



670 BERGEN BLVD | SECOND FL, ROCKEFELLER, NJ 07657

138 EAST 50TH STREET

NEW YORK | NEW YORK

DRAWING TITLE:
**T.A. NOTES AND
INSURANCE CLAUSES**

SEAL

Date

05-23-14

PROJECT N°:

14018

Drawn By:

NA

DWG. N°:

SOE-001.00

1 OF 9

NYCT "NOT FOR BENEFIT" INSURANCE REQUIREMENTS:

SECTION A: INSURANCE REQUIREMENTS

THE PERMITTEE AT ITS SOLE COST AND EXPENSE SHALL CARRY AND MAINTAIN POLICIES OF INSURANCE AT ALL TIMES DURING THE PERIOD OF PERFORMANCE UNDER THIS AGREEMENT AS HEREIN SET FORTH BELOW:

- 1 WORKERS' COMPENSATION: INCLUDING EMPLOYER'S LIABILITY INSURANCE WITH LIMITS OF LIABILITY NOT LESS THAN \$2,000,000 WHICH MAY BE MET BY A COMBINATION OF PRIMARY AND EXCESS INSURANCE MEETING THE STATUTORY LIMITS OF NEW YORK STATE.
2. COMMERCIAL GENERAL LIABILITY: (ISO 2001 FORM OR EQUIVALENT) APPROVED BY PERMITTOR IN THE PERMITTEE'S NAME WITH LIMITS OF LIABILITY IN THE AMOUNT OF NOT LESS THAN \$3,000,000 FOR EACH OCCURRENCE ON A COMBINED SINGLE LIMIT BASIS FOR INJURIES TO PERSONS (INCLUDING DEATH) AND DAMAGE TO PROPERTY, \$3,000,000 GENERAL AGGREGATE AND \$3,000,000 IN THE AGGREGATE WITH RESPECT TO PRODUCTS/COMPLETED OPERATIONS. THE LIMITS MAY BE PROVIDED IN THE FORM OF A PRIMARY POLICY OR COMBINATION OF PRIMARY AND UMBRELLA/EXCESS POLICY. WHEN THE MINIMUM CONTRACT AMOUNTS CAN ONLY BE MET WHEN APPLYING THE UMBRELLA/EXCESS POLICY, THE UMBRELLA/EXCESS POLICY MUST FOLLOW FORM OF THE UNDERLYING POLICY AND BE EXTENDED TO "DROP DOWN" TO BECOME PRIMARY IN THE EVENT PRIMARY LIMITS ARE REDUCED OR AGGREGATE LIMITS ARE EXHAUSTED. SUCH INSURANCE SHALL BE PRIMARY AND NON-CONTRIBUTORY TO ANY OTHER VALID AND COLLECTIBLE INSURANCE AND MUST BE EXHAUSTED BEFORE IMPLICATING ANY PERMITTOR/MTA POLICY AVAILABLE.

SUCH POLICY SHOULD BE WRITTEN ON AN OCCURRENCE FORM, AND SHALL INCLUDE THE FOLLOWING COVERAGES:

- ADDITIONAL INSURED ENDORSEMENT (I.S.O. FORM CG 20 26 07/04) VERSION OR EQUIVALENT APPROVED BY THE PERMITTOR. SHALL NAME THE INDEMNITEES AS REFERENCED UNDER SECTION B OF THIS AGREEMENT AS ADDITIONAL INSUREDS.
 - CONTRACTUAL LIABILITY ASSUMED BY THE PERMITTEE UNDER THIS AGREEMENT;
 - PERSONAL AND ADVERTISING INJURY COVERAGE;
 - PRODUCTS-COMPLETED OPERATIONS;
 - INDEPENDENT CONTRACTORS;
 - "XCU" COVERAGE (EXPLOSION, COLLAPSE, AND UNDERGROUND HAZARDS) WHERE NECESSARY;
 - CONTRACTUAL LIABILITY EXCLUSION, APPLICABLE TO CONSTRUCTION OR DEMOLITION OPERATIONS TO BE PERFORMED WITHIN 50 FEET OF RAILROAD TRACKS, MUST BE REMOVED, WHERE NECESSARY;
3. BUSINESS AUTOMOBILE LIABILITY: (ISO FORM CA 00 01 10 01 OR EQUIVALENT) APPROVED BY THE PERMITTOR IS REQUIRED IF PERMITTEE'S VEHICLE ENTERS PERMITTOR'S PROPERTY. THE INSURANCE MUST BE IN THE NAME OF THE PERMITTEE OR ITS CONTRACTOR ENTERING THE PERMITTOR PROPERTY WITH LIMITS OF LIABILITY IN THE AMOUNT OF NOT LESS THAN \$2,000,000 EACH ACCIDENT FOR CLAIMS FOR BODILY INJURIES (INCLUDING DEATH) TO PERSONS AND FOR DAMAGE TO PROPERTY ARISING OUT OF THE OWNERSHIP, MAINTENANCE OR USE OF ANY OWNED, HIRED OR NON-OWNED MOTOR VEHICLE.
 4. RAILROAD PROTECTIVE LIABILITY: (ISO-RIMA OR EQUIVALENT FORM) APPROVED BY PERMITTOR COVERING THE WORK TO BE PERFORMED AT THE DESIGNATED JOB SITE AND AFFORDING PROTECTION FOR DAMAGES ARISING OUT OF BODILY INJURY OR DEATH, PHYSICAL DAMAGE TO OR DESTRUCTION OF PROPERTY, INCLUDING DAMAGE TO THE INSURED'S OWN PROPERTY AND CONFORMING TO THE FOLLOWING:
 - THE POLICY SHALL BE ISSUED TO THE "NAMED INSUREDS" LISTED UNDER SECTION B.
 - THE LIMIT OF LIABILITY SHALL BE NOT LESS THAN \$2,000,000 PER OCCURRENCE, SUBJECT TO A \$6,000,000 ANNUAL AGGREGATE;
 - POLICY MUST BE ENDORSED TO PROVIDE COVERAGE FOR CLAIMS ARISING FROM INJURY TO EMPLOYEES COVERED BY FEDERAL EMPLOYER'S LIABILITY ACT (FELA).
 - INDICATE THE NAME AND ADDRESS OF THE DESIGNATED CONTRACTOR, PROJECT LOCATION AND DESCRIPTION OF WORKING INJURY.
 - EVIDENCE OF RAILROAD PROTECTIVE LIABILITY INSURANCE, MUST BE PROVIDED IN THE FORM OF A POLICY. A DETAILED INSURANCE BINDER (ACORD OR MANUSCRIPT FORM) WILL BE ACCEPTED PENDING ISSUANCE OF THE POLICY, WHICH MUST BE PROVIDED WITHIN 30 DAYS FROM THE EFFECTIVE DATE.

5. ENVIRONMENTAL INSURANCE: IN THE EVENT ENVIRONMENTAL OR POLLUTION EXPOSURES EXIST, THE PERMITTEE SHALL REQUIRE THE ENVIRONMENTAL CONTRACTOR OR SUB-CONTRACTOR TO PROVIDE THE APPLICABLE INSURANCE COVERING SUCH EXPOSURE. THE LIMITS AND TYPES OF INSURANCE PROVIDED MUST BE SATISFACTORY TO THE PERMITTOR AND APPROVED PRIOR TO THE START OF THE WORK.

