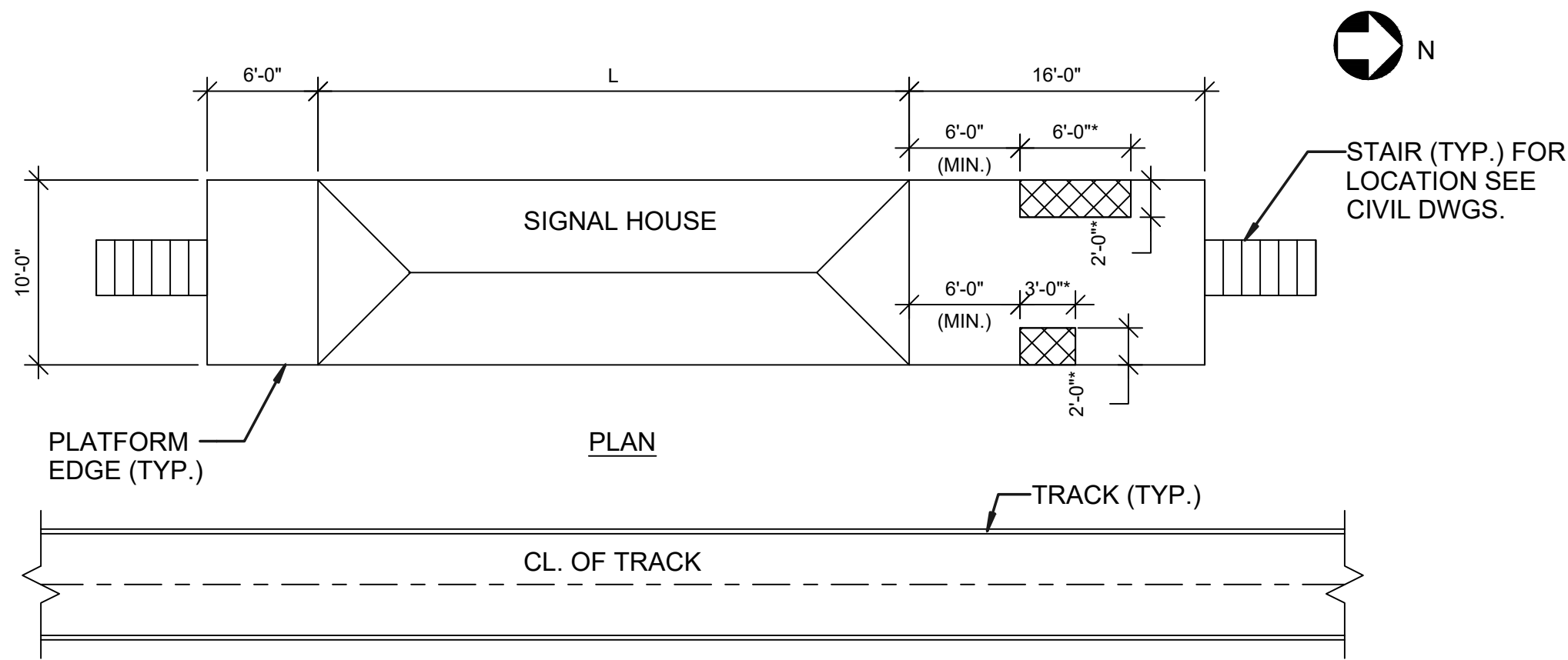
GANNETT FLEMING/CWA, a joint venture
TWO PENN PLAZA, SUITE 552
380 SEVENTH AVENUE
NEW YORK, NY 10121-0101
PRJ: 059824



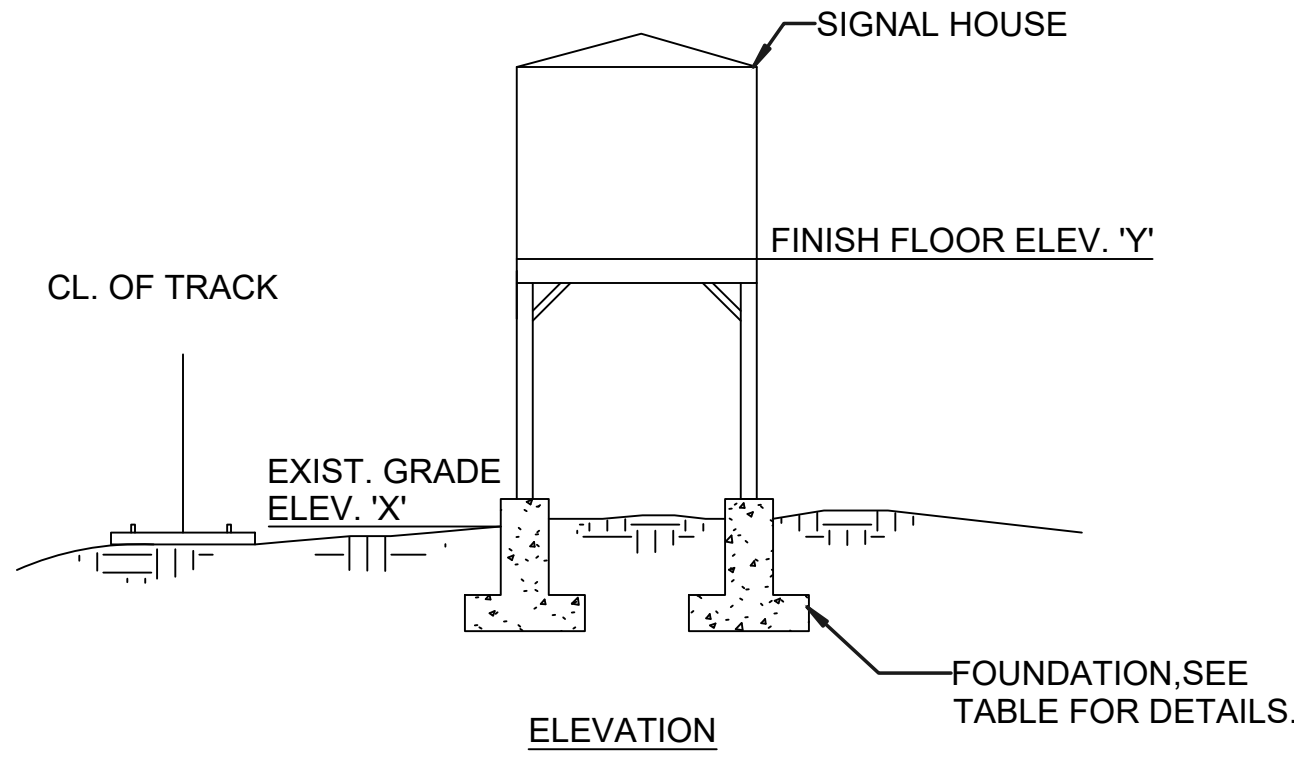
347 MADISON AVENUE
NEW YORK, N.Y. 10017

HUDSON LINE C&S IMPROVEMENTS
EQUIPMENT INSTALLATIONS
MP-32 TO MP-76
STRUCTURAL PLATFORMS
OVERALL PLATFORM
PLAN AND ELEVATION - V

CONTRACT NUMBER		39462
SCALE:	AS SHOWN	DATE: 11/04/2022
DRAWING NUMBER		STR-105
SHEET	190	OF 610

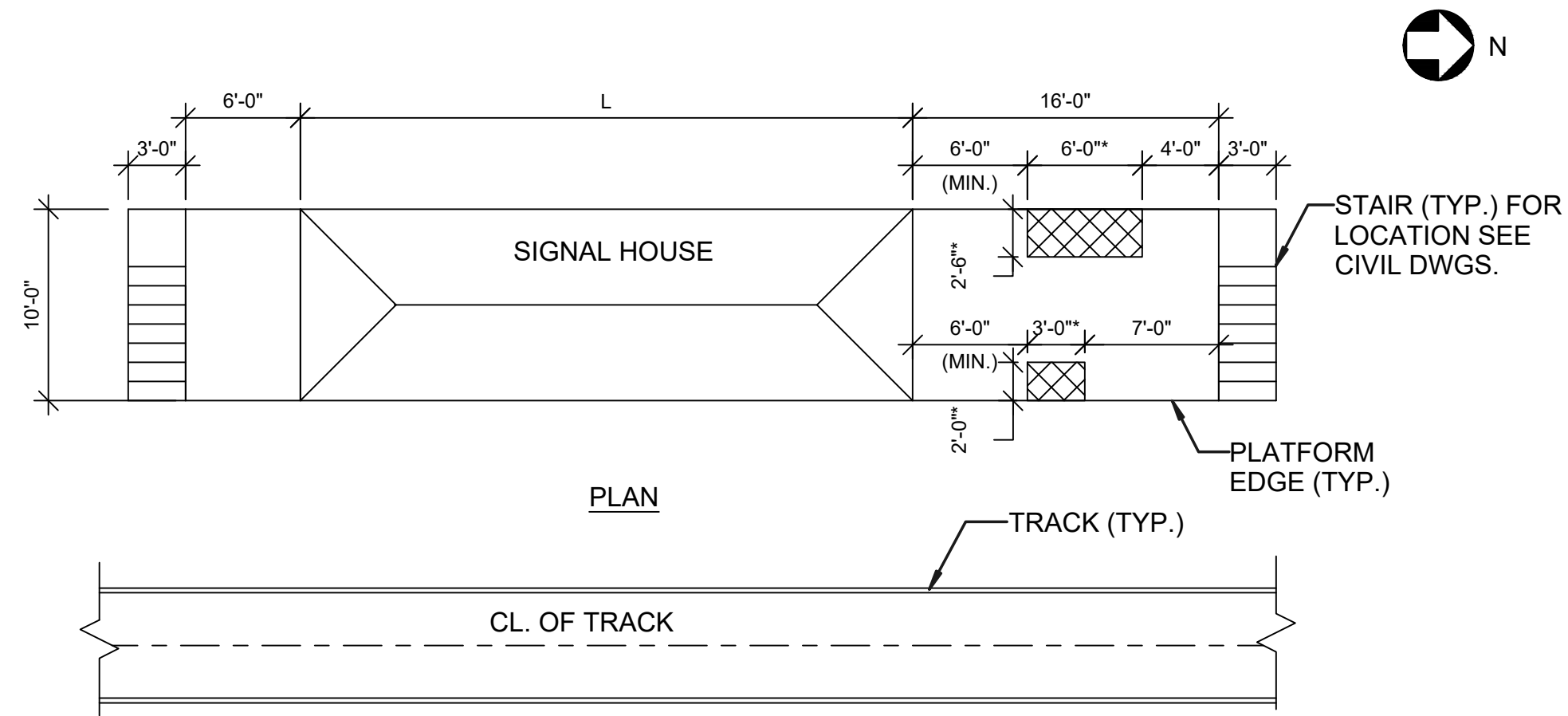


① OVERALL PLATFORM PLAN AND ELEVATION - CP-34 CIL
SCALE: 1/8" = 1'-0"

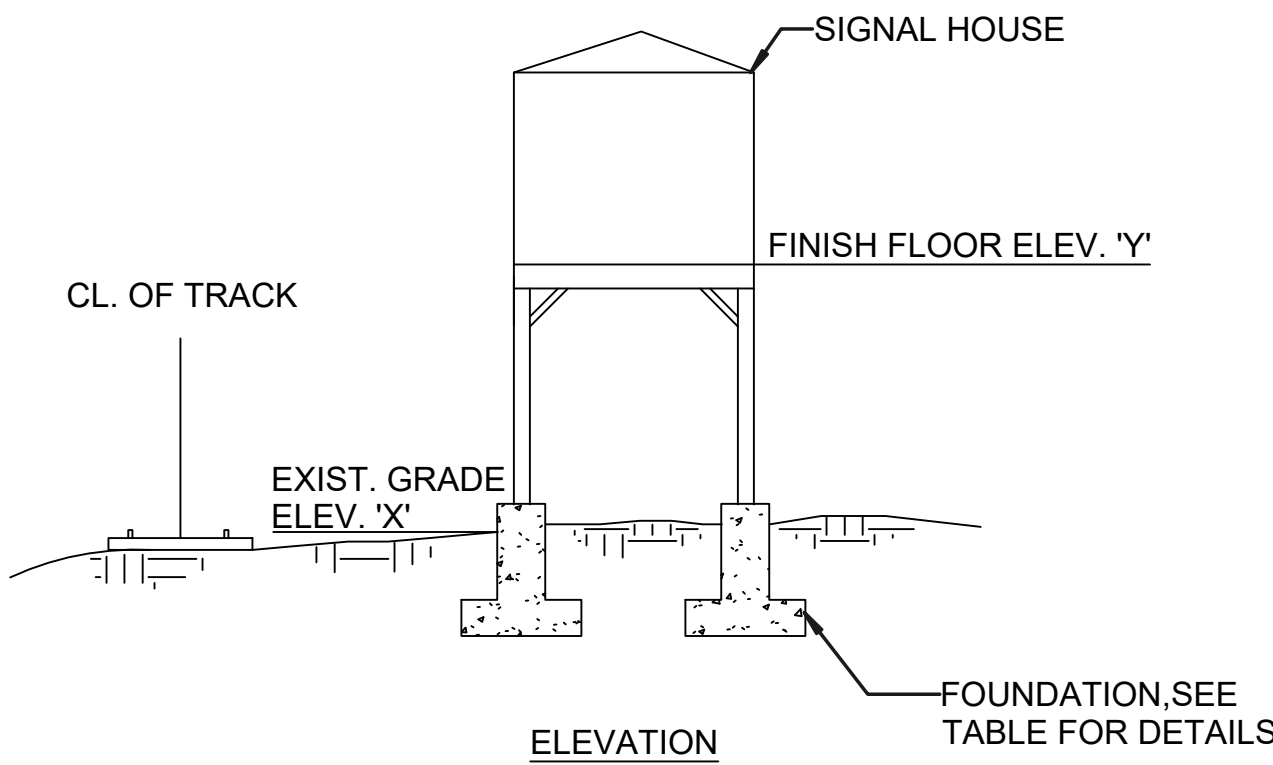


PLATFORM TYPE CP-34 CIL						
LOCATION	TRACK LOCATION	SIGNAL HOUSE DIM. "XX x L"	'X' EXIST. GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV	STAIR SIDE	FOUNDATION TYPE
CP-34 CIL/SMC-34	AS DRAWN	10'-0" x 44'-0"	14.0'/15.0'	18.0'	BOTH	MICROPILE IN SOIL

LOCATED IN CROTON-ON-HUDSON

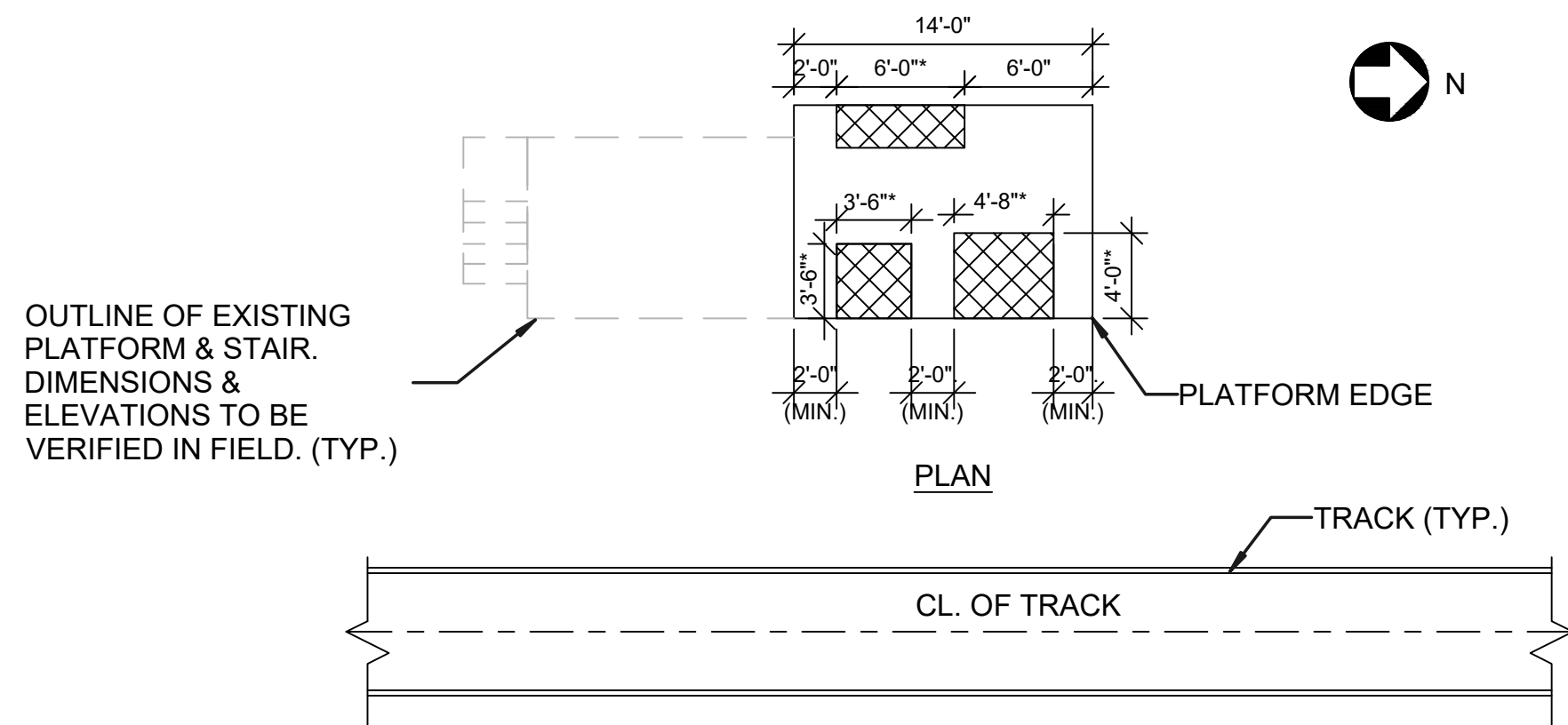


② OVERALL PLATFORM PLAN AND ELEVATION - CP-35 CIL
SCALE: 1/8" = 1'-0"

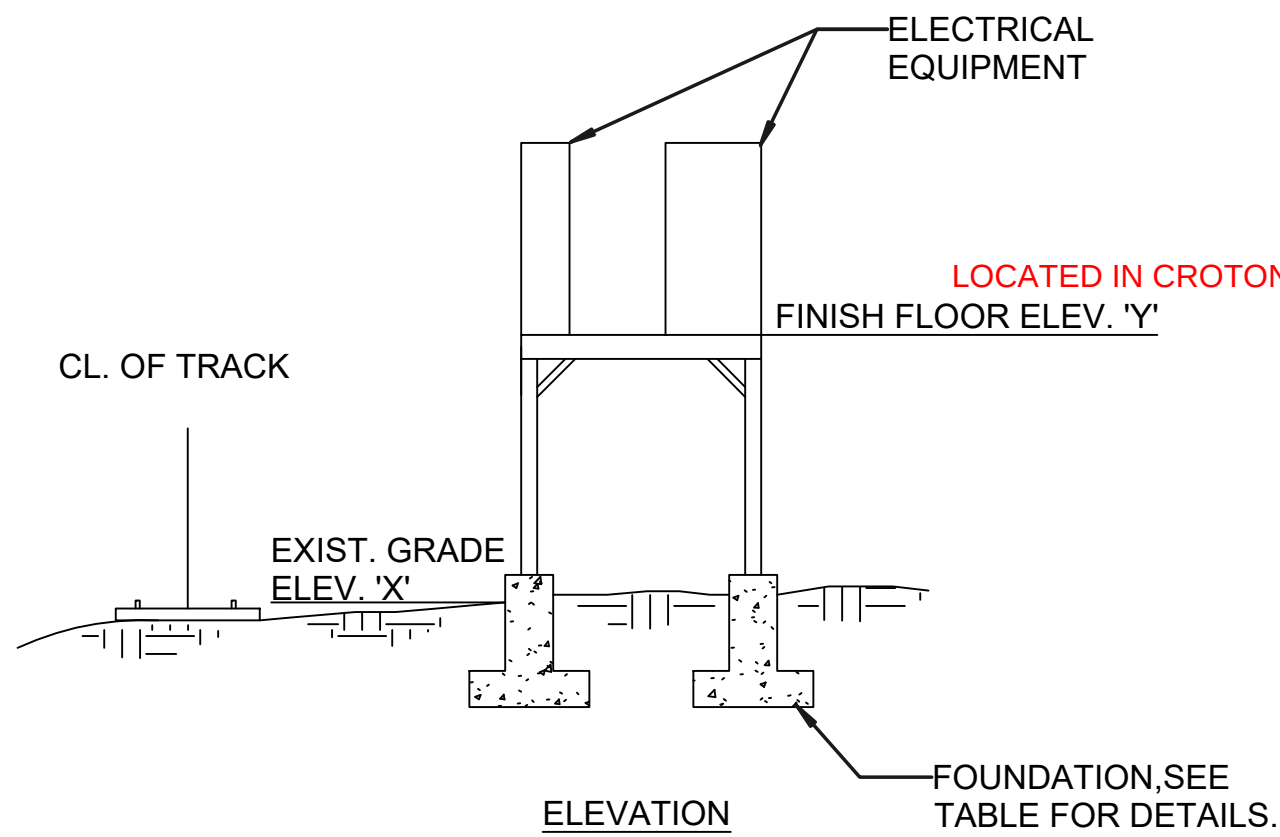


PLATFORM TYPE CP-35 CIL						
LOCATION	TRACK LOCATION	SIGNAL HOUSE DIM. "XX x L"	'X' EXIST. GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV	STAIR SIDE	FOUNDATION TYPE
CP-35 CIL	AS DRAWN	10'-0" x 44'-0"	8.0'/11.0'	18.0'	BOTH	SPREAD FOOTING ON SOIL

LOCATED IN CROTON-ON-HUDSON



③ OVERALL PLATFORM PLAN AND ELEVATION - SHP-1
SCALE: 1/8" = 1'-0"



PLATFORM TYPE SHP-1						
LOCATION	TRACK LOCATION	DIM.	'X' EXIST. GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV	STAIR SIDE	FOUNDATION TYPE
SHP-1	AS DRAWN	VARIES, SEE PLAN	7.0'/10.0'	18.0'	NONE	DRILLED SHAFT IN SOIL

NOTE: WHERE NEW STRUCTURE BEING INSTALLED IS ADJACENT TO AN EXISTING STRUCTURE INSTALLED BY OTHERS, THE CONTRACTOR SHALL VERIFY THE ELEVATION AND LOCATION OF THE EXISTING STRUCTURE AND MAKE SUCH ADJUSTMENTS AS ARE NECESSARY TO MATCH DIMENSIONS & ELEVATIONS.

NOTES:

- FOR GENERAL SITE PLAN, STATION INFORMATION, LOCATION OF SIGNAL HOUSES, SIGNAL CASES, AND OTHER EQUIPMENT ALONG THE TRACK, SEE CIVIL DRAWINGS.
- FOR PLATFORM FRAMING PLANS, SEE SHEETS STR-111 THROUGH STR-121.
- FOR FOUNDATION INFORMATION, SEE SHEETS STR-201 THROUGH STR-204.
- XXXX DENOTES COMMUNICATIONS AND ELECTRICAL EQUIPMENT OVERALL DIMENSIONS & LOCATION ON PLATFORM. SEE SYSTEMS, SIGNAL POWER, AND SNOWMELTER DRAWINGS FOR MORE INFORMATION.
- EXISTING GRADE VARIES. TOP OF FOUNDATION VARIES WITH RESPECT TO EXISTING GRADE. SEE FOUNDATION DETAILS ON SHEETS STR-201 THROUGH STR-204 FOR MORE INFORMATION.
- " " " DIMENSIONS REPRESENT MINIMUM REQUIRED CLEARANCES FOR METRO NORTH AND VENDOR SUPPLIED EQUIPMENT. CONTRACTOR TO COORDINATE CLEARANCES WITH VENDOR APPROVED DRAWINGS AND REQUIRED DIMENSIONS AND CLEARANCES FOR CONTRACTOR SUPPLIED EQUIPMENT.

95% SUBMISSION

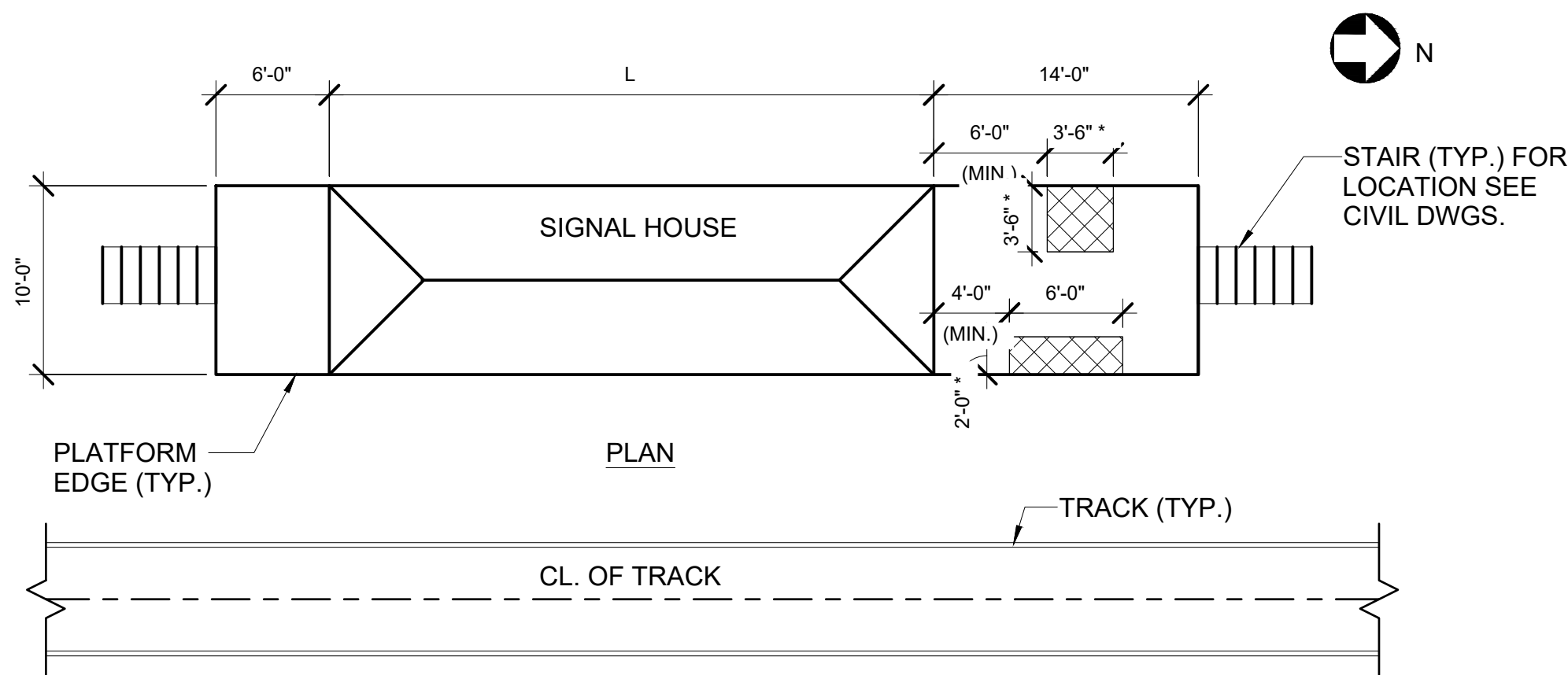
DISCLAIMER									
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NO.	DATE	MODIFICATION	DRAWN	CHKD.	APPRVD.	NO.	DATE	MODIFICATION	DRAWN
REVISIONS									

DESIGNED	G.C.P.
DRAWN	G.C.P.
CHECKED	S.H.V.
APPROVED	A.I.A.

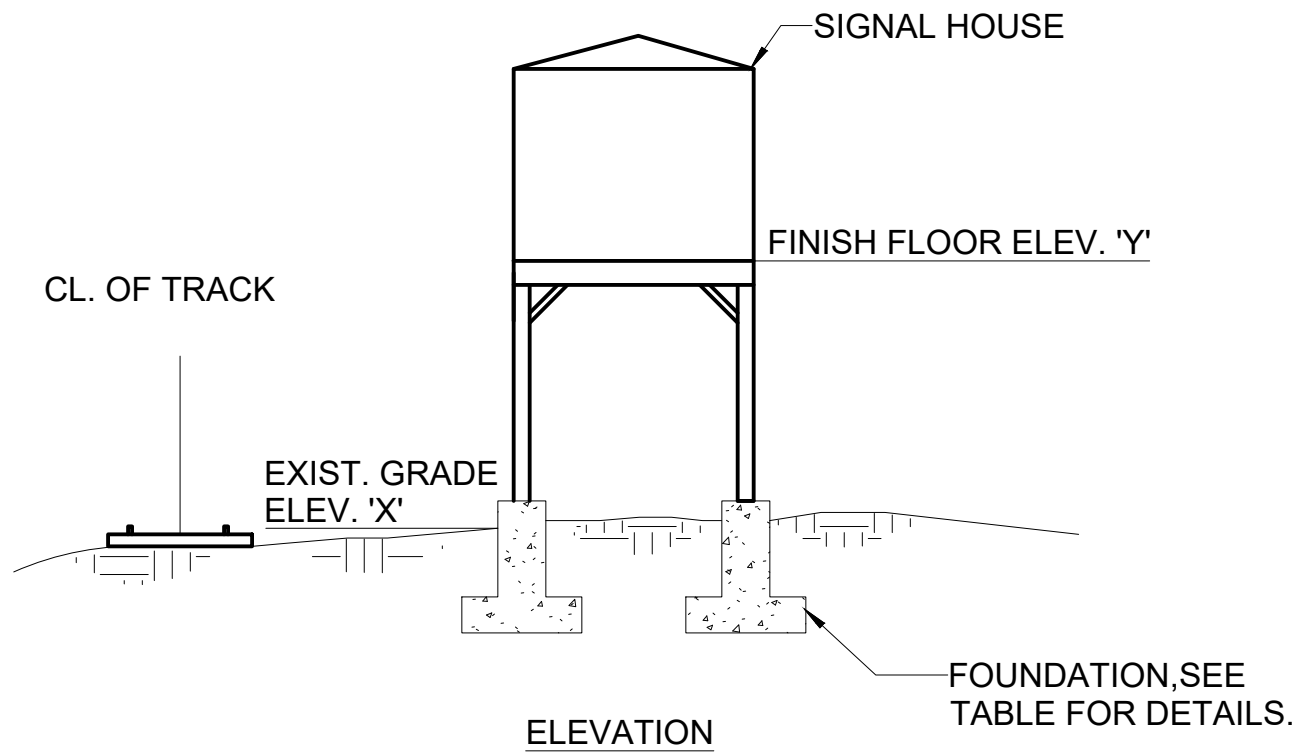
Gannett Fleming / CWA
TRANIT & RAIL SYSTEMS
GANNETT FLEMING/CWA, a joint venture
TWO PENN PLAZA, SUITE 552
380 SEVENTH AVENUE
NEW YORK, NY 10121-0101
PRJ: 059824

MTA Metro-North Railroad
347 MADISON AVENUE
NEW YORK, N.Y. 10017

HUDSON LINE C&S IMPROVEMENTS EQUIPMENT INSTALLATIONS MP-32 TO MP-76		CONTRACT NUMBER 39462	
STRUCTURAL PLATFORMS OVERALL PLATFORM PLAN AND ELEVATION - VI		SCALE: AS SHOWN	DATE: 11/04/2022
		DRAWING NUMBER STR-106	
		SHEET 191	OF 610

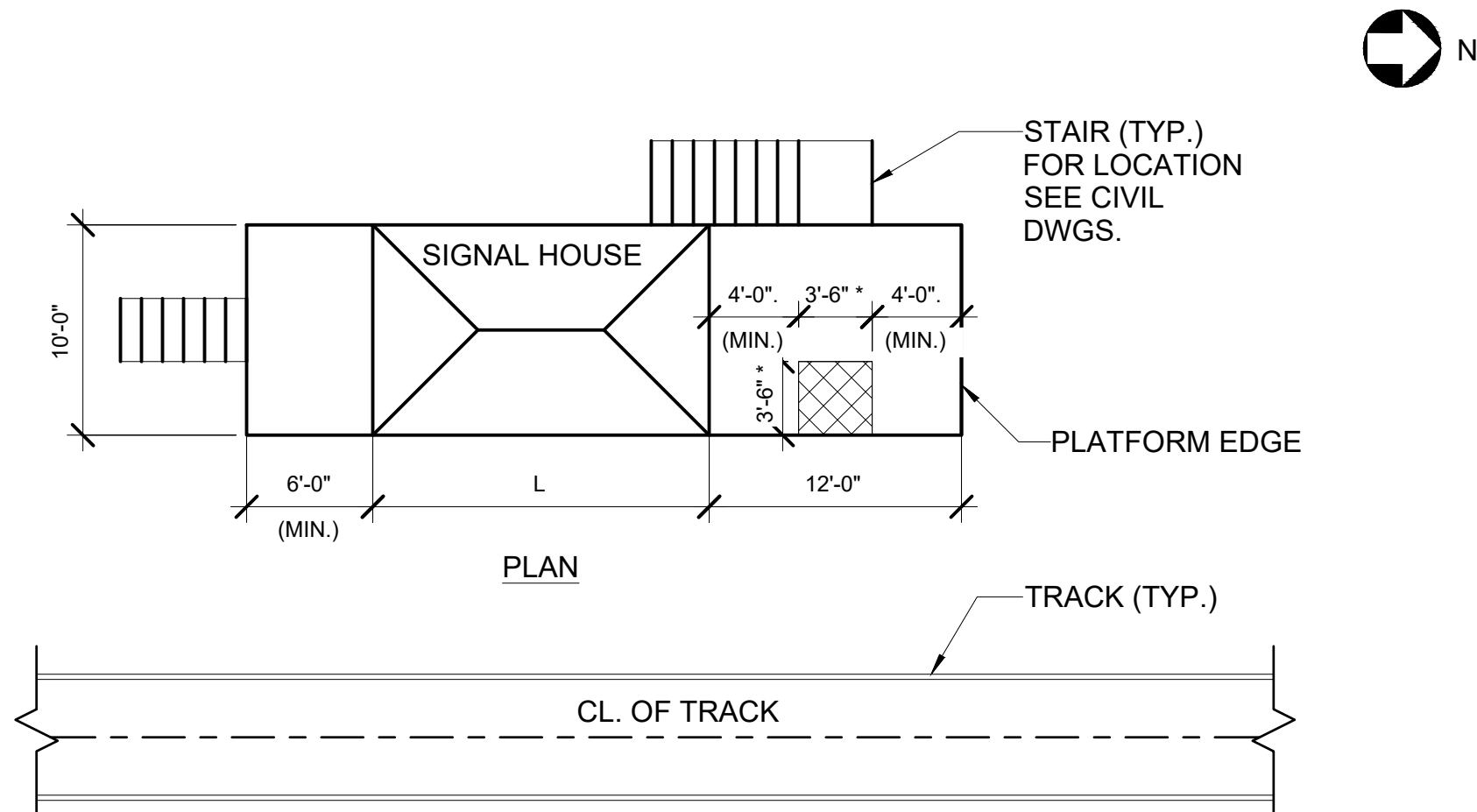


1 **OVERALL PLATFORM PLAN AND ELEVATION - CP-36 CIL**
SCALE: 1/8" = 1'-0"