SECTION B: INDEMNITEES (ADDITIONAL INSUREDS / NAMED INSUREDS)

NEW YORK CITY TRANSIT AUTHORITY (NYCT*), THE MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY ("MABSTOA"), THE STATEN ISLAND RAPID TRANSIT OPERATING AUTHORITY ("SIRTOA"), THE METROPOLITAN TRANSPORTATION AUTHORITY ("MTA") INCLUDING ITS SUBSIDIARIES AND AFFILIATES, MTA CAPITAL CONSTRUCTION ("MTACC"), MTA BUS COMPANY ("MTA BUS"), AND THE CITY OF NEW YORK ("CITY" AS OWNER) AND THE RESPECTIVE AFFILIATES AND SUBSIDIARIES EXISTING CURRENTLY OR IN THE FUTURE OF AND SUCCESSORS TO EACH INDENIFIED PARTIES LISTED HEREIN.

SECTION C: GENERAL INSURANCE REQUIREMENTS

1. INSURANCE COMPANIES: ALL OF THE INSURANCE REQUIRED BY THIS ARTICLE SHALL BE WITH COMPANIES LICENSED OR AUTHORIZED TO DO BUSINESS IN THE STATE OF NEW YORK WITH AN A.M. BEST COMPANY RATING OF NOT LESS THAN A-/M OR BETTER AND REASONABLY APPROVED BY THE PERMITTOR/MTA.
2. FORMS: ALL FORMS SHALL COMPLY WITH THE INSURANCE SERVICES OFFICE, INC. ("ISO") OR ITS EQUIVALENT APPROVED BY THE INSURANCE DEPARTMENT OF THE STATE OF NEW YORK.
3. POLICY DEDUCTIBLE / SELF INSURED RETENTION: INSURANCE MAY CONTAIN A DEDUCTIBLE AND OR SELF-INSURED RETENTION AND SHALL NOT EXCEED \$100,000. THE PERMITTEE SHALL BE RESPONSIBLE FOR ALL CLAIM EXPENSES AND LOSS PAYMENTS WITHIN THE DEDUCTIBLE OR SELF-INSURED RETENTION.
4. POLICY TERMS: THESE POLICIES MUST: (i) BE WRITTEN IN ACCORDANCE WITH THE REQUIREMENTS OF THE PARAGRAPHS ABOVE, AS APPLICABLE; (ii) BE ENDORSED IN FORM ACCEPTABLE TO INCLUDE A PROVISION THAT SHOULD THE POLICY BE CANCELED, MATERIALLY CHANGED, OR NOT RENEWED, NOTICE SHALL BE DELIVERED IN ACCORDANCE WITH THE INSURANCE POLICY PROVISIONS TO THE PERMITTOR, AND (iii) STATE OR BE ENDORSED TO PROVIDE THAT THE COVERAGE AFFORDED UNDER THE PERMITTEE'S POLICIES SHALL APPLY ON A PRIMARY AND NOT ON AN EXCESS OR CONTRIBUTING BASIS WITH ANY POLICIES WHICH MAY BE AVAILABLE TO THE PERMITTOR/MTA, AND ALSO THAT THE PERMITTEE'S POLICIES, PRIMARY AND EXCESS, MUST BE EXHAUSTED BEFORE IMPLICATING ANY PERMITTOR/MTA POLICY AVAILABLE. (iv) IN ADDITION, PERMITTEE'S POLICIES SHALL STATE OR BE ENDORSED TO PROVIDE THAT, IF A SUBCONTRACTOR'S POLICY CONTAINS ANY PROVISION THAT MAY ADVERSELY AFFECT WHETHER PERMITTEE'S POLICIES ARE PRIMARY AND MUST BE EXHAUSTED BEFORE IMPLICATING ANY PERMITTOR/MTA POLICY AVAILABLE, PERMITTEE'S AND SUBCONTRACTOR'S POLICIES SHALL NEVERTHELESS BE PRIMARY AND MUST BE EXHAUSTED BEFORE IMPLICATING ANY PERMITTOR/MTA POLICY AVAILABLE. AT LEAST TWO (2) WEEKS PRIOR TO THE EXPIRATION OF THE POLICIES, THE PERMITTEE SHALL ENDEAVOR TO PROVIDE EVIDENCE OF RENEWAL OR REPLACEMENT POLICIES OF INSURANCE, WITH TERMS AND LIMITS NO LESS FAVORABLE THAN THE EXPIRING POLICIES.

SECTION D: SUBMISSION OF INSURANCE

CERTIFICATES OF INSURANCE MAY BE SUPPLIED AS EVIDENCE OF POLICIES EXCEPT FOR RAILROAD PROTECTIVE LIABILITY. HOWEVER, IF REQUESTED BY THE PERMITTOR, THE PERMITTEE SHALL DELIVER TO THE PERMITTOR WITHIN FORTY-FIVE (45) DAYS A COPY OF SUCH POLICIES, CERTIFIED BY THE INSURANCE CARRIER AS BEING TRUE AND COMPLETE. IF A CERTIFICATE OF INSURANCE IS SUBMITTED, IT MUST: (1) BE PROVIDED ON THE PERMITTOR CERTIFICATE OF INSURANCE; (2) BE SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE INSURANCE CARRIER OR PRODUCER AND NOTARIZED; (3) DISCLOSE ANY DEDUCTIBLE, SELF-INSURED RETENTION, SUB-LIMIT, AGGREGATE LIMIT OR ANY EXCLUSIONS TO THE POLICY THAT MATERIALLY CHANGE THE COVERAGE; (4) INDICATE THE ADDITIONAL INSUREDS AS REQUIRED HEREIN UNDER SECTION B; THE PERMITTEE MUST PROVIDE A COPY OF THE ADDITIONAL INSURED ENDORSEMENT (ISO) FORM CG 20 26 07/04 OR ITS EQUIVALENT AND MUST REFERENCE THE POLICY INFORMATION; (5) INDICATE PROJECT NAME AND LOCATION ON THE CERTIFICATE; AND (6) EXPRESSLY REFERENCE THE INCLUSION OF ALL REQUIRED ENDORSEMENTS.

THE PERMITTEE OR ITS CONTRACTOR/SUBCONTRACTOR PERFORMING THE WORK SHALL FURNISH EVIDENCE OF ALL POLICIES BEFORE ANY WORK IS STARTED TO THE APPROPRIATE DEPARTMENT.

NEW AGREEMENTS:

MTA/NYCT MOW ENGINEERING
ATTENTION: MR. JOHN MALVASIO
130 LIVINGSTON STREET
BROOKLYN, NY 11201

RENEWAL INSURANCE:

MTA RISK INSURANCE MANAGEMENT
ATTENTION: RUTH ARONSON
2 BROADWAY - 21ST FLOOR
NEW YORK, NY 10004

SECTION E: NO LIMIT OF LIABILITY
THE MINIMUM AMOUNTS OF INSURANCE REQUIRED IN THE DETAIL DESCRIPTION OF POLICIES ABOVE SHALL NOT BE CONTRSTED TO LIMIT THE EXTENT OF THE PERMITTEE'S LIABILITY UNDER THIS AGREEMENT.

SECTION F: RIGHT TO REQUEST ADDITIONAL INSURANCE
PERMITTEE FURTHER AGREES TO PROVIDE, AT PERMITTEE'S SOLE COST AND EXPENSE, SUCH INCREASED OR EXPANDED INSURANCE COVERAGE AS PERMITTOR MAY FROM TIME TO TIME AS DEEM APPROPRIATE.