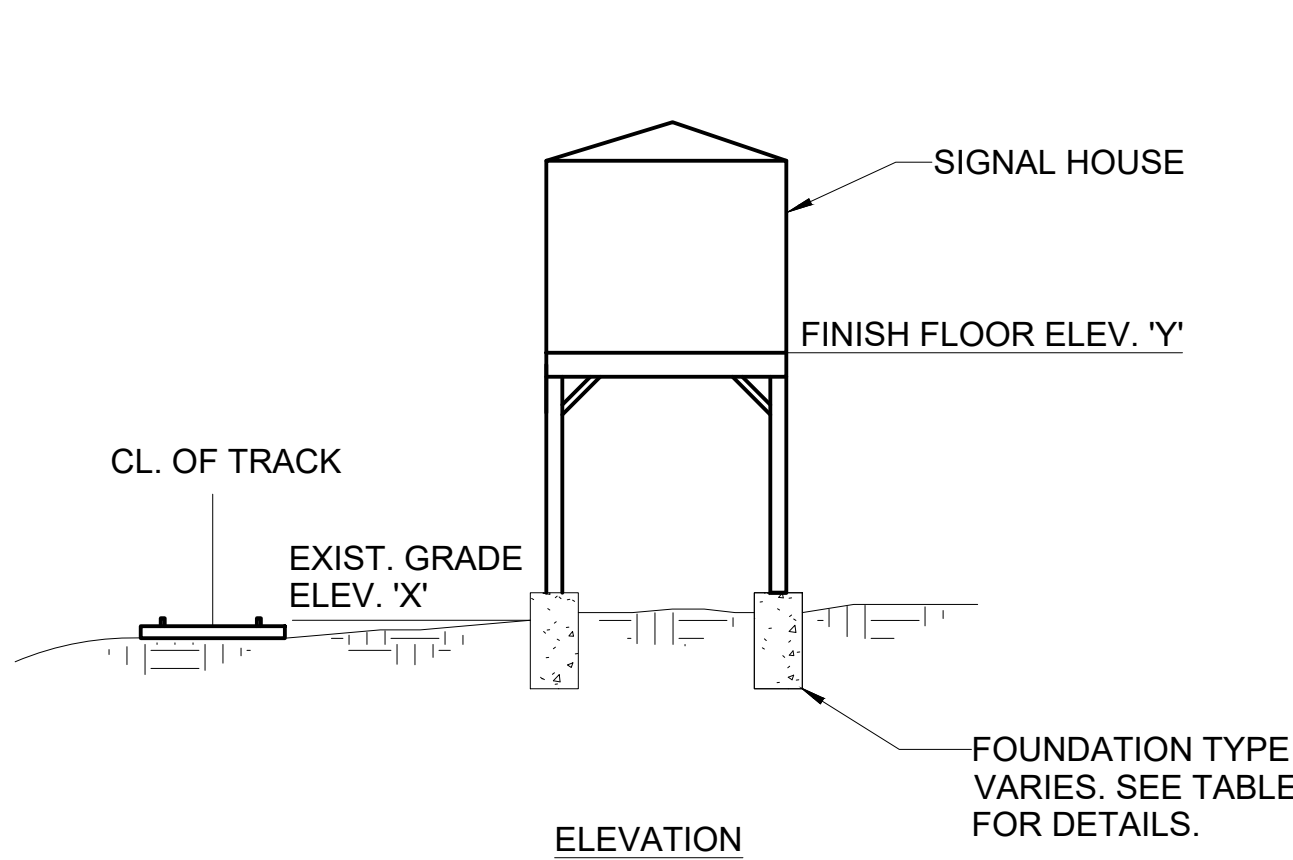


PLATFORM TYPE CP-36 CIL						
LOCATION	TRACK LOCATION	SIGNAL HOUSE DIM. "XX x L"	'X' EXIST GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV.	STAIR SIDE	FOUNDATION TYPE
CP-36 CIL	AS DRAWN	10'-0" x 40'-0"	6.0/8.0'	18.0'	BOTH	SPREAD FOOTING ON SOIL

LOCATED IN CROTON-ON-HUDSON



2 **OVERALL PLATFORM PLAN AND ELEVATION - ML-419**
SCALE: 1/8" = 1'-0"



PLATFORM TYPE ML-419						
LOCATION	TRACK LOCATION	SIGNAL HOUSE DIM. "XX x L"	'X' EXIST GRADE ELEV. (LOW/HIGH)	'Y' FIN. FLOOR ELEV.	STAIR SIDE	FOUNDATION LOCATION
ML-419	AS DRAWN	10'-0" x 20'-0"	4.0/9.0'	18.0'	BOTH	DRILLED SHAFT IN SOIL

NOTES:

- FOR GENERAL SITE PLAN, STATION INFORMATION, LOCATION OF SIGNAL HOUSES, SIGNAL CASES, AND OTHER EQUIPMENT ALONG THE TRACK, SEE CIVIL DRAWINGS.
- FOR PLATFORM FRAMING PLANS, SEE SHEETS STR-111 THROUGH STR-121.
- FOR FOUNDATION INFORMATION, SEE SHEETS STR-201 THROUGH STR-204.
-  DENOTES COMMUNICATIONS AND ELECTRICAL EQUIPMENT OVERALL DIMENSIONS & LOCATION ON PLATFORM. SEE SYSTEMS, SIGNAL POWER, AND SNOWMELTER DRAWINGS FOR MORE INFORMATION.
- EXISTING GRADE VARIES. TOP OF FOUNDATION VARIES WITH RESPECT TO EXISTING GRADE. SEE FOUNDATION DETAILS ON SHEETS STR-201 THROUGH STR-204 FOR MORE INFORMATION.
- " * " DIMENSIONS REPRESENT MINIMUM REQUIRED CLEARANCES FOR METRO NORTH AND VENDOR SUPPLIED EQUIPMENT. CONTRACTOR TO COORDINATE CLEARANCES WITH VENDOR APPROVED DRAWINGS AND REQUIRED DIMENSIONS AND CLEARANCES FOR CONTRACTOR SUPPLIED EQUIPMENT.

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DISCLAIMER											
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NO.	DATE	MODIFICATION	DRAWN	CHKD.	APPRVD.	NO.	DATE	MODIFICATION	DRAWN	CHKD.	APPRVD.
REVISIONS						REVISIONS					

DESIGNED	G.C.P.
DRAWN	G.C.P.
CHECKED	S.H.V.
APPROVED	A.I.A.

**Gannett Fleming**
Transit & Rail Systems / **CWA**

GANNETT FLEMING/CWA, a joint venture
TWO PENN PLAZA, SUITE 552
380 SEVENTH AVENUE
NEW YORK, NY 10121-0101
PRJ: 059824

**Metro-North Railroad**
347 MADISON AVENUE
NEW YORK, N.Y. 10017

HUDSON LINE C&S IMPROVEMENTS
EQUIPMENT INSTALLATIONS
MP-32 TO MP-76

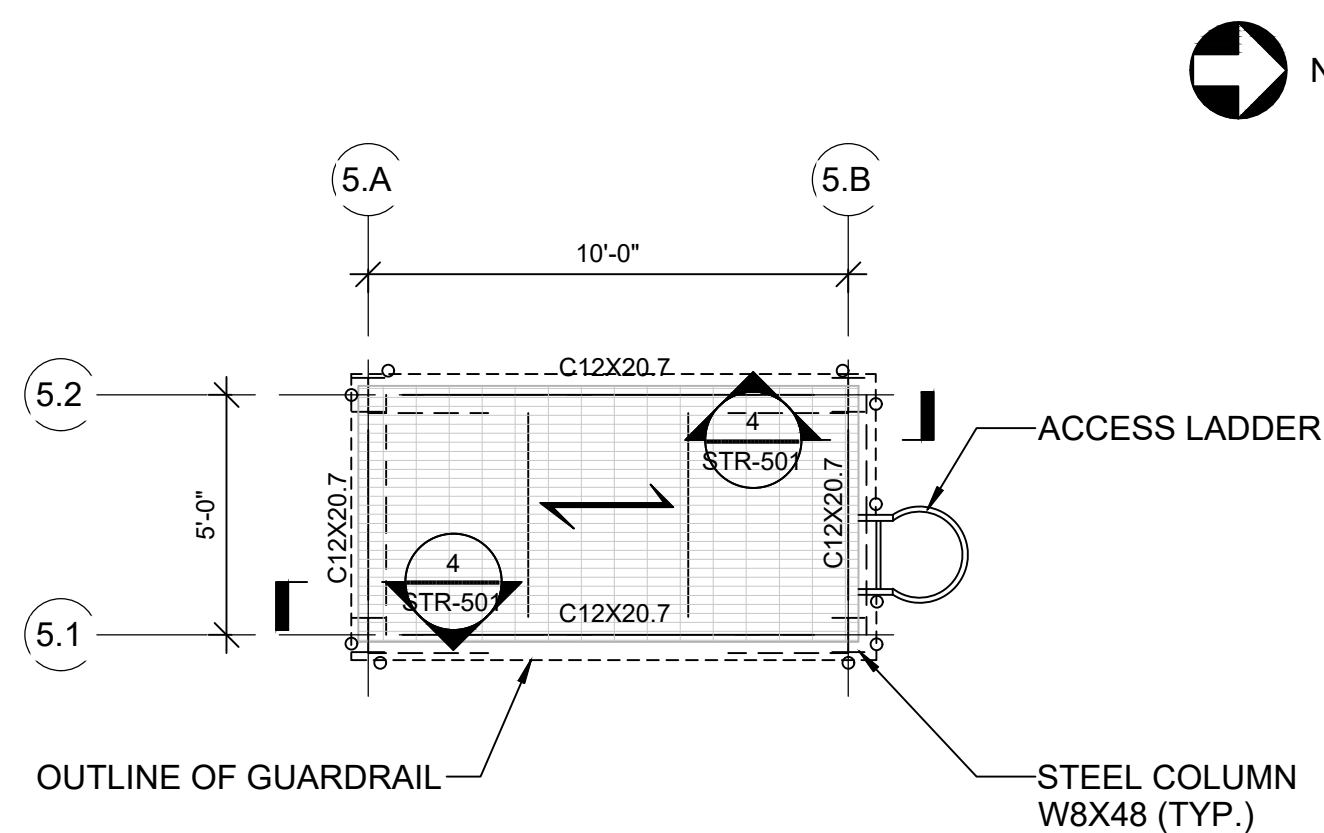
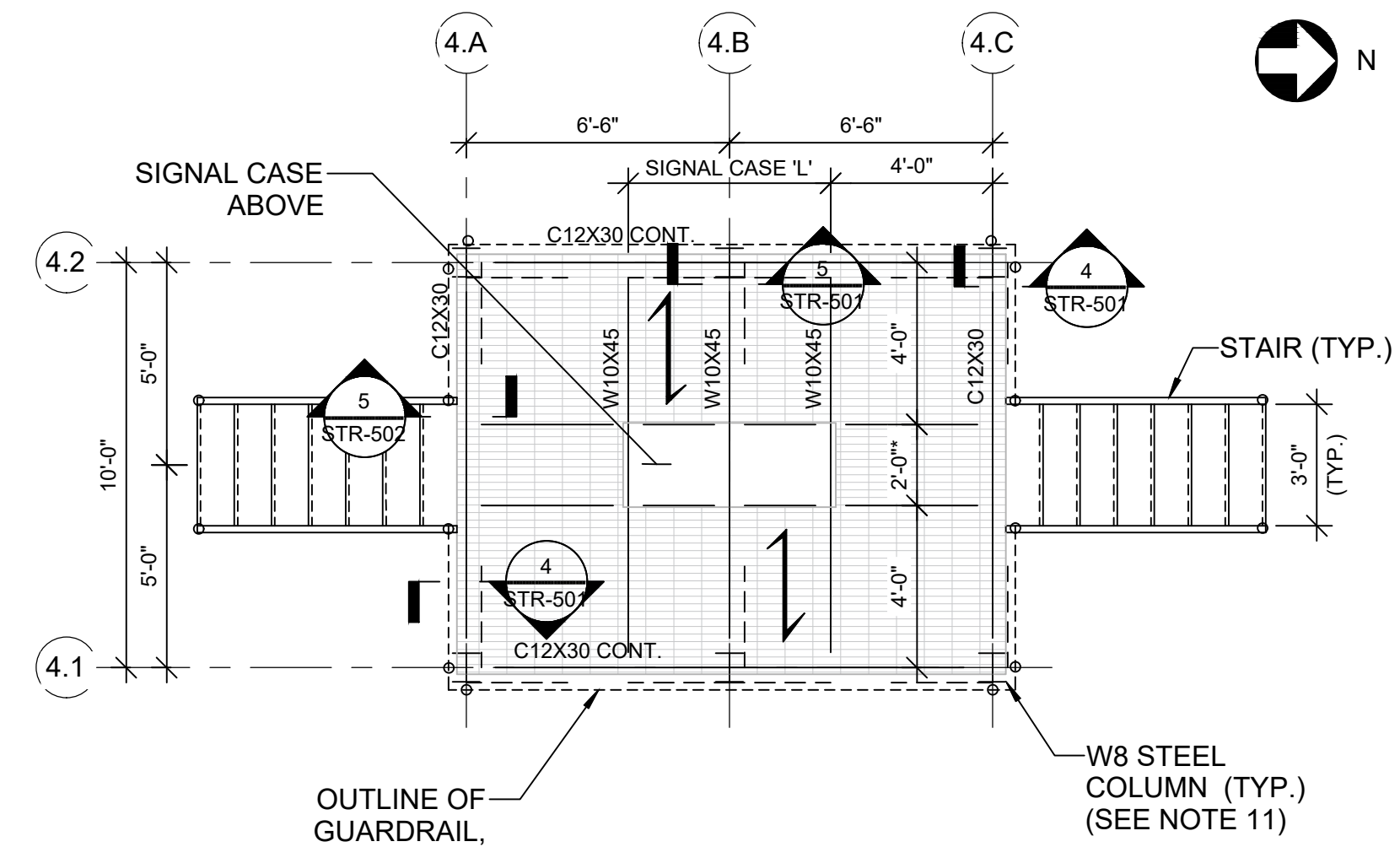
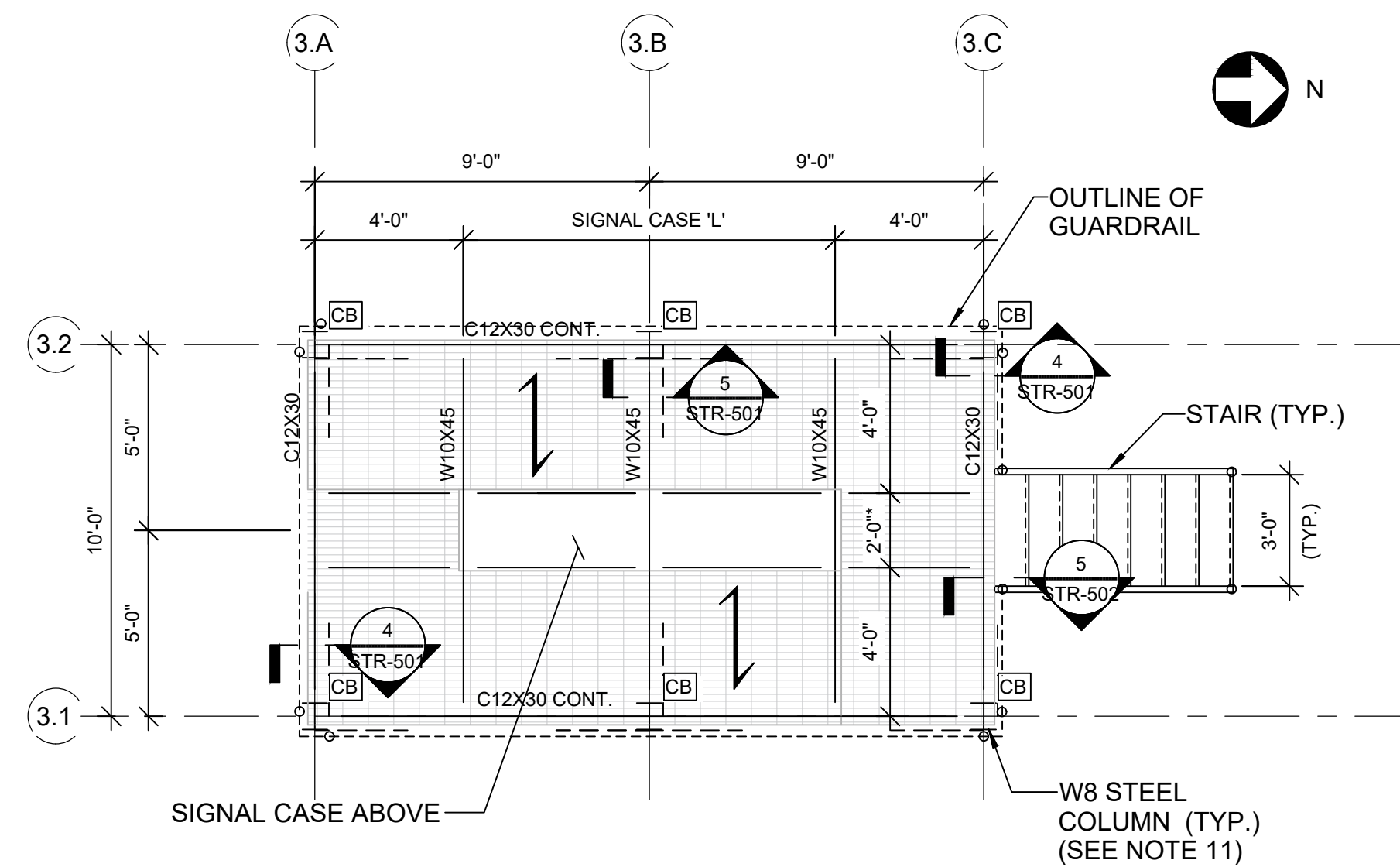
STRUCTURAL PLATFORMS
OVERALL PLATFORM
PLAN AND ELEVATION - VII

CONTRACT NUMBER		39462
SCALE:	AS SHOWN	DATE: 11/04/2022
DRAWING NUMBER		STR-107
SHEET	192	OF 610

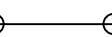


- ## 95% SUBMISSION

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NOTES:

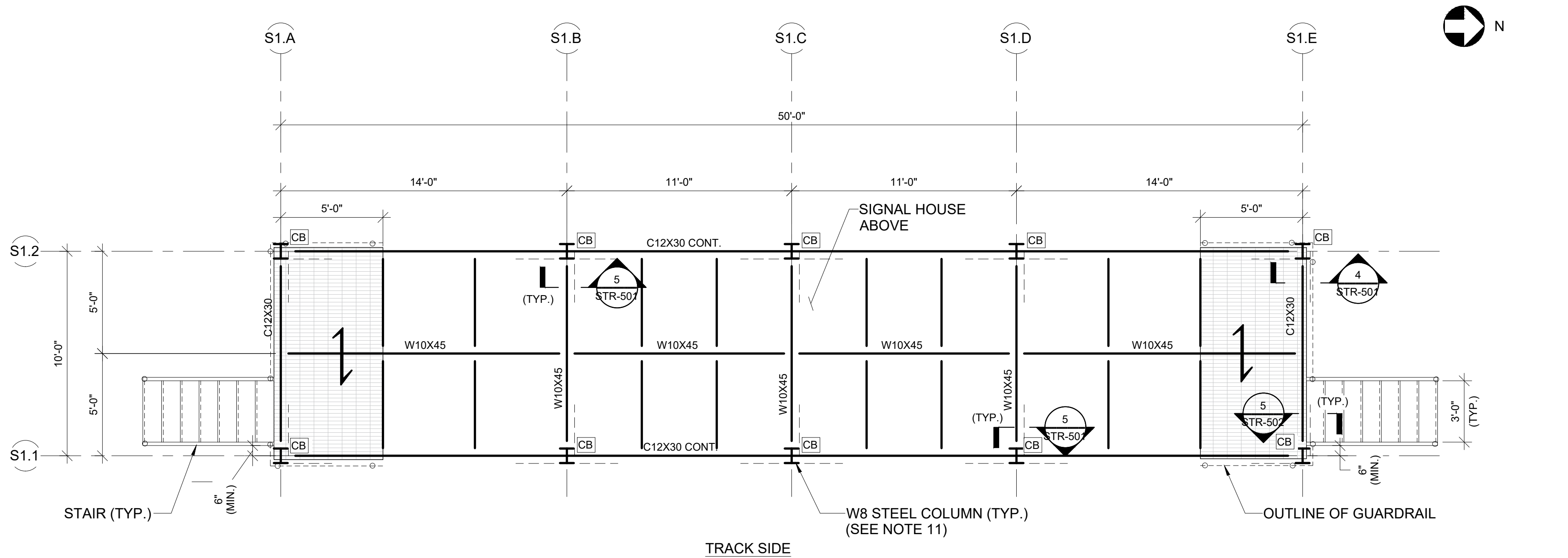
1. FOR OVERALL PLATFORM PLAN AND ELEVATION, TRACK LOCATION, EXISTING GRADE ELEVATION AND TOP OF FINISH FLOOR ELEVATION, SEE PLATFORM INFORMATION TABLES ON STR-101 TO STR-106.
2.  DENOTES 1 1/4"x 3/16" GALVANIZED STEEL GRATING TYPE SGW BY MCNICHOLS OR APPROVED EQUAL. TOP OF GRATING SHALL BE AT FINISH FLOOR ELEVATION. DIRECTION OF GRATING IS SHOWN AS  ON PLAN. PROVIDE SADDLE TYPE GRATING ANCHORS TO MATCH GRATING SPACED AT 2'-0" O.C. MAX IN EACH DIRECTION. FOR EXTENT OF GRATING SEE DETAIL 6 ON STR-502.
3. TOP OF STEEL TO BE 1 1/4" BELOW TOP OF GRATING UNLESS OTHERWISE NOTED THUS [+/- ...] INDICATING DISTANCE ABOVE OR BELOW TOP OF GRATING.
4. ALL FILLER BEAMS TO BE W8x24 AND SHALL BE EQUALLY SPACED WITHIN BAYS UNLESS OTHERWISE NOTED. MAXIMUM FILLER BEAM SPACING SHALL NOT EXCEED 4'-6".
5. DIMENSION NOTED AS 'L' REPRESENTS THE LENGTH OF THE SIGNAL HOUSE OR SIGNAL CASE. SEE PLATFORM INFORMATION TABLES ON DWG. STR-101 THROUGH STR-106.
6. - - - - INDICATES L3 1/2"x3 1/2"x1/2" KICKER BELOW. SEE STR-501 FOR DETAILS.
7.  INDICATES COLUMN BELOW.
8. STAIR LENGTH AND LOCATION VARIES DUE TO VARYING GRADE ELEVATIONS AT DIFFERENT SITES. CONTRACTOR TO VERIFY FINAL GRADE ELEVATIONS AND SUBMIT STAIR SHOP DRAWINGS FOR APPROVAL. FOR TYPICAL STRINGER CONNECTION AT TOP AND BOTTOM OF STAIR SEE STR-502. FOR STAIR FOUNDATION SEE STR-204. FOR LOCATION OF THE STAIR ALONG PLATFORM WIDTH, SEE CIVIL SITE DRAWINGS.
9. FOR GUARDRAIL INFORMATION AND CONNECTION DETAILS SEE STR-505.  DENOTES OUTLINE OF GUARDRAIL. PLACE GUARDRAIL POSTS AT MAX 3'-6" O.C. TYP.
10. " " " DIMENSIONS SHALL BE COORDINATED WITH VENDORS APPROVED DRAWINGS TO LOCATE EXACT BEAM LOCATION BASED ON EQUIPMENT SIZE & FRAMING REQUIREMENTS.
11. CONTRACTOR TO VERIFY EXISTING GRADE ELEVATION AT EVERY INDIVIDUAL PLATFORM LOCATION AND TO VERIFY STEEL COLUMN HEIGHT.
 - FOR COL. HEIGHT UP TO 10FT, USE W8x48.
 - FOR COL. HEIGHT BETWEEN 10FT TO 17FT, USE W8x67.

[illegible]

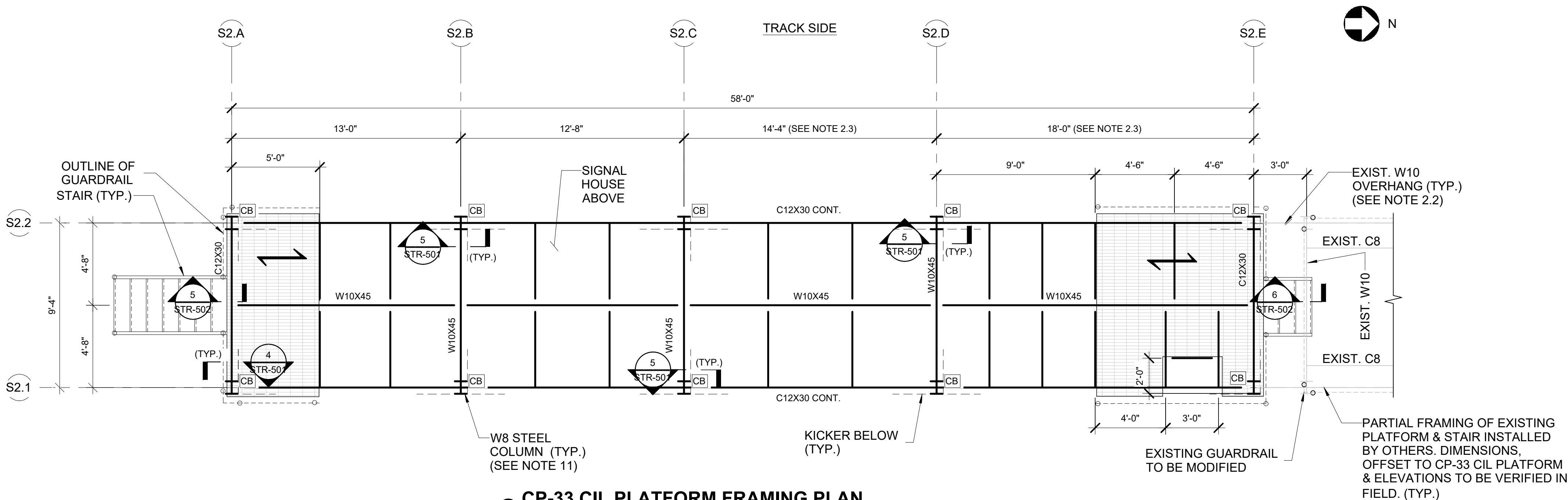


- ## 95% SUBMISSION

[illegible]



1 CP-33 LOCATION C- PLATFORM FRAMING PLAN
SCALE: 1/4" = 1'-0"

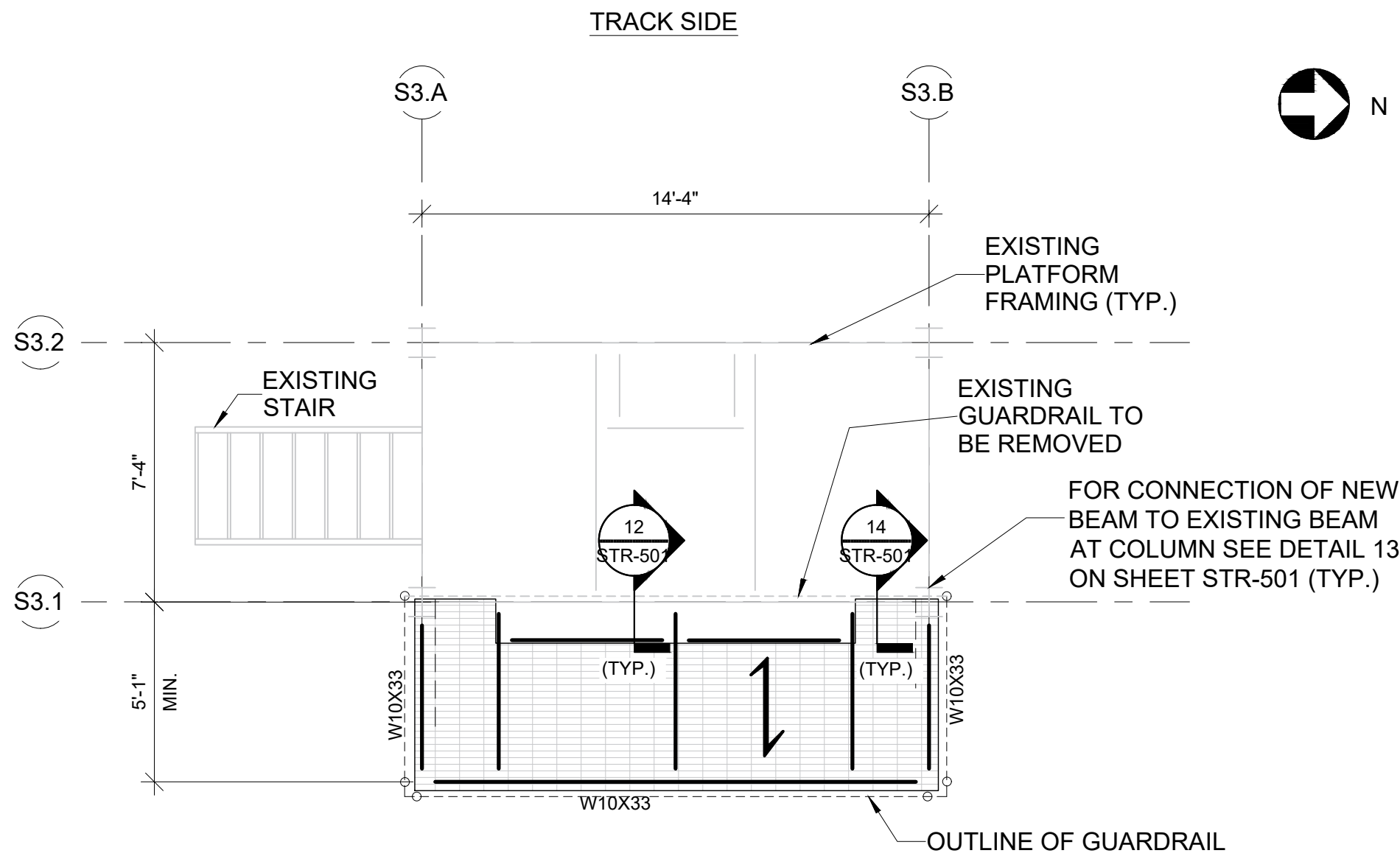


2 CP-33 CIL PLATFORM FRAMING PLAN
SCALE: 1/4" = 1'-0"

- NOTES:
- FOR OVERALL PLATFORM PLAN AND ELEVATION, TRACK LOCATION, EXISTING GRADE ELEVATION AND TOP OF FINISH FLOOR ELEVATION, SEE PLATFORM INFORMATION TABLES ON STR-101 TO STR-106.
 - ▢ DENOTES 1 1/4"x 3/16" GALVANIZED STEEL GRATING TYPE SGW BY MCNICHOLS OR APPROVED EQUAL. TOP OF GRATING SHALL BE AT FINISH FLOOR ELEVATION. DIRECTION OF GRATING IS SHOWN AS → ON PLAN. PROVIDE SADDLE TYPE GRATING ANCHORS TO MATCH GRATING SPACED AT 2'-0" O.C. MAX IN EACH DIRECTION. FOR EXTENT OF GRATING SEE DETAIL 6 ON STR-502.
 - TOP OF STEEL TO BE 1 1/4" BELOW TOP OF GRATING UNLESS OTHERWISE NOTED THUS [+/- ...] INDICATING DISTANCE ABOVE OR BELOW TOP OF GRATING.
 - ALL FILLER BEAMS TO BE W8x24 AND SHALL BE EQUALLY SPACED WITHIN BAYS UNLESS OTHERWISE NOTED. MAXIMUM FILLER BEAM SPACING SHALL NOT EXCEED 4'-6".
 - DIMENSION NOTED AS 'L' REPRESENTS THE LENGTH OF THE SIGNAL HOUSE OR SIGNAL CASE. SEE PLATFORM INFORMATION TABLES ON DWG. STR-101 THROUGH STR-106.
 - INDICATES L3 1/2"x3 1/2"x1/2" KICKER BELOW. SEE STR-501 FOR DETAILS.
 - CB INDICATES COLUMN BELOW.
 - STAIR LENGTH AND LOCATION VARIES DUE TO VARYING GRADE ELEVATIONS AT DIFFERENT SITES. CONTRACTOR TO VERIFY FINAL GRADE ELEVATIONS AND SUBMIT STAIR SHOP DRAWINGS FOR APPROVAL. FOR TYPICAL STRINGER CONNECTION AT TOP AND BOTTOM OF STAIR SEE STR-502. FOR STAIR FOUNDATION SEE STR-204. FOR LOCATION OF THE STAIR ALONG PLATFORM WIDTH, SEE CIVIL SITE DRAWINGS.
 - FOR GUARDRAIL INFORMATION AND CONNECTION DETAILS SEE STR-505. ○-----○ DENOTES OUTLINE OF GUARDRAIL. PLACE GUARDRAIL POSTS AT MAX 3'-6" O.C. TYP.
 - " " " DIMENSIONS SHALL BE COORDINATED WITH VENDORS APPROVED DRAWINGS TO LOCATE EXACT BEAM LOCATION BASED ON EQUIPMENT SIZE & FRAMING REQUIREMENTS.
 - CONTRACTOR TO VERIFY EXISTING GRADE ELEVATION AT EVERY INDIVIDUAL PLATFORM LOCATION AND TO VERIFY STEEL COLUMN HEIGHT.
- FOR COL. HEIGHT UP TO 10FT, USE W8x48.
 - FOR COL. HEIGHT BETWEEN 10FT TO 17FT, USE W8x67.

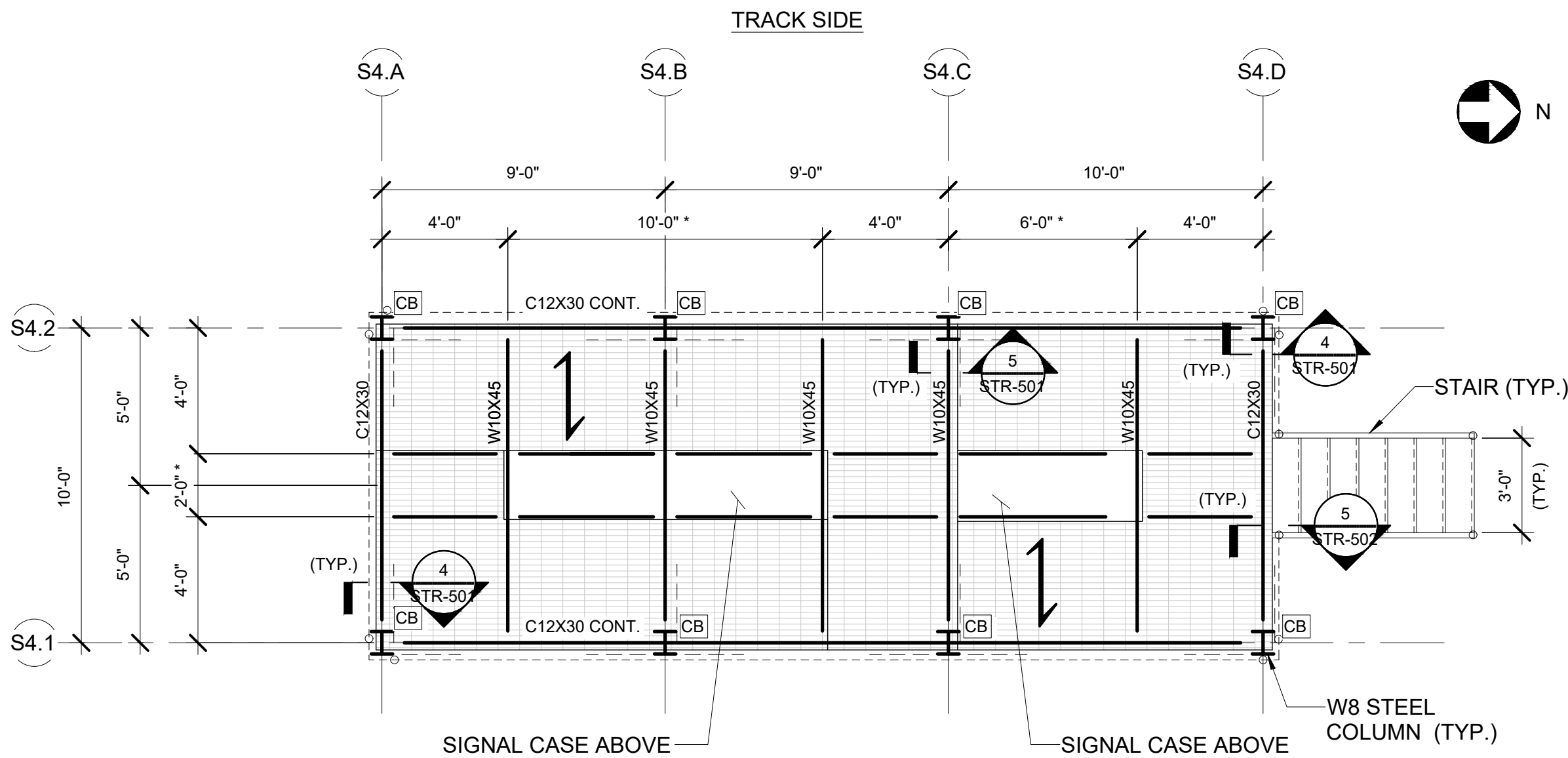
95% SUBMISSION

												DISCLAIMER						DESIGNED						HUDSON LINE C&S IMPROVEMENTS			CONTRACT NUMBER																										
												IT IS A VIOLATION OF THE PROFESSIONAL LICENSE LAW FOR ANY PERSON TO ALTER THIS DRAWING IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER/ARCHITECT AS APPLICABLE. THE ALTERING ENGINEER/ARCHITECT SHALL AFFIX HIS/HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS/HER SIGNATURE AND DATE OF ALTERATION.						G.C.P.			GANNETT FLEMING/CWA, a joint venture TWO PENN PLAZA, SUITE 552 380 SEVENTH AVENUE NEW YORK, NY 10121-0101 PRJ: 059824			EQUIPMENT INSTALLATIONS			39462																										
															G.C.P.									SCALE: AS SHOWN			DATE: 11/04/2022																										
															S.H.V.						 Metro-North Railroad			STRUCTURAL PLATFORMS			DRAWING NUMBER																										
															A.I.A.						347 MADISON AVENUE NEW YORK, N.Y. 10017			PLATFORM FRAMING PLAN			STR-114																										
NO.			DATE			MODIFICATION						DRAWN			CHKD.			APPRVD.			NO.			DATE			MODIFICATION						DRAWN			CHKD.			APPRVD.			SHEET			OF								
REVISIONS												REVISIONS																								CP-33 LOC. C AND CP-33 CIL												199			610		

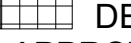


① **CP-33 LOCATION G PLATFORM FRAMING PLAN**
SCALE: 1/4" = 1'-0"

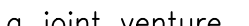
- NOTE:
- 1.1 THE CONTRACTOR SHALL VERIFY THE ELEVATION AND LOCATION OF THE EXISTING STRUCTURE AND MAKE SUCH ADJUSTMENTS AS ARE NECESSARY TO MATCH DIMENSIONS & ELEVATIONS OF NEW PLATFORM TO EXISTING PLATFORM.
- 1.2 TOP OF NEW STEEL BEAM AND NEW GRATING TO MATCH EXISTING.