SECTION G: EVENT OF DEFAULT
IF, AT ANY TIME DURING THE PERIOD OF THIS AGREEMENT, INSURANCE AS REQUIRED IS NOT IN EFFECT, OR PROOF THEREOF IS NOT PROVIDED TO THE PERMITTOR, THE PERMITTOR SHALL HAVE THE OPTIONS TO: (i) DIRECT THE PERMITTEE TO SUSPEND WORK OR OPERATION WITH NO ADDITIONAL COST OR EXTENSION OF TIME DUE ON ACCOUNT THEREOF; OR (ii) TREAT SUCH FAILURE AS AN EVENT OF DEFAULT.

SECTION H: NOTICE OF CLAIM
THE PERMITTEE SHALL IMMEDIATELY FILE WITH NYCT/MTA'S TORT DIVISION (WITH A COPY TO THE PROJECT MANAGER), 130 LIVINGSTON STREET, 11TH FLOOR, BROOKLYN, NEW YORK 11201, A NOTICE OF ANY OCCURRENCE LIKELY TO RESULT IN A CLAIM AGAINST NYCT/MTA AND SHALL ALSO FILE WITH THE TORTS DIVISION DETAILED SWORN PROOF OF INTEREST AND LOSS WITH THE CLAIM. THIS PARAGRAPH SHALL SURVIVE THE EXPIRATION OR EARLIER TERMINATION OF THE CONTRACT.

Shauqat Shaikh

Shauqat Shaikh

Buildings

APPROVED

Under Directive 2 of 1975

Date: 07/31/2015

NYC Development Hub

NYC TRANSIT AUTHORITY GENERAL NOTES:

NOTE: THE APPROPRIATE NOTES ARE TO BE MADE PART OF THE PROJECT'S CONTRACT DRAWINGS.

1. THE NYC TRANSIT (NYCT) RESERVES THE RIGHT TO PLACE INSPECTORS, FLAGMEN OR OTHER PERSONNEL IN THE SUBWAY STRUCTURES DURING CONSTRUCTION OF THE PROJECT LINKED BY A TELEPHONE SYSTEM, IF DEEMED NECESSARY, TO OBSERVE THE EFFECTS OF THE CONSTRUCTION ON THE TRANSIT FACILITIES. NYCT FURTHER RESERVES THE RIGHT TO PLACE SUCH PERSONNEL, WHENEVER, IN ITS OPINION, THE PROJECT CONDITIONS WARRANT SUCH PLACEMENT, REGARDLESS OF DISTANCE. THE COST OF SUCH PERSONNEL, TELEPHONE INSTALLATION AND ANY RE-ROUTES, DIVERSIONS OF SERVICE, WORK TRAINS, ETC., MADE NECESSARY BY THE PROJECT, MUST BE BORNE BY THE PROJECT OR THE RESPONSIBLE NEW YORK CITY/STATE AGENCY.
2. ALL ROCK EXCAVATION ADJACENT TO THE TRANSIT STRUCTURE IS TO BE CHANNEL DRILLED TWO FEET BELOW SUBGRADE.
3. IF TOP OF ROCK IS FOUND BELOW SUBWAY STRUCTURE, THE SUBWAY STRUCTURE MUST BE UNDERPINNED IN ACCORDANCE WITH DRAWINGS TO BE SUBMITTED TO NYCT FOR APPROVAL.
4. IF ROCK IS SOFT OR SEAMY, LATERAL SUPPORTS MUST BE PROVIDED BELOW THE SUBWAY STRUCTURE IN ACCORDANCE WITH DRAWINGS TO BE SUBMITTED TO NYCT FOR APPROVAL.
5. BLASTING WILL BE PERMITTED ONLY WITH LIGHT CHARGES SUBJECT TO THE APPROVAL OF NYCT'S ENGINEER AND IN ACCORDANCE WITH THE REGULATIONS OF THE FIRE DEPARTMENT. THE CONTRACTOR SHALL PROVIDE A DETAILED MONITORING PLAN PROVIDING FOR MEASUREMENTS OF BOTH PARTICLE VELOCITY AND DISPLACEMENTS AT CRITICAL LOCATIONS OF THE NYCT STRUCTURE. THE MONITORING PLAN SHALL INCLUDE THRESHOLD AND UPSET LEVELS OF BOTH PARTICLE VELOCITY AND SETTLEMENT TOGETHER WITH AN ACTION PLAN FOR THEIR IMPLEMENTATION. THE CONTRACTOR SHALL SECURE AN APPROVED SEISMOLOGIST TO INSTALL AND OPERATE SUITABLE VELOCITY GAUGES TO CONTINUOUSLY MONITOR PARTICLE VELOCITY AND AN INDEPENDENT LICENSED SURVEYOR TO MONITOR DISPLACEMENTS. THE PRESENCE OF A QUALIFIED TECHNICIAN FROM MONITORING COMPANY IS REQUIRED TO PROVIDE THE VIBRATION READING UPON REQUEST OF NYCT ENGINEER. THE THRESHOLD MAXIMUM PARTICLE VELOCITY ABOVE AMBIENT CAUSED BY THE BLASTING WILL BE 0.5 INCH PER SECOND. VALUES EXCEEDING THIS LEVEL WILL BE REVIEWED AND EVALUATED BY NYCT'S ENGINEER. IN NO CASE WILL PARTICLE VELOCITIES EXCEED THE UPSET LEVEL OF 2.0 INCHES PER SECOND.
6. BEFORE PLACING CONCRETE, THE SUBGRADE OF THE FOUNDATIONS IN THE VICINITY OF THE SUBWAY STRUCTURE IS TO BE INSPECTED AND APPROVED BY NYCT'S ENGINEER.
7. IF ANY PORTION OF THE SUBWAY STRUCTURE OR FINISH IS DAMAGED, IT SHALL BE REPAIRED OR REPLACED WITH THE SAME MATERIALS IN PLACE, SUBJECT TO THE APPROVAL OF NYCT'S ENGINEER AND AT THE EXPENSE OF THE PROJECT.
8. EXCAVATION EMBANKMENTS ARE TO BE SHORED AND BRACED. DRAWINGS INDICATING A SUGGESTED METHOD OF CONSTRUCTION ARE TO BE SUBMITTED TO NYCT FOR APPROVAL IN CONJUNCTION WITH THE PROJECT'S CONTRACT DRAWINGS. IN CASE OF EXCAVATION UNDERMINING THE SUBWAY STRUCTURE, UNDERPINNING MAY BE REQUIRED. DRAWINGS FOR UNDERPINNING ARE TO BE SUBMITTED TO NYCT FOR APPROVAL.
9. TEMPORARY SHORING MAY BE PLACED IN DIRECT CONTACT WITH NYCT STRUCTURES ONLY IF THE NYCT STRUCTURE IS SHOWN TO BE ABLE TO SUPPORT ALL ANTICIPATED LOADS THAT CAN BE TRANSFERRED THROUGH THE TEMPORARY STRUCTURES WITHOUT DAMAGING THE EXISTING STRUCTURE. AT THE COMPLETION OF THE PROJECT, THESE TEMPORARY SHORING AND BRACING SYSTEMS ARE TO BE REMOVED OR CUT-OFF AS APPROVED BY NYCT.
10. WHEN PILES ARE TO BE DRIVEN OR DRILLED ADJACENT TO THE SUBWAY STRUCTURE, BORING DATA, PILE LAYOUTS, SPECIFICATIONS AND INSTALLATION PROCEDURES ARE TO BE SUBMITTED TO NYCT FOR APPROVAL. VELOCITY METERS ARE TO BE INSTALLED IN THE SUBWAY TUNNEL AT CRITICAL LOCATIONS TO MONITOR INDUCED VIBRATIONS. INDUCED DISPLACEMENTS IN THE TUNNEL STRUCTURE AND TRUCK INRAVEY TO BE MONITORED DURING DRIVING OR DRILLING. THE THRESHOLD MAXIMUM PARTICLE VELOCITY ABOVE AMBIENT CAUSED BY THE DRIVING OR DRILLING WILL BE 0.5 INCH PER SECOND. VALUES EXCEEDING THIS LEVEL WILL BE REVIEWED AND EVALUATED BY NYCT'S ENGINEER. IN NO CASE WILL PARTICLE VELOCITIES EXCEED THE UPSET LEVEL OF 2.0 INCHES PER SECOND.
11. NO PILES ARE PERMITTED TO BE INSTALLED BY ANY METHOD WITHIN THREE FEET OF SUBWAY STRUCTURE, MEASURED FROM THE EDGE OF THE PILE OR CASING TO THE WALL. CLOSED-END PILES WILL NOT BE PERMITTED TO BE DRIVEN WITHIN TEN FEET OF THE SUBWAY STRUCTURE.
12. ALL PILES ARE TO BE PLACED WITHIN A PREAUERGED CASED HOLE TO THE INFLUENCE LINE. THE CASING SHALL BE CLEANED WITHOUT DISTURBING THE SOIL OUTSIDE THE CASING AND THE PILE TO BE PLACED WITHIN THE CASING FOR INSTALLATION. THE PILES MAY THEN BE DRIVEN BEYOND THE INFLUENCE LINE WITHIN THE CASING.
13. THE INFLUENCE LINE SHALL START AT THE BOTTOM OF THE SUBWAY STRUCTURE AND EXTEND FROM 1H:1V TO 2H:1V SLOPE DEPENDING ON THE SOIL PROPERTIES AND GROUND WATER TABLE. FOR PILES INSTALLED WITHIN TEN FEET OF THE SUBWAY STRUCTURE, THE CASING SHALL BE EXTENDED UP TO THE BOTTOM OF THE SUBWAY STRUCTURE.
14. ALL PILES ARE TO BE DRIVEN OR DRILLED A MINIMUM OF TEN FEET BELOW THE INTERSECTION OF THE PILE CENTERLINE AND THE INFLUENCE LINE OF THE SUBWAY STRUCTURE.
15. THE USE OF "DOWN-THE-HOLE -HAMMERS" FOR INSTALLATION OF PILES THROUGH OVERBURDEN AND FILL WILL BE PERMITTED ONLY TO REMOVE BOULDERS. IT WILL NOT BE PERMITTED AS A MATTER OF COURSE TO ADVANCE THE HOLE. THEIR USE TO CONSTRUCT ROCK SOCKETS WILL NOT BE ALLOWED WITHIN 5 FEET OF THE NYCT STRUCTURE. THE USE OF MACHINE UTILIZING AIR FOR SOIL REMOVAL WILL NOT BE ALLOWED.
16. VIBRATORY HAMMERS WILL NOT BE PERMITTED WITHIN 75 FEET OF SUBWAY STRUCTURES. HOERAMS WILL NOT BE PERMITTED WITHIN 25 FEET OF SUBWAY STRUCTURES.
17. DYNAMIC COMPACTION METHODS USING DROPPED HEAVY WEIGHTS CANNOT BE CONDUCTED WITHIN 1000 FEET OF ANY NYCT STRUCTURE UNLESS IT IS SHOWN THAT INDUCED SETTLEMENTS AND VIBRATIONS WILL NOT DAMAGE THESE STRUCTURES. A SUITABLE MONITORING PLAN INCLUDING SETTLEMENT AND VIBRATION MEASUREMENTS MUST BE APPROVED BY NYCT'S ENGINEER FOR ALL SUCH OPERATIONS WITHIN THESE DISTANCES.
18. THERE SHALL BE NO MACHINE EXCAVATION WITHIN 3 FEET OF NYCT STRUCTURES, POWER DUCT LINES, OR ANY OTHER FACILITIES UNTIL THEY HAVE BEEN CAREFULLY EXPOSED BY HAND EXCAVATION.
19. ALL DEWATERING OPERATIONS CONDUCTED WITHIN 500 FEET OF THE NYCT STRUCTURE MUST BE PERFORMED IN ACCORDANCE WITH DRAWINGS SUBMITTED TO NYCT FOR APPROVAL. THE DISTANCE FROM THE STRUCTURE TO THE DEWATERING OPERATION CAN BE REDUCED PROVIDED THAT SOIL CONDITIONS AT THE SITE INDICATE THAT THE RADIUS OF INFLUENCE OF THE DEWATERING IS LESS THAN 500 FEET. FOR DEWATERING WITHIN THE RADIUS OF INFLUENCE, THE DEWATERING PROGRAM MUST BE SHOWN TO HAVE NEGIGIBLE INFLUENCE ON SETTLEMENTS OF THE NYCT STRUCTURE.
20. SUBWAY ENTRANCES (VENTILATORS, ETC.) ARE TO BE UNDERPINNED OR SHORED AND BRACED IF DIRECTED BY NYCT'S ENGINEER.
21. NYCT, AT ITS DISCRETION, RESERVES THE RIGHT TO REQUIRE THE PROJECT TO CLOSE OR MAINTAIN AND PROTECT EXISTING SUBWAY ENTRANCES, VENTILATORS, ETC. ADJACENT TO THE PROJECT DURING CONSTRUCTION. SUCH CONSTRUCTION MAY INCLUDE UNDERPINNING, SHORING, BRACING AND ERECTION OF SUITABLE BARRICADES AND/OR CANOPIES AND SHIELDS. SUCH PROTECTION SHALL BE IN ACCORDANCE WITH DRAWINGS SUBMITTED TO NYCT FOR APPROVAL.
22. IF SHIELDS ARE TO BE INSTALLED TO PROTECT NYCT FACILITIES AND/OR THE PUBLIC, PLANS SHOWING THE LOCATION, TYPE AND METHOD OF ATTACHMENT TO THE TRANSIT STRUCTURE MUST BE SUBMITTED TO NYCT FOR APPROVAL.
23. ALL LUMBER AND PLYWOOD USED FOR PROTECTION OF SUBWAY FACILITIES MUST BE FIRE RETARDANT.
24. SUBWAY EMERGENCY EXITS MUST BE KEPT CLEAR AT ALL TIMES.
25. IN EXCAVATING OVER OR NEAR THE SUBWAY ROOF, SPECIAL CARE SHALL BE EXERCISED SO THAT THE THIN CONCRETE PROTECTION OF THE SUBWAY WATERPROOFING IS NOT DAMAGED.
26. BURNING OF, WELDING TO OR DRILLING THROUGH EXISTING STEEL STRUCTURES WILL NOT BE PERMITTED EXCEPT AS SHOWN ON DRAWINGS APPROVED BY NYCT.
27. HORIZONTAL AND VERTICAL CONTROL SURVEY DATA OF THE EXISTING NYCT STRUCTURE IS TO BE TAKEN BY A LICENSED LAND SURVEYOR TO MONITOR ANY MOVEMENTS THAT OCCUR DURING CONSTRUCTION AND TO SHOW THAT THE INDUCED MOVEMENTS ARE WITHIN ALLOWABLES NOTED BELOW. IF ANY MOVEMENTS EXCEED ALLOWABLES, REMEDIATION AS APPROVED BY NYCT SHALL BE PERFORMED.