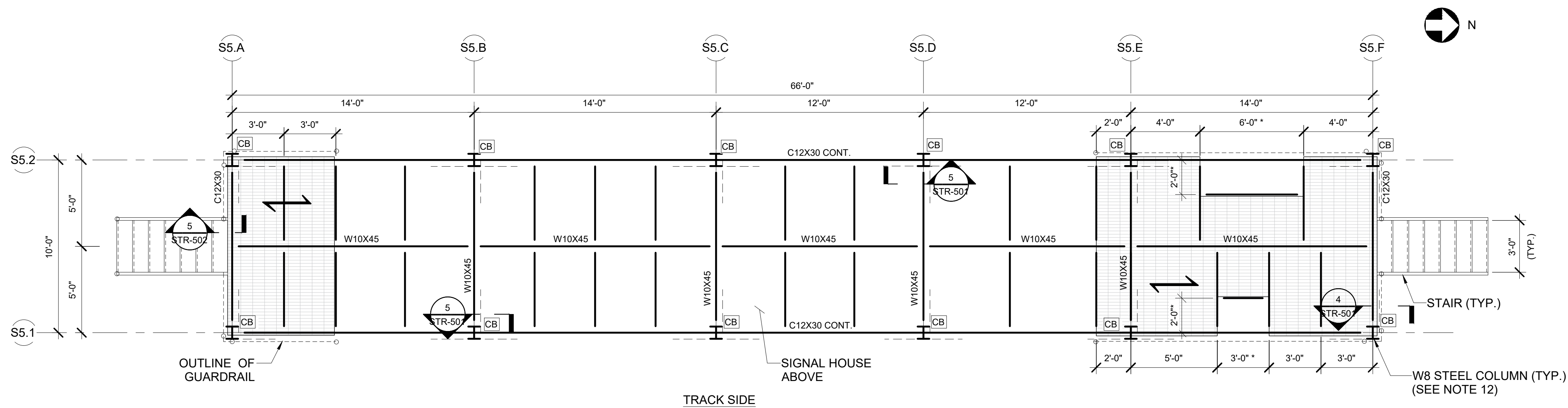


② **CP-34 LOCATION A PLATFORM FRAMING PLAN**
SCALE: 1/4" = 1'-0"

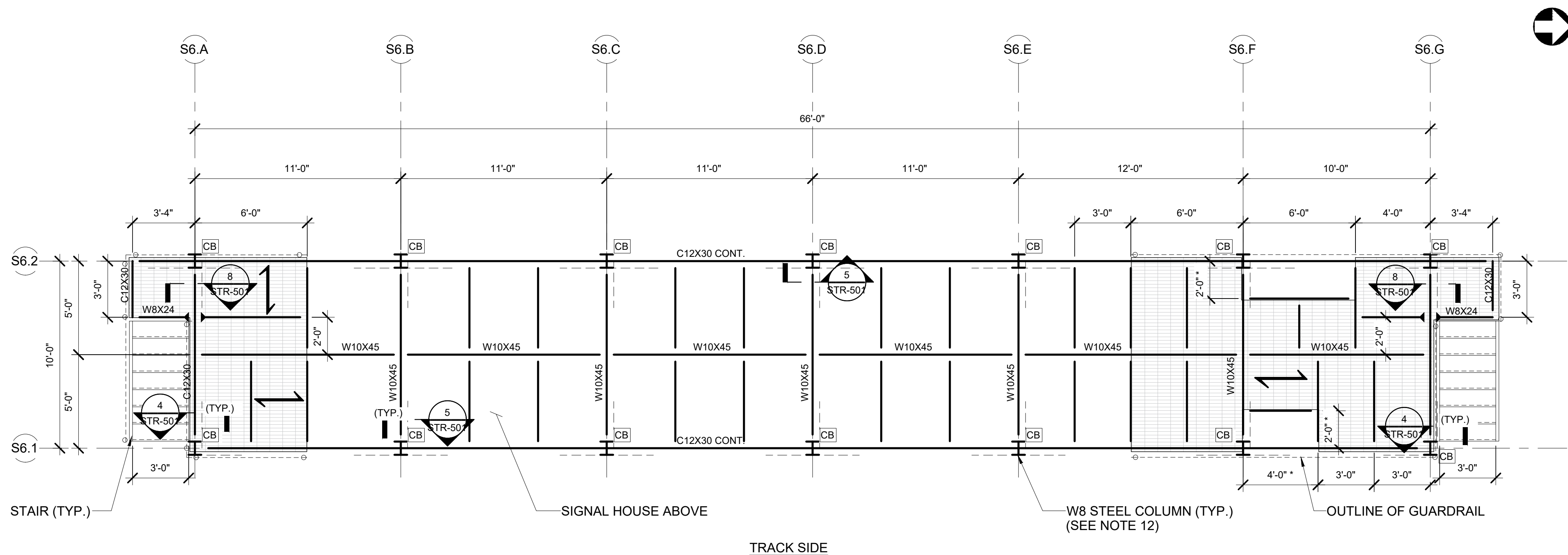
- NOTES:
1. FOR OVERALL PLATFORM PLAN AND ELEVATION, TRACK LOCATION, EXISTING GRADE ELEVATION AND TOP OF FINISH FLOOR ELEVATION, SEE PLATFORM INFORMATION TABLES ON STR-101 TO STR-106.
2.  DENOTES 1 1/4"x 3/16" GALVANIZED STEEL GRATING TYPE SGW BY MCNICHOLS OR APPROVED EQUAL. TOP OF GRATING SHALL BE AT FINISH FLOOR ELEVATION. DIRECTION OF GRATING IS SHOWN AS  ON PLAN. PROVIDE SADDLE TYPE GRATING ANCHORS TO MATCH GRATING SPACED AT 2'-0" O.C. MAX IN EACH DIRECTION. FOR EXTENT OF GRATING SEE DETAIL 6 ON STR-502.
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6. - - - - INDICATES L3 1/2"x3 1/2"x1/2" KICKER BELOW. SEE STR-501 FOR DETAILS.
7.  INDICATES COLUMN BELOW.
8. STAIR LENGTH AND LOCATION VARIES DUE TO VARYING GRADE ELEVATIONS AT DIFFERENT SITES. CONTRACTOR TO VERIFY FINAL GRADE ELEVATIONS AND SUBMIT STAIR SHOP DRAWINGS FOR APPROVAL. FOR TYPICAL STRINGER CONNECTION AT TOP AND BOTTOM OF STAIR SEE STR-502. FOR STAIR FOUNDATION SEE STR-204. FOR LOCATION OF THE STAIR ALONG PLATFORM WIDTH, SEE CIVIL SITE DRAWINGS.
9. FOR GUARDRAIL INFORMATION AND CONNECTION DETAILS SEE STR-505.  DENOTES OUTLINE OF GUARDRAIL. PLACE GUARDRAIL POSTS AT MAX 3'-6" O.C. TYP.
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- FOR COL. HEIGHT UP TO 10FT, USE W8x48.
 - FOR COL. HEIGHT BETWEEN 10FT TO 17FT, USE W8x67.

95% SUBMISSION

												DISCLAIMER				DESIGNED G.C.P.		 GANNETT FLEMING/CWA, a joint venture TWO PENN PLAZA, SUITE 552 380 SEVENTH AVENUE NEW YORK, NY 10121-0101 PRJ: 059824	HUDSON LINE C&S IMPROVEMENTS EQUIPMENT INSTALLATIONS MP-32 TO MP-76		CONTRACT NUMBER 39462	
												IT IS A VIOLATION OF THE PROFESSIONAL LICENSE LAW FOR ANY PERSON TO ALTER THIS DRAWING IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER/ARCHITECT AS APPLICABLE. THE ALTERING ENGINEER/ARCHITECT SHALL AFFIX HIS/HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS/HER SIGNATURE AND DATE OF ALTERATION.				DRAWN G.C.P.			STRUCTURAL PLATFORMS PLATFORM FRAMING PLAN CP-33 LOC. G AND CP-34 LOC. A		SCALE: AS SHOWN DATE: 11/04/2022	
																CHECKED S.H.V.					DRAWING NUMBER STR-115	
																APPROVED A.I.A.					SHEET 200 OF 610	
																 Metro-North Railroad 347 MADISON AVENUE NEW YORK, N.Y. 10017						



① **CP-34 CIL PLATFORM FRAMING PLAN**
SCALE: 1/4" = 1'-0"



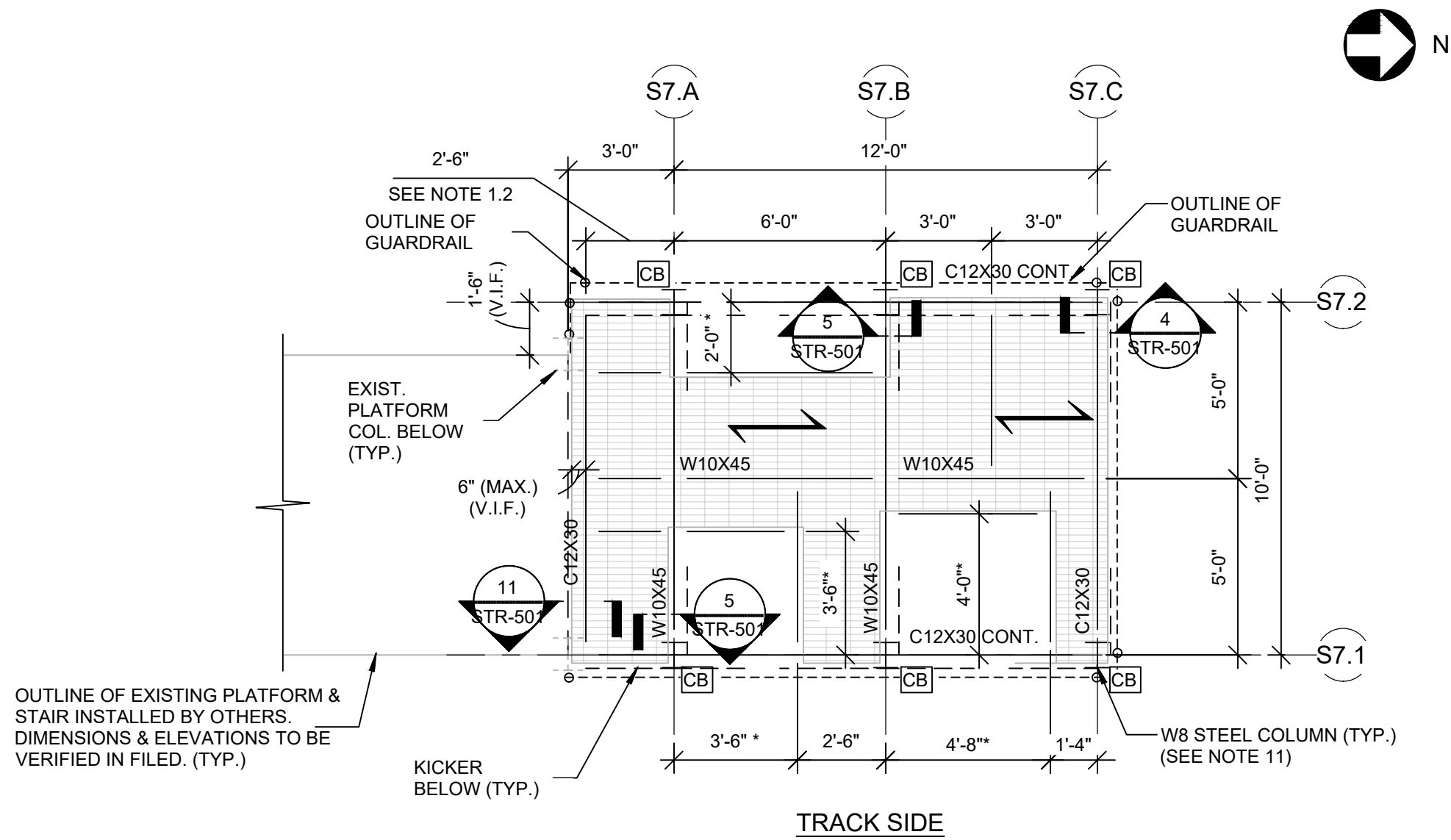
② **CP-35 CIL PLATFORM FRAMING PLAN**
SCALE: 1/4" = 1'-0"

NOTES:

- FOR OVERALL PLATFORM PLAN AND ELEVATION, TRACK LOCATION, EXISTING GRADE ELEVATION AND TOP OF FINISH FLOOR ELEVATION, SEE PLATFORM INFORMATION TABLES ON STR-101 TO STR-106.
- ▢ DENOTES 1 1/4"x 3/16" GALVANIZED STEEL GRATING TYPE SGW BY MCNICHOLS OR APPROVED EQUAL. TOP OF GRATING SHALL BE AT FINISH FLOOR ELEVATION. DIRECTION OF GRATING IS SHOWN AS → ON PLAN. PROVIDE SADDLE TYPE GRATING ANCHORS TO MATCH GRATING SPACED AT 2'-0" O.C. MAX IN EACH DIRECTION. FOR EXTENT OF GRATING SEE DETAIL 6 ON STR-502.
- TOP OF STEEL TO BE 1 1/4" BELOW TOP OF GRATING UNLESS OTHERWISE NOTED THUS [+/- ...] INDICATING DISTANCE ABOVE OR BELOW TOP OF GRATING.
- ALL FILLER BEAMS TO BE W8x24 AND SHALL BE EQUALLY SPACED WITHIN BAYS UNLESS OTHERWISE NOTED.
- DIMENSION NOTED AS 'L' REPRESENTS THE LENGTH OF THE SIGNAL HOUSE. SEE PLATFORM INFORMATION TABLES ON DWG. STR-101 THROUGH STR-106.
- INDICATES L3 1/2"x3 1/2"x1/2" KICKER BELOW. SEE STR-501 FOR DETAILS.
- ▢ INDICATES COLUMN BELOW.
- STAIR LENGTH AND LOCATION VARIES DUE TO VARYING GRADE ELEVATIONS AT DIFFERENT SITE. CONTRACTOR TO VERIFY FINAL GRADE ELEVATIONS AND SUBMIT STAIR SHOP DRAWINGS FOR APPROVAL. FOR TYPICAL STRINGER CONNECTION AT TOP AND BOTTOM OF STAIR SEE STR-502. FOR STAIR FOUNDATION SEE STR-204. FOR OCATION OF THE STAIR ALONG PLATFORM WIDTH, SEE CIVIL SITE DRAWINGS.
- FOR GUARDRAIL INFORMATION AND CONNECTION DETAILS SEE STR-504. ○-----○ DENOTES OUTLINE OF GUARDRAIL. PLACE GUARDRAIL POSTS AT MAX 3'-6" O.C. TYP.
- "*" DIMENSIONS SHALL BE COORDINATED WITH ELECTRICAL/ MECHANICAL DRAWINGS TO LOCATE EXACT BEAM LOCATION BASED ON EQUIPMENT SIZE.
- INDICATED MOMENT CONNECTION. SEE STR-501 FOR DETAILS.
- CONTRACTOR TO VERIFY EXISTING GRADE ELEVATION AT EVERY INDIVIDUAL PLATFORM LOCATION AND TO VERIFY STEEL COLUMN HEIGHT.
 - FOR COL. HEIGHT UP TO 10FT, USE W8x48.
 - FOR COL. HEIGHT BETWEEN 10FT TO 15FT, USE W8x67.

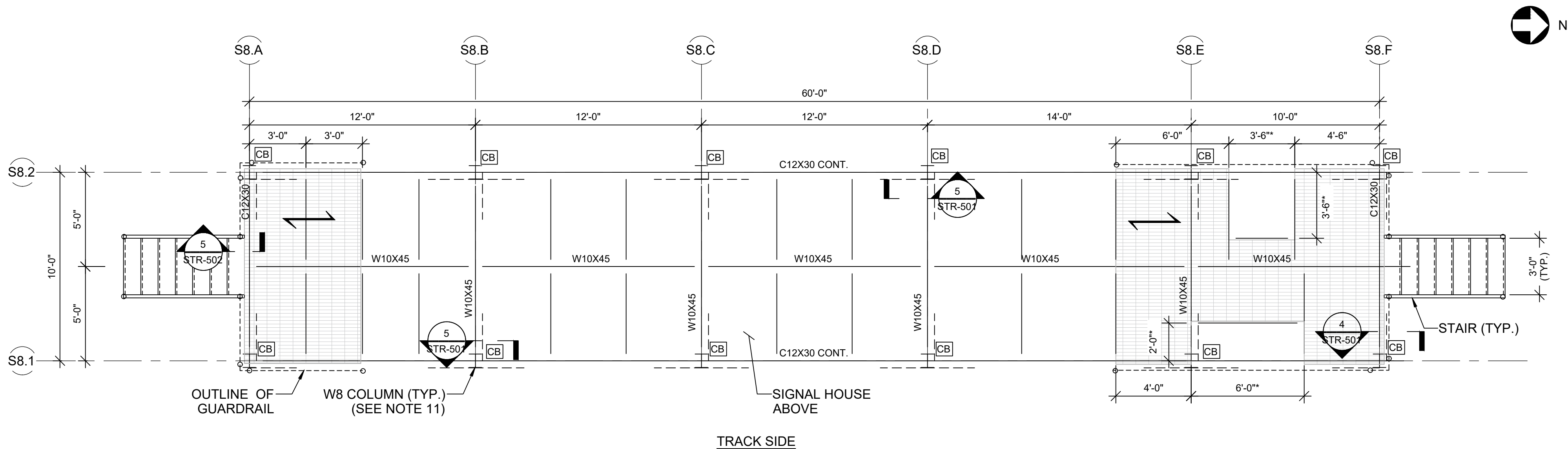
95% SUBMISSION

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① **SHP-1 PLATFORM FRAMING PLAN**
SCALE: 1/4" = 1'-0"

NOTE:
1.1 THE CONTRACTOR SHALL VERIFY THE ELEVATION AND LOCATION OF THE EXISTING STRUCTURE AND MAKE SUCH ADJUSTMENTS AS ARE NECESSARY TO MATCH DIMENSIONS & ELEVATIONS OF NEW PLATFORM TO EXISTING PLATFORM.
1.2 2'-6" CANTILEVER IS RECOMMENDED BASED ON PRELIMINARY FILED INFORMATION & EXISTING PLATFORM DRAWINGS. CONTRACTOR TO VERIFY THE REQUIRED CANTILEVER EXTENSION & NEW COLUMN LOCATION AND MODIFY DIMENSIONS AS NECESSARY TO ALLOW INSTALLATION OF NEW FOUNDATIONS.