STRUCTURE	NOTIFY NYCT ENGINEER	STOP WORK
ELEVATED	1/8 INCH	1/4 INCH
SUBWAY	1/8 INCH	1/4 INCH
28. BUS ROUTES AFFECTED BY THE PROJECT WILL OR MAY REQUIRE BUS DIVERSIONS. THESE ARRANGEMENTS SHALL BE MADE THROUGH:		
MS. SARAH WYSS ACTING DIRECTOR, OPERATIONS PLANNING NEW YORK CITY TRANSIT 2 BROADWAY, ROOM A17.82 NEW YORK, NEW YORK 10004 TELEPHONE NUMBER 646/252-5517		
WHEN IMPACTING ANY BUS STOP, SPECIAL OPERATIONS MUST BE NOTIFIED TWO WEEKS IN ADVANCE.		

NYCT OUTSIDE CONTRACT INSURANCE REQUIREMENTS:

1. THE PERMITTEE AT ITS SOLE COST AND EXPENSE SHALL CARRY OR CAUSE TO CARRIED AND SHALL MAINTAIN AT ALL TIMES DURING THE PERIOD OF PERFORMANCE UNDER THIS AGREEMENT POLICIES OF INSURANCE AS HEREIN BELOW SET FORTH BELOW:
 - A. WORKERS' COMPENSATION INSURANCE (INCLUDING EMPLOYER'S LIABILITY INSURANCE) WITH LIMITS OF NOT LESS THAN \$2,000,000, WHICH LIMIT MAY BE MET BY A COMBINATION OF PRIMARY AND EXCESS INSURANCE MEETING THE STATUTORY LIMITS OF NEW YORK STATE. THE POLICY SHALL BE ENDORSED TO INCLUDE LONGSHOREMAN'S AND HARBOR WORKERS' COMPENSATION ACT/MARITIME COVERAGE ENDORSEMENT AND/OR JONES ACT ENDORSEMENT WHEN APPLICABLE.
 - B. COMMERCIAL GENERAL LIABILITY INSURANCE (I.S.O. 2001 FORM OR EQUIVALENT) APPROVED BY PERMITTOR IN THE PERMITTEE'S NAME WITH LIMITS OF LIABILITY IN THE AMOUNT OF AT LEAST \$3,000,000 FOR EACH OCCURRENCE ON A COMBINED SINGLE LIMIT BASIS FOR INJURIES TO PERSONS (INCLUDING DEATH) AND DAMAGE TO PROPERTY, \$3,000,000 GENERAL AGGREGATE AND \$3,000,000 IN THE AGGREGATE WITH RESPECT TO PRODUCTS/COMPLETED OPERATIONS. THE LIMITS MAY BE PROVIDED IN THE FORM OF A PRIMARY POLICY OR COMBINATION OF PRIMARY AND UMBRELLA/EXCESS POLICY. WHEN THE MINIMUM CONTRACT AMOUNTS CAN ONLY BE MET WHEN APPLYING THE UMBRELLA/EXCESS POLICY, THE UMBRELLA/EXCESS POLICY MUST FOLLOW FORM OF THE UNDERLYING POLICY AND BE EXTENDED TO "DROP DOWN" TO BECOME PRIMARY IN THE EVENT PRIMARY LIMITS ARE REDUCED OR AGGREGATE LIMITS ARE EXHAUSTED. SUCH INSURANCE SHALL BE PRIMARY AND NON-CONTRIBUTORY TO ANY OTHER VALID AND COLLECTIBLE INSURANCE AND MUST BE EXHAUSTED BEFORE IMPLICATING ANY PERMITTOR/MTA POLICY AVAILABLE.
 - SUCH POLICY SHOULD BE WRITTEN ON AN OCCURRENCE FORM, AND SHALL INCLUDE:
 - CONTRACTUAL LIABILITY ASSUMED BY THE PERMITTEE UNDER THIS AGREEMENT;
 - PERSONAL AND ADVERTISING INJURY COVERAGE;
 - PRODUCTS-COMPLETED OPERATIONS;
 - INDEPENDENT CONTRACTORS COVERAGE;
 - "XCU" COVERAGE (EXPLOSION, COLLAPSE, AND UNDERGROUND HAZARDS) WHERE NECESSARY;
 - CONTRACTUAL LIABILITY EXCLUSION, APPLICABLE TO CONSTRUCTION OR DEMOLITION OPERATIONS TO BE PERFORMED WITHIN 50 FEET OF RAILROAD TRACKS, MUST BE VOIDED, WHERE NECESSARY; AND
 - ADDITIONAL INSURED ENDORSEMENT (I.S.O. FORM CG 20 26 07/04 VERSION OR EQUIVALENT) APPROVED BY THE PERMITTOR. NAMING:
 - NEW YORK CITY TRANSIT AUTHORITY (NYCTA), THE MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY (MABSTOA), THE STATEN ISLAND RAPID TRANSIT OPERATING AUTHORITY (SIRTOA), MTA CAPITAL CONSTRUCTION CO., THE METROPOLITAN TRANSPORTATION AUTHORITY (MTA) INCLUDING ITS SUBSIDIARIES AND AFFILIATES, AND THE CITY OF NEW YORK (AS OWNER).
 - C. BUSINESS AUTOMOBILE LIABILITY INSURANCE POLICY - (I.S.O. FORM CA 00 01 10 01 OR EQUIVALENT) APPROVED BY PERMITTOR IS REQUIRED IF PERMITTEE'S VEHICLE ENTERS PERMITTOR PROPERTY. THE INSURANCE MUST BE IN THE NAME OF THE PERMITTEE OR ITS CONTRACTOR ENTERING THE PERMITTOR PROPERTY WITH LIMITS OF LIABILITY IN THE AMOUNT OF \$2,000,000 EACH ACCIDENT FOR CLAIMS FOR BODILY INJURIES (INCLUDING DEATH) TO PERSONS AND FOR DAMAGE TO PROPERTY ARISING OUT OF THE OWNERSHIP, MAINTENANCE OR USE OF ANY OWNED, HIRED OR NON-OWNED MOTOR VEHICLE.
 - D. RAILROAD PROTECTIVE LIABILITY INSURANCE (ISO-RIMA OR EQUIVALENT FORM) APPROVED BY PERMITTOR COVERING THE WORK TO BE PERFORMED AT THE DESIGNATED JOB SITE AND AFFORDING PROTECTION FOR DAMAGES ARISING OUT OF BODILY INJURY OR DEATH, PHYSICAL DAMAGE TO OR DESTRUCTION OF PROPERTY, INCLUDING DAMAGE TO THE INSURED'S OWN PROPERTY AND CONFORMING TO THE FOLLOWING:
 - THE FOLLOWING ARE THE "NAMED INSUREDS" FOR THIS COVERAGE:
 - NEW YORK CITY TRANSIT AUTHORITY (NYCTA), THE MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY (MABSTOA), THE STATEN ISLAND RAPID TRANSIT OPERATING AUTHORITY (SIRTOA), MTA CAPITAL CONSTRUCTION CO., THE METROPOLITAN TRANSPORTATION AUTHORITY (MTA) INCLUDING ITS SUBSIDIARIES AND AFFILIATES, AND THE CITY OF NEW YORK (AS OWNER).
 - THE LIMIT OF LIABILITY SHALL BE \$2,000,000 AT LEAST EACH OCCURRENCE, SUBJECT TO A \$6,000,000 ANNUAL AGGREGATE;
 - POLICY ENDORSEMENT CG 28 31 - POLLUTION EXCLUSION AMENDMENT IS REQUIRED TO BE ENDORSED ONTO THE POLICY WHEN ENVIRONMENTAL-RELATED WORK AND/OR EXPOSURES EXIST.
 - INDICATE THE NAME AND ADDRESS OF THE CONTRACTOR TO PERFORM THE WORK, THE CONTRACT # AND THE NAME OF THE RAILROAD PROPERTY WHERE THE WORK IS BEING PERFORMED AND THE AGENCY PERMIT.
 - EVIDENCE OF RAILROAD PROTECTIVE LIABILITY INSURANCE, MUST BE PROVIDED IN THE FORM OF THE ORIGINAL POLICY. A DETAILED INSURANCE BINDER (ACORD OR MANUSCRIPT FORM) WILL BE ACCEPTED PENDING ISSUANCE OF THE ORIGINAL POLICY, WHICH MUST BE PROVIDED WITHIN 30 DAYS OF THE BINDER APPROVAL.
 - E. ENVIRONMENTAL/POLLUTION EXPOSURES
IN THE EVENT ENVIRONMENTAL OR POLLUTION EXPOSURES EXIST, THE PERMITTEE SHALL REQUIRE THE ENVIRONMENTAL CONTRACTOR OR SUB-CONTRACTOR TO PROVIDE THE APPLICABLE INSURANCE COVERING SUCH EXPOSURE. THE LIMITS AND TYPE OF INSURANCE PROVIDED MUST BE SATISFACTORY TO THE PERMITTOR AND WILL BE CONFIRMED TO THE PARTIES PRIOR TO THE START OF THE WORK.
2. GENERAL REQUIREMENTS APPLICABLE TO INSURANCE POLICIES
 - A. ALL OF THE INSURANCE REQUIRED BY THIS ARTICLE SHALL BE WITH COMPANIES LICENSED OR AUTHORIZED TO DO BUSINESS IN THE STATE OF NEW YORK WITH AN A.M. BEST COMPANY RATING OF NOT LESS THAN A-/M OR BETTER AND REASONABLY APPROVED BY THE PERMITTOR/MTA AND SHALL DELIVER EVIDENCE OF SUCH POLICIES.
 - B. EXCEPT FOR WORKERS COMPENSATION, ALL REFERENCES TO FORMS AND COVERAGES REFERRED TO ABOVE SHALL BE THE MOST RECENT USED BY THE INSURANCE SERVICES OFFICE, INC. ("ISO") OR EQUIVALENT FORMS APPROVED BY THE INSURANCE DEPARTMENT OF THE STATE OF NEW YORK; PROVIDED, HOWEVER, THAT EXCESS COVERAGES MAY BE WRITTEN ON FORMS REASONABLY ACCEPTABLE TO PERMITTOR CONTAINING PROVISIONS OTHER THAN THOSE CONTAINED IN ISO FORMS BUT OTHERWISE CONFORMING IN SUBSTANCE TO THE REQUIREMENTS OF THIS ARTICLE.
 - C. THE PERMITTEE OR ITS CONTRACTOR PERFORMING THE WORK SHALL FURNISH EVIDENCE OF ALL POLICIES BEFORE ANY WORK IS STARTED TO THE PERMITTOR:
 - FOR NYCT CONTRACT INSPECTION
C/O MR. JOHN MALVASIO
DIRECTOR, MOW ENGINEERING
130 LIVINGSTON STREET, ROOM 8044F
BROOKLYN, NY 11201
TELEPHONE: (718) 694-1358