② **CP-36 CIL PLATFORM FRAMING PLAN**
SCALE: 1/4" = 1'-0"

NOTES:

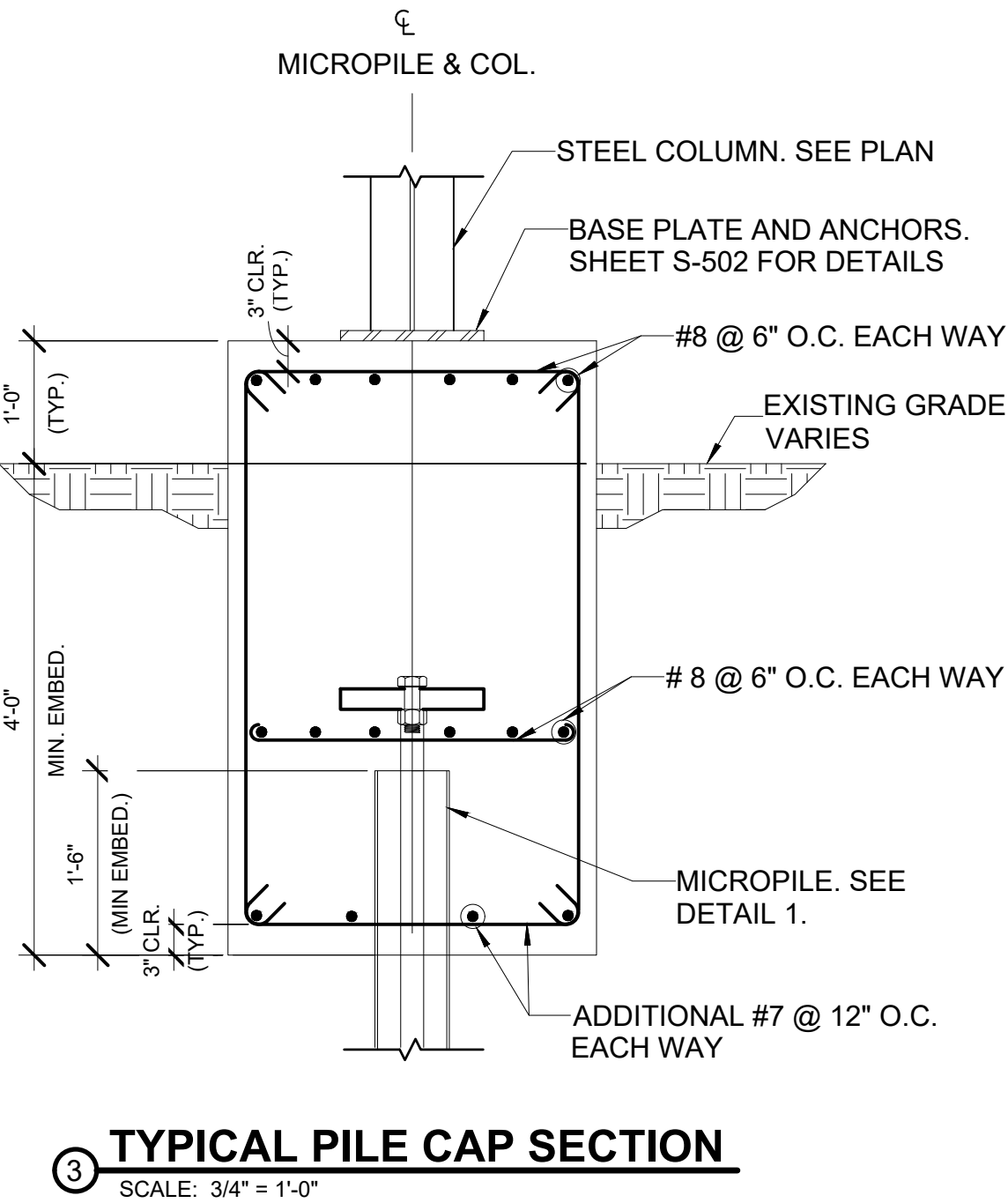
- FOR OVERALL PLATFORM PLAN AND ELEVATION, TRACK LOCATION, EXISTING GRADE ELEVATION AND TOP OF FINISH FLOOR ELEVATION, SEE PLATFORM INFORMATION TABLES ON STR-101 TO STR-106.
 - ▨ DENOTES 1 1/4"x 3/16" GALVANIZED STEEL GRATING TYPE SGW BY MCNICHOLS OR APPROVED EQUAL. TOP OF GRATING SHALL BE AT FINISH FLOOR ELEVATION. DIRECTION OF GRATING IS SHOWN AS → ON PLAN. PROVIDE SADDLE TYPE GRATING ANCHORS TO MATCH GRATING SPACED AT 2'-0" O.C. MAX IN EACH DIRECTION. FOR EXTENT OF GRATING SEE DETAIL 6 ON STR-502.
 - TOP OF STEEL TO BE 1 1/4" BELOW TOP OF GRATING UNLESS OTHERWISE NOTED THUS [+/- ...] INDICATING DISTANCE ABOVE OR BELOW TOP OF GRATING.
 - ALL FILLER BEAMS TO BE W8x24 AND SHALL BE EQUALLY SPACED WITHIN BAYS UNLESS OTHERWISE NOTED. MAXIMUM FILLER BEAM SPACING SHALL NOT EXCEED 4'-6".
 - DIMENSION NOTED AS 'L' REPRESENTS THE LENGTH OF THE SIGNAL HOUSE OR SIGNAL CASE. SEE PLATFORM INFORMATION TABLES ON DWG. STR-101 THROUGH STR-106.
 - INDICATES L3 1/2"x3 1/2"x1/2" KICKER BELOW. SEE STR-501 FOR DETAILS.
 - CB INDICATES COLUMN BELOW.
 - STAIR LENGTH AND LOCATION VARIES DUE TO VARYING GRADE ELEVATIONS AT DIFFERENT SITES. CONTRACTOR TO VERIFY FINAL GRADE ELEVATIONS AND SUBMIT STAIR SHOP DRAWINGS FOR APPROVAL. FOR TYPICAL STRINGER CONNECTION AT TOP AND BOTTOM OF STAIR SEE STR-502. FOR STAIR FOUNDATION SEE STR-204. FOR LOCATION OF THE STAIR ALONG PLATFORM WIDTH, SEE CIVIL SITE DRAWINGS.
 - FOR GUARDRAIL INFORMATION AND CONNECTION DETAILS SEE STR-505. ○-----○ DENOTES OUTLINE OF GUARDRAIL. PLACE GUARDRAIL POSTS AT MAX 3'-6" O.C. TYP.
 - " " " " DIMENSIONS SHALL BE COORDINATED WITH VENDORS APPROVED DRAWINGS TO LOCATE EXACT BEAM LOCATION BASED ON EQUIPMENT SIZE & FRAMING REQUIREMENTS.
 - CONTRACTOR TO VERIFY EXISTING GRADE ELEVATION AT EVERY INDIVIDUAL PLATFORM LOCATION AND TO VERIFY STEEL COLUMN HEIGHT.
- FOR COL. HEIGHT UP TO 10FT, USE W8x48.
 - FOR COL. HEIGHT BETWEEN 10FT TO 17FT, USE W8x67.

95% SUBMISSION

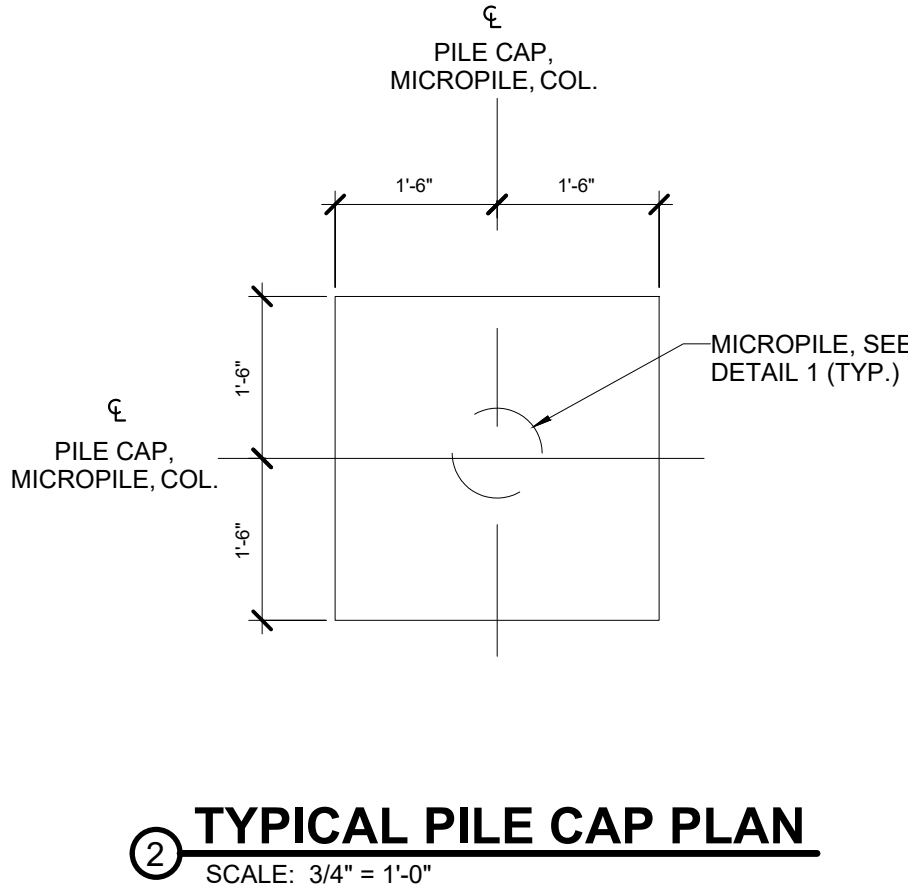
												DISCLAIMER		DESIGNED		GANNETT FLEMING Transit & Rail Systems / CWA		HUDSON LINE C&S IMPROVEMENTS EQUIPMENT INSTALLATIONS MP-32 TO MP-76		CONTRACT NUMBER	
												IT IS A VIOLATION OF THE PROFESSIONAL LICENSE LAW FOR ANY PERSON TO ALTER THIS DRAWING IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER/ARCHITECT AS APPLICABLE. THE ALTERING ENGINEER/ARCHITECT SHALL AFFIX HIS/HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS/HER SIGNATURE AND DATE OF ALTERATION.		DRAWN		GANNETT FLEMING/CWA, a joint venture TWO PENN PLAZA, SUITE 552 380 SEVENTH AVENUE NEW YORK, NY 10121-0101 PRJ: 059824		STRUCTURAL PLATFORMS PLATFORM FRAMING PLAN SHP-1 AND CP-36 CIL		39462	
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												REVISIONS									

- MICROPILE FOUNDATION NOTES:
- ALL MICROPILES SHALL BE INSTALLED TO THE MINIMUM REQUIRED EMBEDMENT DEPTH.
 - CONSTRUCTION OF MICROPILES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
 - MINIMUM GROUT STRENGTH FOR MICROPILES SHALL NOT BE LESS THAN 4,000 PSI AT 28 DAYS.
 - MICROPILE REINFORCING STEEL BAR SHALL BE THREADED BARS, ASTM A 615 GRADE 75 (GALVANIZED).
 - MICROPILE CASING SHALL BE ASTM A 252 GRADE 3 (FY = 80 KSI) OR BETTER.
 - THE BOTTOM OF THE MICROPILE SHALL BE FOUNDED IN UNDISTURBED MATERIAL. THE BOTTOM SHALL BE CLEANED OUT OF ALL LOOSE AND DISTURBED MATERIAL PRIOR TO GROUTING. CARE SHALL BE TAKEN TO PREVENT LOOSE SURFACE MATERIAL FALL INTO THE DRILLED HOLE.
 - MICROPILES SHALL BE PRESSURE GROUTED THROUGH THE CASING DURING CASING WITHDRAWAL IN ACCORDANCE WITH THE SPECIFICATIONS.
 - GROUT SHALL BE PLACED AS SOON AS POSSIBLE AFTER DRILLING AND CLEANING OUT BOTTOM AND AFTER FOUNDATION LEVEL AND MATERIAL HAS BEEN VERIFIED BY A QUALITY CONTROL ENGINEER AND OBTAINED REQUIRED APPROVAL FROM THE ENGINEER.
 - GROUT SHALL BE PUMPED THROUGH A TREMIE TUBE EXTENDING TO THE BOTTOM OF THE PILE UNTIL GROUT OF SUITABLE QUALITY RETURNS AT THE TOP OF THE PILE.
 - THE DISCHARGE END OF THE TREMIE SHALL REMAIN SUBMERGED IN THE GROUT AT ALL TIMES AND REMAIN FILLED WITH GROUT TO A HEIGHT WHICH SHALL AT LEAST BALANCE THE EXTERNAL HYDROSTATIC HEAD. IF, FOR ANY REASON, THE DISCHARGE END OF THE TREMIE IS LIFTED CLEAR OF THE SURROUNDING GROUT, THUS BREAKING THE SEAL AND PERMITTING ENTRY OF WATER, THE PUMPING OPERATION SHALL BE ABANDONED AND ALL DEFECTIVE GROUT SUBSEQUENTLY REMOVED.
 - GROUT SHALL BE PLACED IN ONE CONTINUOUS OPERATION.
 - CONSTRUCTION TOLERANCE AT THE TOP OF THE PILES SHALL BE IN ACCORDANCE WITH THE SPECIFICATION.
 - DO NOT ALLOW THE PILE TO DEVIATE FROM THE VERTICAL BY MORE THAN PERMITTED IN THE SPECIFICATION.
 - CONTRACTOR SHALL ENSURE ADEQUATE RECORDS OF ALL WORK ARE MAINTAINED AS PER THE REQUIREMENTS IN THE SPECIFICATIONS.

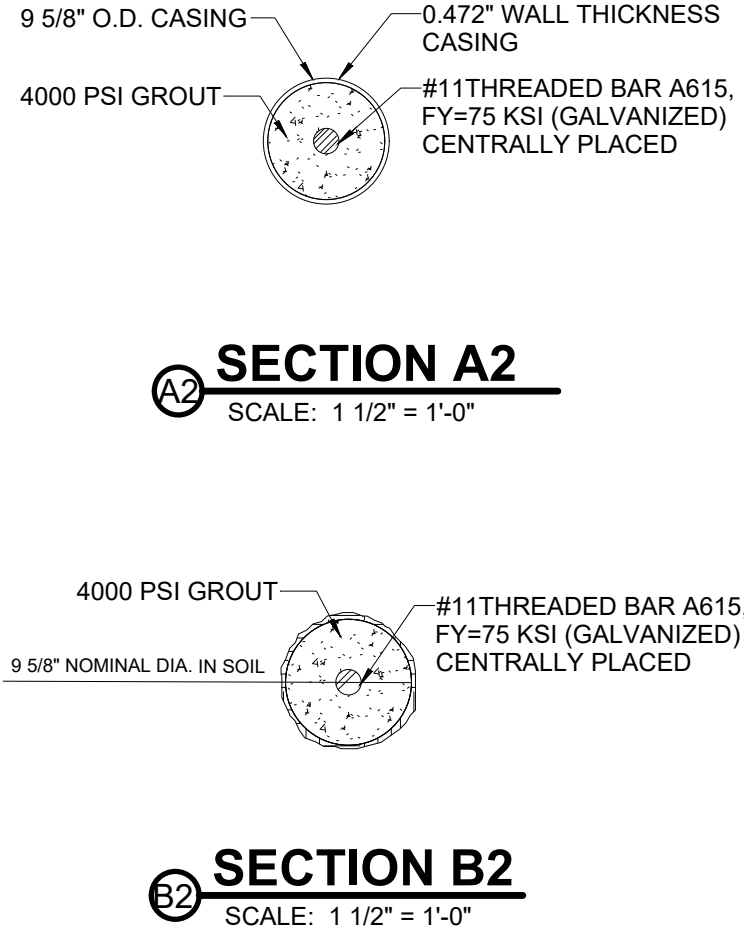
- NOTES:
- FOUNDATION TYPES AND DETAILS SHOWN HERE ARE BASED ON LIMITED AVAILABLE SUBSURFACE DATA. ALL FOUNDATION TYPES AND DETAILS SHOWN SHALL BE CONSIDERED PRELIMINARY AND FOR ESTIMATION PURPOSE ONLY.
 - SUBSURFACE EXPLORATION WILL BE PERFORMED BY METRO-NORTH RAILROAD, TO PERFORM FINAL DESIGN OF THE FOUNDATIONS IN THE 100% SUBMISSION.



3 TYPICAL PILE CAP SECTION
SCALE: 3/4" = 1'-0"

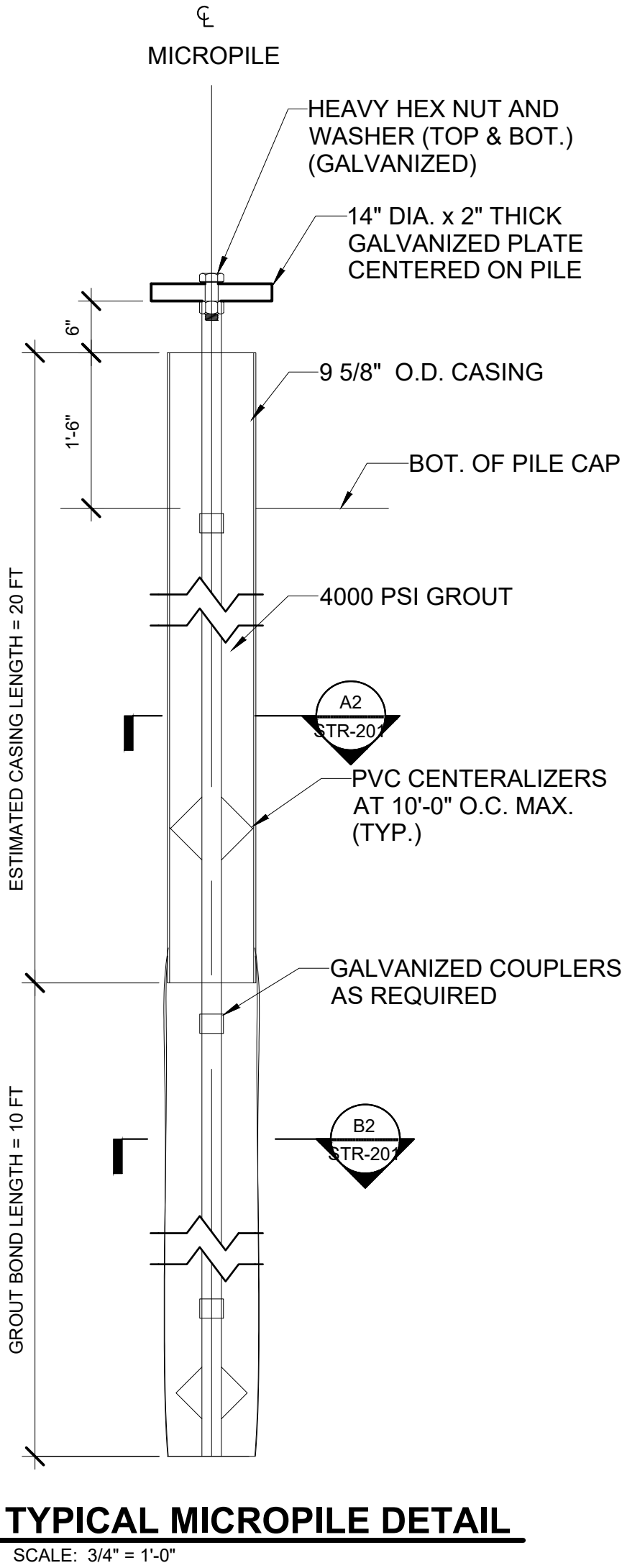


2 TYPICAL PILE CAP PLAN
SCALE: 3/4" = 1'-0"

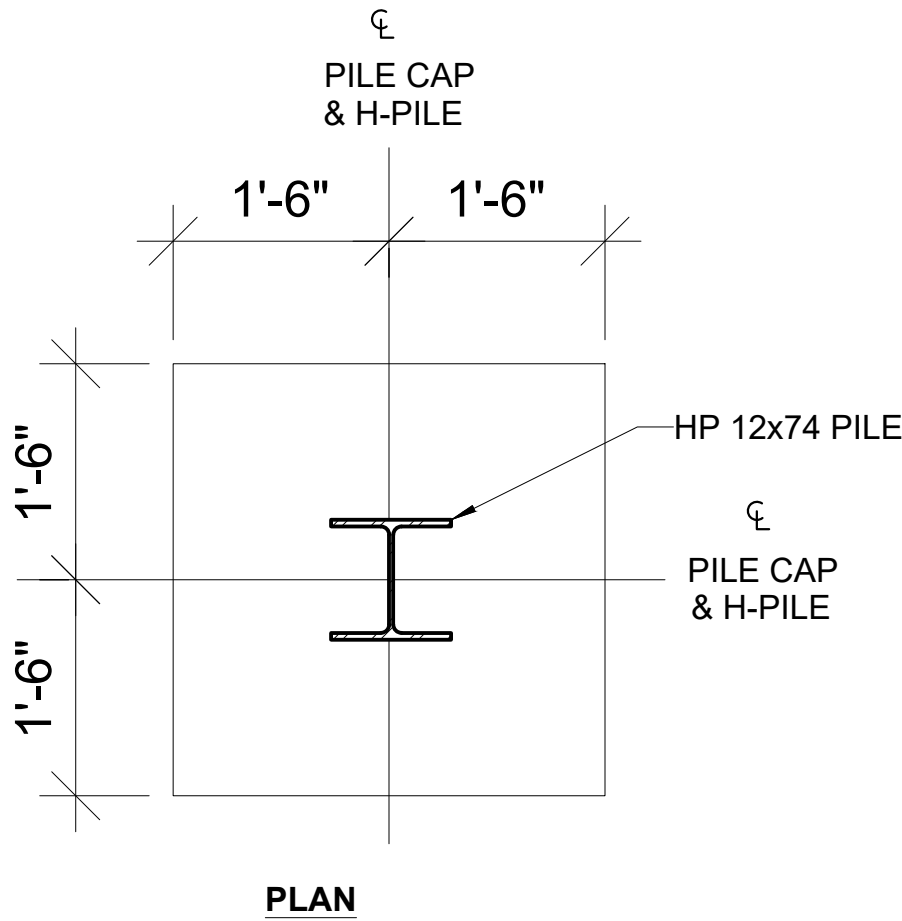


A2 SECTION A2
SCALE: 1 1/2" = 1'-0"

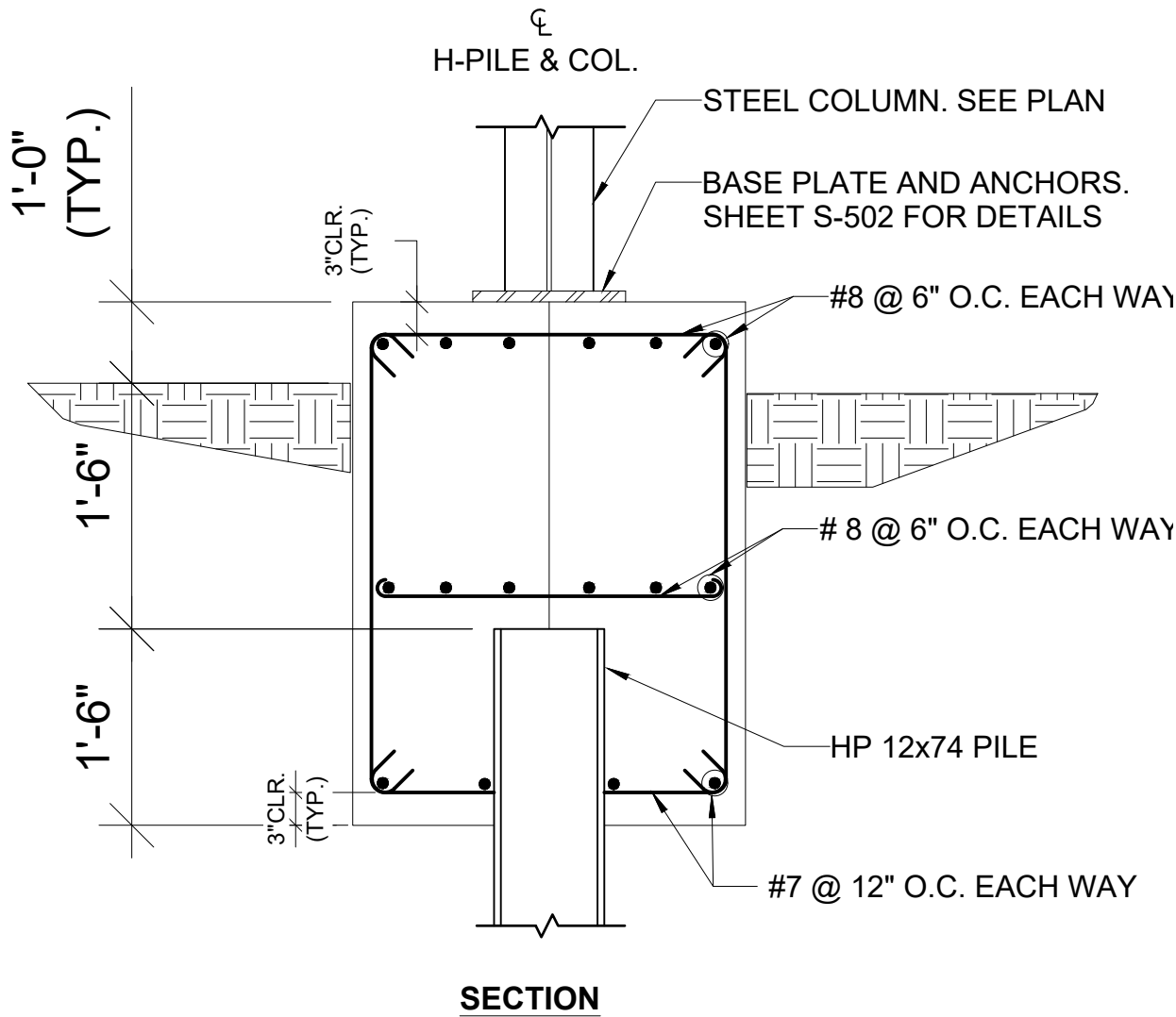
B2 SECTION B2
SCALE: 1 1/2" = 1'-0"



1 TYPICAL MICROPILE DETAIL
SCALE: 3/4" = 1'-0"



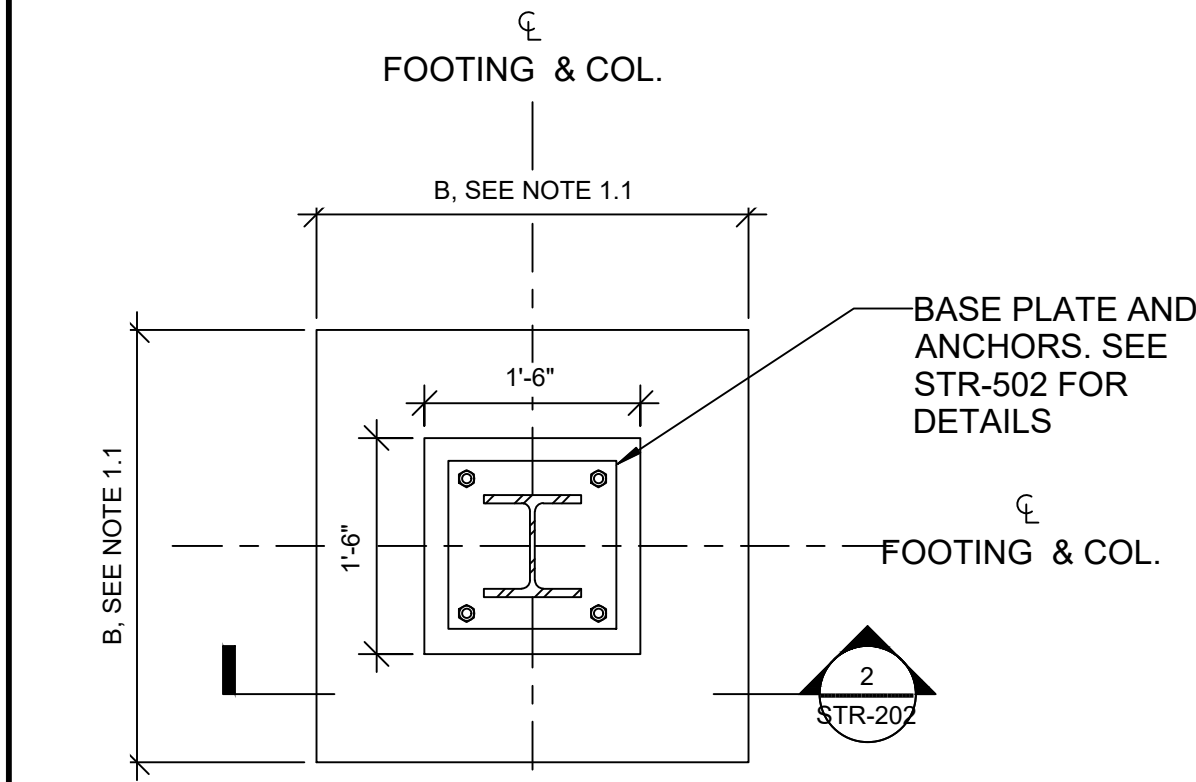
4 TYPICAL H-PILE DETAIL
SCALE: 3/4" = 1'-0"



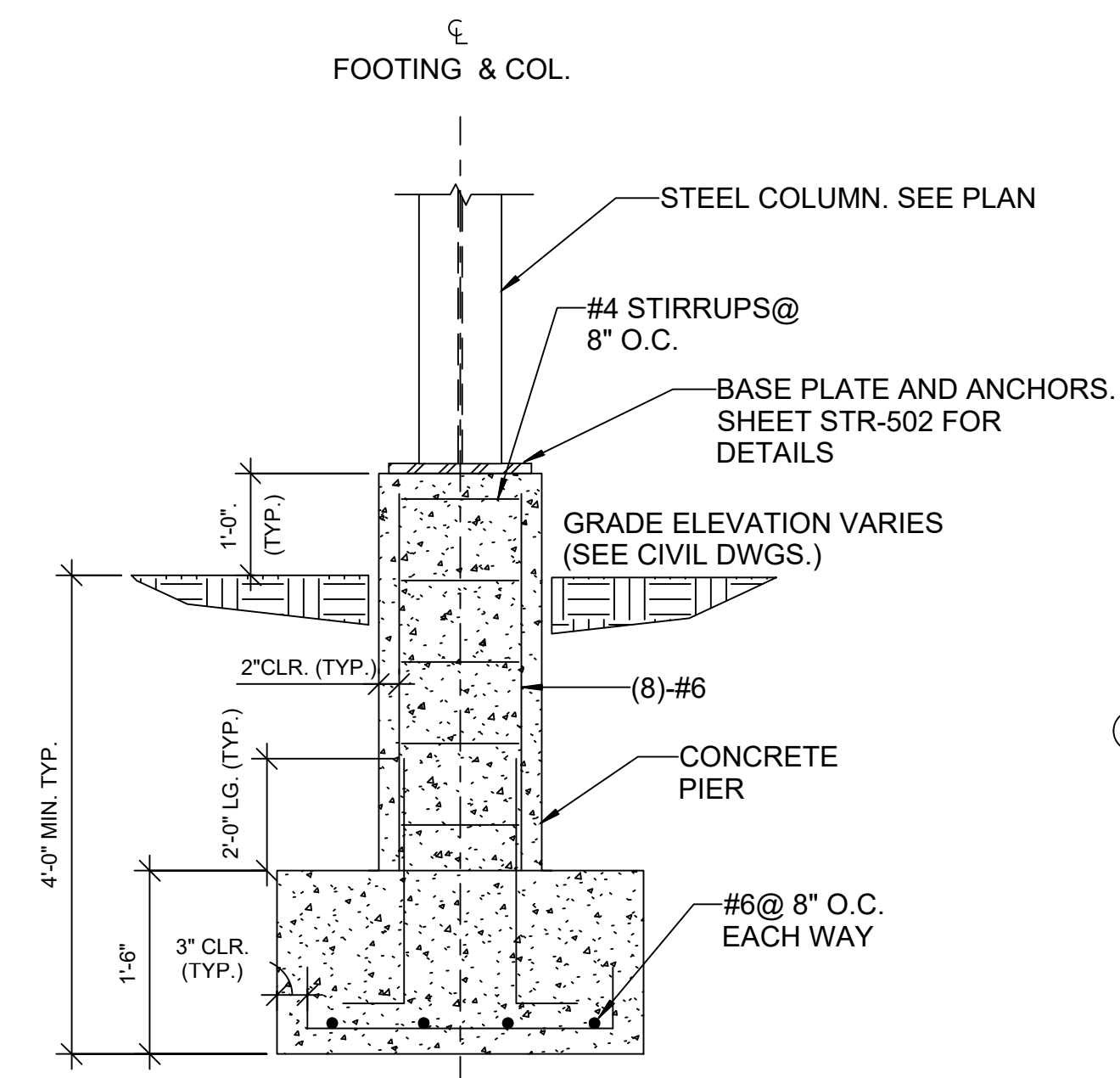
- H-PILE FOUNDATION NOTES:
- PILES:
STEEL HP 12X74 PILE
STEEL YIELD STRESS = 50 KSI
ULTIMATE AXIAL CAPACITY = 68 KIPS
ALLOWABLE AXIAL CAPACITY = 30 KIPS
ULTIMATE DRIVING CAPACITY = 68 KIPS
ESTIMATED PILE LENGTH FROM BOTTOM OF PILE CAP = 76 FT
 - THE CONTRACTOR SHALL SUBMIT THE RESULTS OF THE WAVE EQUATION ANALYSIS PERFORMED FOR THE STEEL HP12X74 PILE TO SHOW THAT THE PROPOSED DRIVING SYSTEM IS CAPABLE OF DRIVING THE PILES TO THE ULTIMATE AXIAL COMPRESSION CAPACITY OF 68 KIPS WITHOUT EXCEEDING THE MAXIMUM PERMISSIBLE PILE DRIVING STRESS OF 45 KSI FOR 50 KSI STEEL.
 - THE CONTRACTOR SHALL PERFORM DYNAMIC PILE LOAD TEST AS PER THE SPECIFICATIONS. THE TEST PILE SHALL BE DRIVEN TO THE REQUIRED DRIVING CAPACITY. THE CONTRACTOR SHALL SUBMIT THE TEST PILE DRIVING RESULTS TO SHOW THE CAPABILITY OF THE PILE HAMMER TO DRIVE THE PILES TO THE REQUIRED DRIVING CAPACITY WITHOUT EXCEEDING THE MAXIMUM PERMISSIBLE PILE DRIVING STRESS.
 - THE DYNAMIC LOAD TEST SHALL BE PERFORMED WITH THE PILE DRIVING ANALYZER (PDA) AND THE TEST DATA SHALL BE ANALYZED WITH THE CASE PILE WAVE ANALYZER PROGRAM (CAPWAP).
 - PRODUCTION PILES SHALL BE DRIVEN TO ACHIEVE THE DRIVING CAPACITY AS DETERMINED BY THE DRIVING CRITERIA ESTABLISHED FROM THE PDA TEST RESULTS.
 - USE PREDRILLING, SPUDGING OR AUGERING TO ADVANCE THE PILES IF REFUSAL OR OBSTRUCTION IS ENCOUNTERED AT A SHALLOW DEPTH (I.E., A DEPTH OF LESS THAN 10 FT BELOW THE EXISTING GROUND SURFACE).
 - APPLY COAL TAR EPOXY SYSTEM TO THE UPPER 30 FEET OF ALL PILES.