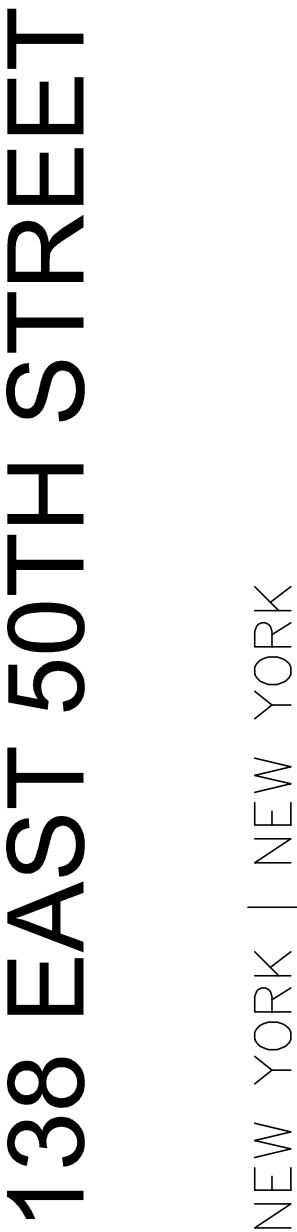
THESE POLICIES MUST: (i) BE WRITTEN IN ACCORDANCE WITH THE REQUIREMENTS OF THE PARAGRAPHS ABOVE, AS APPLICABLE; (ii) BE ENDORSED IN FORM ACCEPTABLE TO INCLUDE A PROVISION THAT THE POLICY WILL NOT BE CANCELED, MATERIALLY CHANGED, OR NOT RENEWED, UNLESS OTHERWISE INDICATED HEREIN, AT LEAST THIRTY (30) DAYS PRIOR WRITTEN NOTICE TO THE PERMITTOR C/O MTA RISK AND INSURANCE MANAGEMENT - STANDARDS, ENFORCEMENT & CLAIMS UNIT, 2 BROADWAY, 21ST FLOOR, NEW YORK, NY 10004; AND (iii) STATE OR BE ENDORSED TO PROVIDE THAT THE COVERAGE AFFORDED UNDER THE CONTRACTOR'S POLICIES SHALL APPLY ON A PRIMARY AND NOT ON AN EXCESS OR CONTRIBUTING BASIS WITH ANY POLICIES WHICH MAY BE AVAILABLE TO THE PERMITTOR/MTA, AND ALSO THAT THE CONTRACTOR'S POLICIES, PRIMARY AND EXCESS, MUST BE EXHAUSTED BEFORE IMPLICATING ANY PERMITTOR/MTA POLICY AVAILABLE. (iv) IN ADDITION, CONTRACTOR'S POLICY SHALL STATE OR BE ENDORSED TO PROVIDE THAT, IF A SUBCONTRACTOR'S POLICY CONTAINS ANY PROVISION THAT MAY ADVERSELY AFFECT WHETHER CONTRACTOR'S POLICIES ARE PRIMARY AND MUST BE EXHAUSTED BEFORE IMPLICATING ANY PERMITTOR/MTA POLICY AVAILABLE, CONTRACTOR'S AND SUBCONTRACTOR'S POLICIES SHALL NEVERTHELESS BE PRIMARY AND MUST BE EXHAUSTED BEFORE IMPLICATING ANY PERMITTOR/MTA POLICY AVAILABLE. EXCEPT FOR PROFESSIONAL LIABILITY, POLICIES WRITTEN ON CLAIMS MADE BASIS ARE NOT ACCEPTABLE. AT LEAST TWO (2) WEEKS PRIOR TO THE EXPIRATION OF THE POLICIES, CONTRACTOR SHALL ENDEAVOR TO PROVIDE EVIDENCE OF RENEWAL OR REPLACEMENT POLICIES OF INSURANCE, WITH TERMS AND LIMITS NO LESS FAVORABLE THAN THE EXPIRING POLICIES. EXCEPT AS OTHERWISE INDICATED IN THE DETAILED COVERAGE PARAGRAPHS BELOW, SELF INSURED RETENTIONS AND POLICY DEDUCTIBLES SHALL NOT EXCEED \$100,000, UNLESS SUCH INCREASED DEDUCTIBLE OR RETENTION IS APPROVED BY PERMITTOR/MTA. THE PERMITTEE SHALL BE RESPONSIBLE FOR ALL CLAIM EXPENSE AND LOSS PAYMENTS WITHIN THE DEDUCTIBLE OR SELF-INSURED RETENTION. THE INSURANCE MONETARY LIMITS REQUIRED HEREIN MAY BE MET THROUGH THE COMBINED USE OF THE INSURED'S PRIMARY AND UMBRELLA/EXCESS POLICIES.