95% SUBMISSION

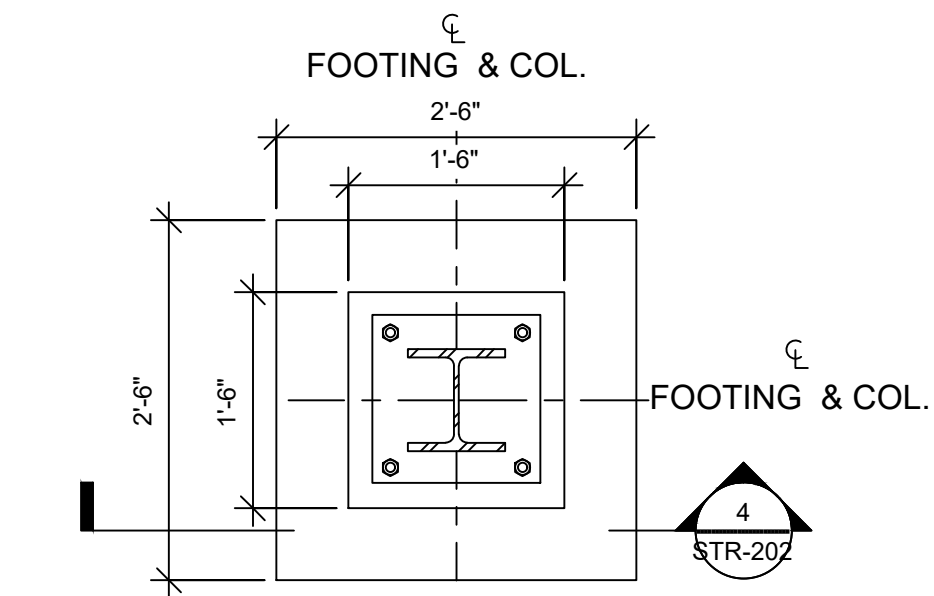
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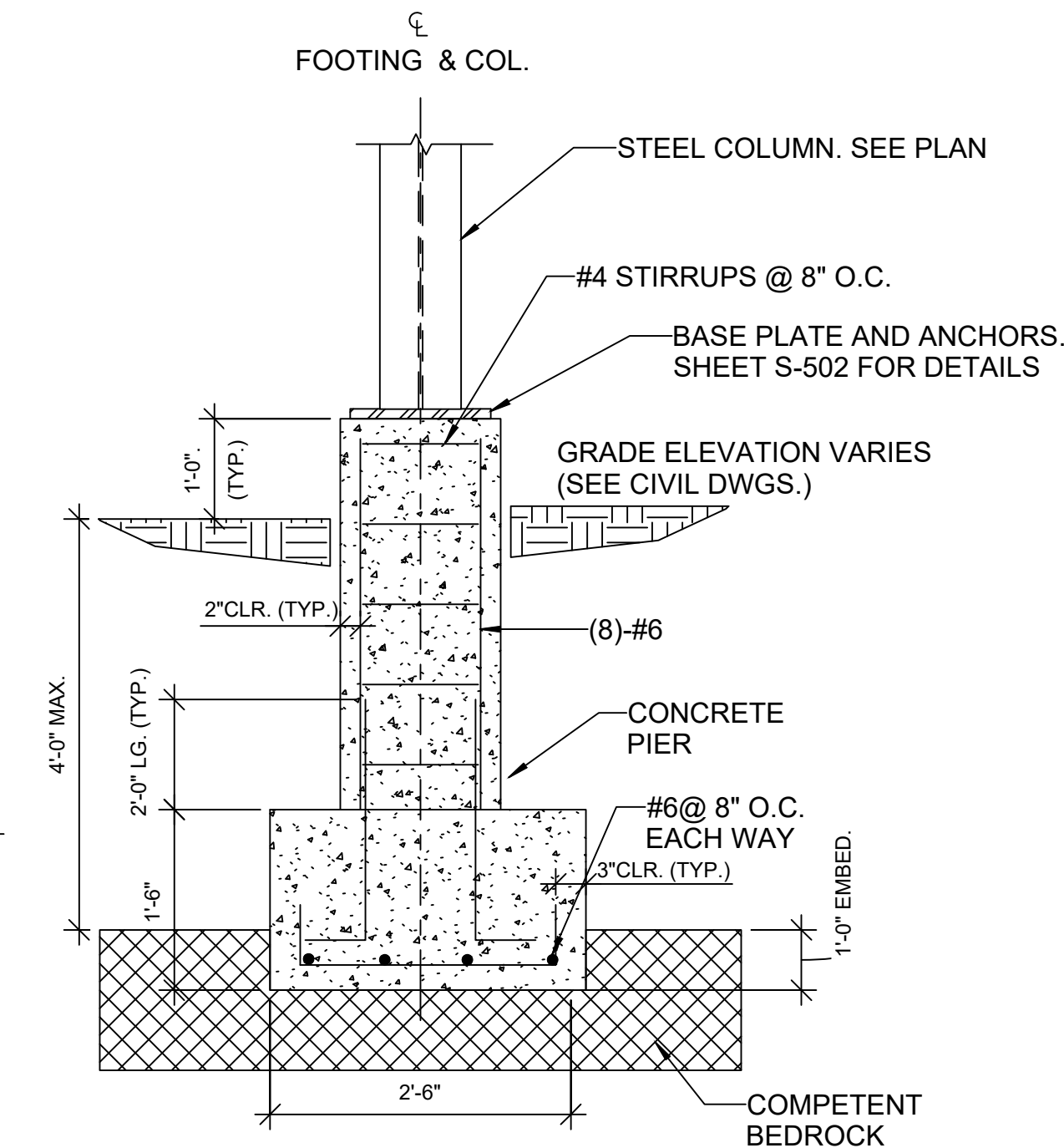
1 **TYPICAL SPREAD FOOTING ON SOIL**
SCALE: 3/4" = 1'-0"
NOTE:
1.1 FOR TYPE A SPREAD FOOTINGS, B = 3 FT
FOR TYPE B SPREAD FOOTINGS, B = 4 FT



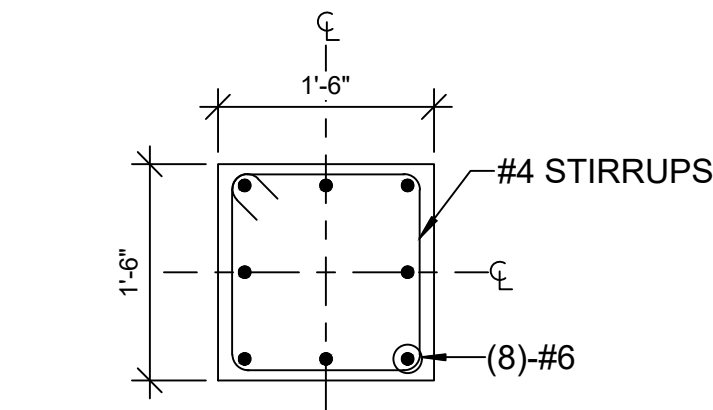
2 **TYPICAL SPREAD FOOTING ON SOIL SECTION**
SCALE: 3/4" = 1'-0"



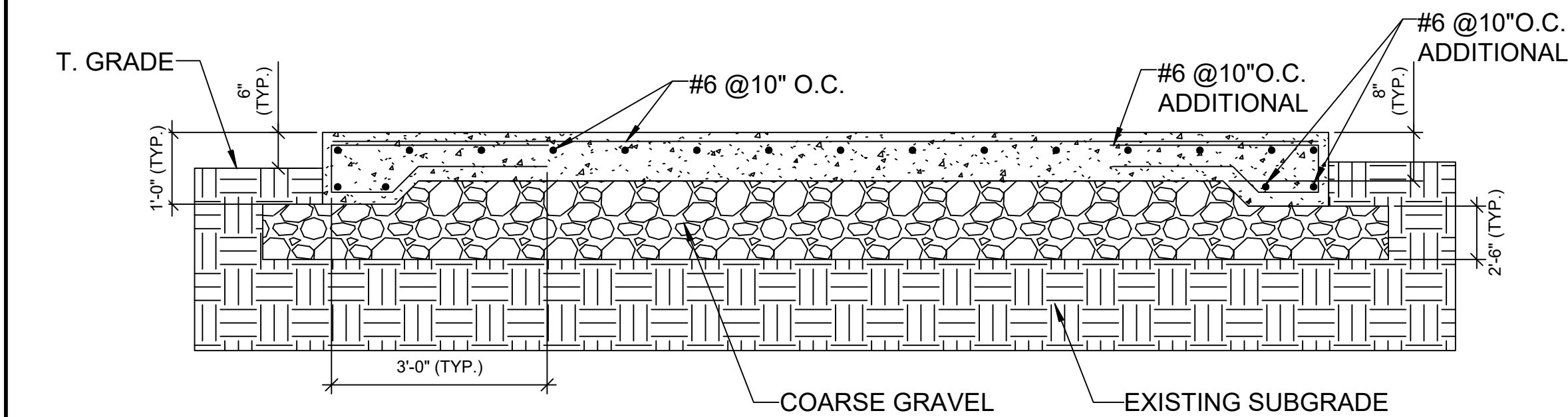
3 **TYPICAL SPREAD FOOTING ON BEDROCK**
SCALE: 3/4" = 1'-0"



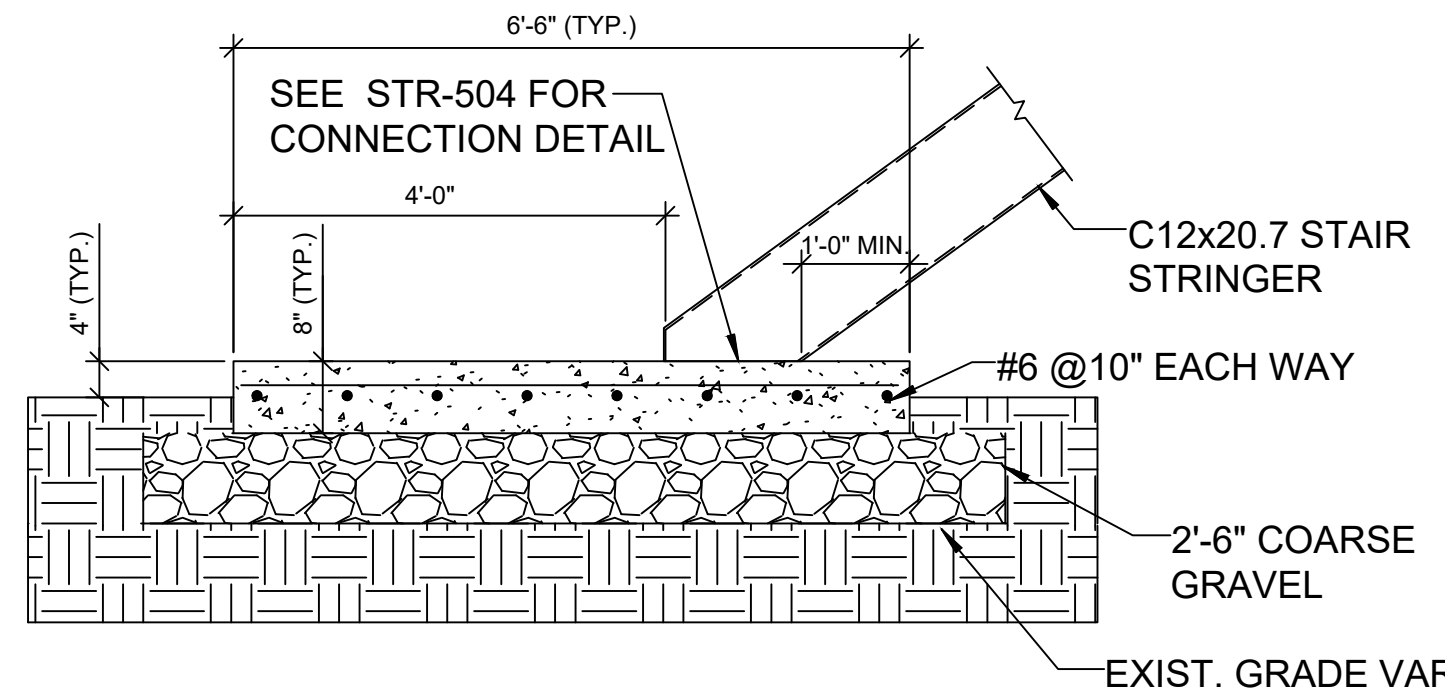
4 **TYPICAL SPREAD FOOTING ON BEDROCK SECTION**
SCALE: 3/4" = 1'-0"



5 **TYPICAL PIER SECTION**
SCALE: 3/4" = 1'-0"

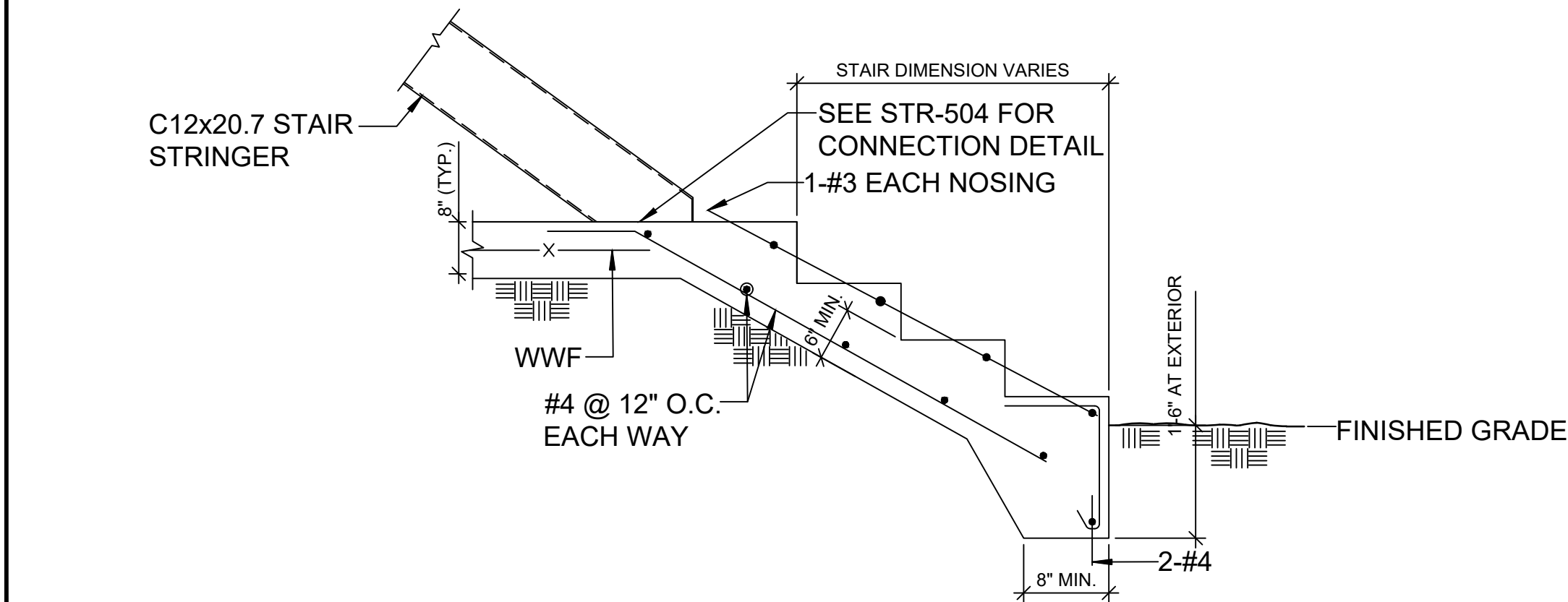


6 **TYPICAL EQUIPMENT CONCRETE FOUNDATION PAD DETAIL**
SCALE: NTS



7 **TYPICAL STAIR FOUNDATION DETAIL**
SCALE: NTS

NOTE:
7.1 CONCRETE PAD SHALL BE PLACED SUCH THAT THE CENTERLINE OF THE CONCRETE PAD IS ALIGNED WITH THE CENTERLINE OF THE STAIR ALONG THE STAIR LENGTH.
7.2 FOR 3'-0" WIDE STAIR, USE 4'-0" WIDE CONCRETE PAD.
FOR 5'-0" WIDE STAIR, USE 6'-0" WIDE CONCRETE PAD.



8 **TYPICAL STAIR LANDING ON A SLOPE DETAIL**
SCALE: NTS

- NOTES:
- FOUNDATION TYPES AND DETAILS SHOWN HERE ARE BASED ON LIMITED AVAILABLE SUBSURFACE DATA. ALL FOUNDATION TYPES AND DETAILS SHOWN SHALL BE CONSIDERED PRELIMINARY AND FOR ESTIMATION PURPOSE ONLY.
 - SUBSURFACE EXPLORATION WILL BE PERFORMED BY METRO-NORTH RAILROAD, TO PERFORM FINAL DESIGN OF THE FOUNDATIONS IN THE 100% SUBMISSION.
 - FOR COST ESTIMATION OF THE SPREAD FOOTING ON SOIL FOUNDATIONS, ASSUME COLUMNS WITH AXIAL LOADS LESS THAN OR EQUAL TO 10 KIPS BE SUPPORTED BY TYPE A AND COLUMNS WITH AXIAL LOADS GREATER THAN 10 KIPS BE SUPPORTED BY TYPE B.
 - PROVIDE SUFFICIENT DEWATERING MEASURES TO ALLOW ALL WORK TO PROCEED IN DRY CONDITIONS. MAINTAIN GROUNDWATER LEVELS AT LEAST 2 FEET BELOW THE WORKING FOUNDATION SUBGRADE.
 - THE FOUNDATION SUBGRADE SHALL BE EXAMINED AND APPROVED BY THE PROFESSIONAL GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF THE FOUNDATION REBAR AND CONCRETE. IF DIRECTED BY THE PROFESSIONAL GEOTECHNICAL ENGINEER, REMOVE UNSUITABLE MATERIALS AND REPLACE WITH SUITABLE STRUCTURAL FILL BENEATH THE FOUNDATIONS.
 - PRIOR TO PLACING ANY FILL THE GROUND SURFACE SHALL BE STRIPPED OF VEGETATION, TOPSOILS AND DEBRIS AND COMPACTED. ANY SOFT AREAS SHOULD BE REMOVED AND REPLACED WITH STRUCTURAL FILL.
 - STRUCTURAL FILL SHALL BE PLACED IN MAXIMUM 8-INCH LOOSE LIFTS AND COMPACTED TO A MINIMUM 95 PERCENT OF THE MAXIMUM DRY DENSITY DETERMINED BY ASTM D1557 (MODIFIED PROCTOR).
 - WHERE BEDROCK IS ENCOUNTERED, ROCK EXCAVATION SHALL BE PERFORMED AS PER THE SPECIFICATIONS TO PROVIDE A LEVEL BEARING SURFACE.

95% SUBMISSION

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8. GROUNDWATER WILL BE ENCOUNTERED DURING DRILLED SHAFT CONSTRUCTION. SO, CONCRETE SHALL BE PLACED USING CONCRETE PUMP OR A TREMIE PIPE IN ACCORDANCE WITH THE SPECIFICATIONS.

[illegible]

95% SUBMISSION