D. CERTIFICATES OF INSURANCE MAY BE SUPPLIED AS EVIDENCE OF POLICIES OF THE ABOVE POLICIES, EXCEPT THE RAILROAD PROTECTIVE LIABILITY POLICY, DESIGNATED AS POLICY D. HOWEVER, IF REQUESTED BY THE PERMITTOR, THE PERMITTEE SHALL DELIVER TO THE AUTHORITY, WITHIN FORTY-FIVE (45) DAYS OF THE REQUEST, A COPY OF SUCH POLICIES, CERTIFIED BY THE INSURANCE CARRIER AS BEING TRUE AND COMPLETE. THE RAILROAD PROTECTIVE LIABILITY INSURANCE POLICY MUST BE PROVIDED IN THE FORM OF THE ORIGINAL POLICY. A DETAILED INSURANCE BINDER MAY BE PROVIDED, ACORD OR MANUSCRIPT FORM, PENDING ISSUANCE OF THE ORIGINAL POLICY. THE ORIGINAL POLICY MUST BE SUBMITTED TO MTA RIM WITHIN 30 DAYS OF THE BINDER APPROVAL.

E. IF A CERTIFICATE OF INSURANCE IS SUBMITTED, IT MUST: (1) BE PROVIDED ON THE PERMITTOR CERTIFICATE OF INSURANCE FORM OR MTA CERTIFICATE OF INSURANCE FORM FOR JOINT AGENCY AGREEMENTS; (2) BE SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE INSURANCE CARRIER OR PRODUCER AND NOTARIZED; (3) DISCLOSE ANY DEDUCTIBLE, SELF-INSURED RETENTION, SUB-LIMIT, AGGREGATE LIMIT OR ANY EXCLUSIONS TO THE POLICY THAT MATERIALLY CHANGE THE COVERAGE; (4) INDICATE THE ADDITIONAL INSUREDS AND NAMED INSUREDS AS REQUIRED HEREIN, ALONG WITH A PHYSICAL COPY OF THE ADDITIONAL INSURED ENDORSEMENT (I.S.O. FORM CG 20 26 07/04 VERSION OR EQUIVALENT), AS APPLICABLE AND THE ENDORSEMENT(S) MUST INCLUDE POLICY NUMBER(S); (5) REFERENCE THE CONTRACT BY NUMBER ON THE FACE OF THE CERTIFICATE; AND (6) EXPRESSLY REFERENCE THE INCLUSION OF ALL REQUIRED ENDORSEMENTS.

F. THE MINIMUM AMOUNTS OF INSURANCE REQUIRED IN THE DETAIL DESCRIPTION OF POLICIES A, B, C, AND D ABOVE SHALL NOT BE CONTRSTED TO LIMIT THE EXTENT OF THE PERMITTEE'S LIABILITY UNDER THIS AGREEMENT.

G. IF, AT ANY TIME DURING THE PERIOD OF THIS AGREEMENT, INSURANCE AS REQUIRED IS NOT IN EFFECT, OR PROOF THEREOF IS NOT PROVIDED TO THE PERMITTOR, THE PERMITTOR SHALL HAVE THE OPTIONS TO: (i) DIRECT THE PERMITTEE TO SUSPEND WORK OR OPERATION WITH NO ADDITIONAL COST OR EXTENSION OF TIME DUE ON ACCOUNT THEREOF; OR (ii) TREAT SUCH FAILURE AS AN EVENT OF DEFAULT.

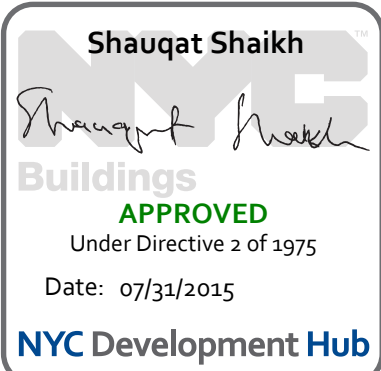



SURVEY AND MONITORING NOTES:

3. THE TEMPORARY SHEETING WALL (SUPPORT OF EXCAVATION) IS DESIGNED WITH AN ADDED ALLOWABLE VERTICAL SURCHARGE LOADING AT SIDEWALK GRADE AT A VALUE OF 300 POUNDS PER SQUARE FOOT (PSF). HEAVY EQUIPMENT OR MATERIAL STORAGE ANTICIPATED SHALL BE PLACED WITHIN A DISTANCE TO THE SHEETING WALL EQUAL TO THE EXCAVATION DEPTH, MUST BE EVALUATED BY THIS OFFICE FOR ACCEPTANCE PRIOR TO PLACING SAID HEAVY EQUIPMENT.
2. ALL SOLDIER PILES SHALL BE W12x65 OR BETTER, U.O.N.
3. ALL STEEL SECTIONS SHOWN ON THESE DRAWINGS ARE MINIMUM REQ'D DIMENSIONS
4. STRUCTURAL CONCRETE FOR UNDERPINNING PIERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000-PSI AT 28 DAYS, AS APPLICABLE.
5. CONCRETE PIERS AND DRY PACK SHALL BE ALLOWED TO CURE PRIOR TO EXCAVATING ADJACENT PIT, OR ADVANCING THE EXCAVATION IN FRONT OF THE PIT.
6. DRY PACK SHALL CONSIST OF ONE PART CEMENT TO TWO PARTS SAND BY VOLUME. WATER SHALL BE ADDED TO PRODUCE A MIXTURE WHICH HOLDS ITS SHAPE WHEN FORMED INTO A BALL BY HAND.
7. GROUTING TO STABILIZE SOIL AT UNDERPINNING PITS SHALL BE PERFORMED USING SODIUM SILICATE OR MICROFINE CEMENT. GROUT MIX DESIGN, EQUIPMENT, DRILLING PROCEDURE, AND SEQUENCE SHALL BE PERFORMED BY THE CONTRACTOR AND SUBMITTED FOR REVIEW.
8. TIMBER LAGGING SHALL BE ROUGH CUT, FULL SIZE CONSTRUCTION GRADE, WITH A MINIMUM ALLOWABLE BENDING STRESS OF 1200-PSI. TIMBER SIZES SHOWN ARE ACTUAL SIZES.
9. DEPTH OF EXCAVATION BELOW FOOTING AND PREVIOUSLY INSTALLED LAGGING BOARDS SHALL NOT EXCEED 36 INCHES, OR AT DIRECTION FIELD PROFESSIONAL ENGINEER. MAINTAIN TIGHT CONTACT BETWEEN SOIL AND LAGGING BOARDS. IF MATERIAL IS CAVING INTO EXCAVATION, DECREASE THE UNBRACED EXCAVATION DEPTH AND/OR GROUT THE MATERIAL TO MINIMIZE LOSS.
10. IF MATERIAL BEHIND LAGGING HAS BEEN LOST OR DISTURBED, LEAVE A 1 TO 1 1/2-INCH SPACE BETWEEN LAGGING BOARDS TO IMMEDIATELY BACKFILL OR GROUT.
11. EXCAVATION FOR UNDERPINNING PIERS MUST BE PERFORMED IN DRY CONDITIONS. DEWATERING MAY BE NECESSARY PRIOR TO EXCAVATION TO MAINTAIN WATER LEVELS A MINIMUM OF 1 FOOT BELOW THE PROPOSED SUBGRADE LEVEL OF THE PIER. HAY OR FILTER FABRIC SHALL BE USED TO MINIMIZE MIGRATION OF FINES INTO THE EXCAVATION.
12. UNDERPINNING PIER SUBGRADE BEARING MATERIAL SHALL BE EQUAL OR BETTER CLASS THAN THE ORIGINAL BEARING MATERIAL.
13. MAXIMUM PIT WIDTH IS 4 FEET UNLESS OTHERWISE NOTED ON THE DRAWINGS.
14. EXCAVATE PITS FOR UNDERPINNING PITS SHOULD CAUSE MINIMAL DISTURBANCE TO SOIL SUBGRADE BELOW THE FOOTING. IT IS THE CONTRACTORS RESPONSIBILITY TO DESIGN THE APPROACH PITS AND EXCAVATE PITS FOLLOWING OSHA AND LOCAL LAWS.
15. EXCAVATE PITS SUCH THAT A MINIMUM OF 12 FEET OF UNDISTURBED SOIL OR CURED UNDERPINNING PIER IS MAINTAINED BETWEEN OPEN PITS UNTIL ALL UNDERPINNING IS COMPLETE.
16. DO NOT LEAVE PITS OPEN OVERNIGHT OR DURING WEEKENDS OR HOLIDAYS.
17. DO NOT START UNDERPINNING WITH A CORNER OR END UNDERPINNING PIER.
18. UNDERPINNING PIER THICKNESS SHALL BE 2'-0" OR WIDTH OF FOOTING, WHICHEVER IS GREATER.
19. UNDERPINNING SHALL BE CONSTRUCTED IN ONE VERTICAL LIFT, NO COLD JOINTS.
20. CONTRACTOR SHALL REMOVE 12 INCHES MINIMUM FROM TOP OF PILE AT ADJACENT NEIGHBORING YARDS AND RESTORE AS CLOSELY AS POSSIBLE TO ORIGINAL CONDITION.

1. A PRE-CONSTRUCTION (PRE-CONDITION) SURVEY OF THE ADJACENT STRUCTURES SHALL BE COMPLETED PRIOR TO CONSTRUCTION COMMENCEMENT. THE CONTRACTOR SHALL REVIEW AND FAMILIARIZE HIMSELF WITH THE RESULTS OF THE SURVEY. THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE ADJACENT STRUCTURES (INSIDE AND OUT) PRIOR TO STARTING THE WORK.
2. MONITOR THE ADJACENT BUILDINGS AT 50-FOOT INTERVALS MOVEMENT IN 3 AXIS. NOTE THAT MONITORING LOCATIONS ARE NOT SHOWN ON THE SUPPORT OF EXCAVATION PLAN.
3. OBTAIN BASELINE READINGS OF THE MONITORING POINTS PRIOR TO AND DURING EXCAVATION AND NEW CONSTRUCTION.
4. PERFORM OPTICAL SURVEYS (BY OTHER) AT LEAST TWICE PER WEEK. IF MOVEMENTS OCCUR, INCREASE THE FREQUENCY OF THE READINGS AS DIRECTED BY THE ENGINEER.
5. VIBRATION MONITORS (SEISMOGRAPHS – BY OTHERS) SHALL BE PLACED ADJACENT TO AREAS WHERE WORK IS BEING PERFORMED. NOTE THAT SEISMOGRAPH LOCATIONS ARE NOT SHOWN ON THE SUPPORT OF EXCAVATION PLAN FOR CLARITY (NYCTA MONITORING BY OTHERS).
6. BUILDING MOVEMENT AND VIBRATION CRITERIA:
 - A. IF THE VERTICAL OR LATERAL BUILDING MOVEMENT REACHES 0.125 INCHES, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER.
 - B. IF THE BUILDING MOVEMENT REACHES 1/4-INCH, IMMEDIATELY INFORM THE CONSTRUCTION MANAGER AND ENGINEER AND STOP WORK. THE WORK SHALL RESUME UPON APPROVAL BY THE CONSTRUCTION MANAGER AND APPROVED REMEDIAL MEASURES AND/OR MODIFIED CONSTRUCTION PROCEDURES BY THE ENGINEER.
 - C. IF THE VIBRATIONS REACH 0.5 INCHES PER SECOND (IPS) THE CONSTRUCTION MANAGER AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
 - D. IF THE VIBRATIONS EXCEED 1.0 IPS, IMMEDIATELY INFORM THE CONSTRUCTION MANAGER AND ENGINEER AND STOP WORK. THE WORK SHALL RESUME UPON APPROVAL BY THE CONSTRUCTION MANAGER AND APPROVED REMEDIAL MEASURES AND/OR MODIFIED CONSTRUCTION PROCEDURES BY THE ENGINEER.
7. VIBRATION MONITORS SHALL TAKE REAL TIME READINGS UNDER DIRECTION OF VIBRATION CONTRACTOR/CONSULTANT.
8. ALL MONITORING DATA SHALL BE PRESENTED TO THE CONSTRUCTION MANAGER AND ENGINEER AT THE END OF EACH DAY AS APPLICABLE.
9. CRACK MONITORING GAUGES ESTABLISHED AT THE PROPERTY DURING THE EXISTING CONDITIONS DOCUMENTATION WORK SHALL BE MONITORED AT LEAST ON A WEEKLY BASIS DURING EXCAVATION AND CONSTRUCTION ACTIVITIES. IF NEW CRACKS ARE OBSERVED, ADDITIONAL GAUGES SHALL BE INSTALLED AND SIMILARLY MONITORED. IF ANY OF THE CRACK GAUGES INDICATES A MOVEMENT OF MORE THAN 1 MILLIMETER (0.04 INCHES) BETWEEN 2 CONSECUTIVE READINGS OR A CUMULATIVE MOVEMENT EXCEEDING 2 MILLIMETERS (0.08 INCHES), ANY WORK ADJACENT TO THE PROPERTY SHALL BE STOPPED AND CORRECTIVE ACTION ACCEPTABLE TO ALL CONCERNED PARTIES SHALL BE IMPLEMENTED PRIOR TO RESTART.

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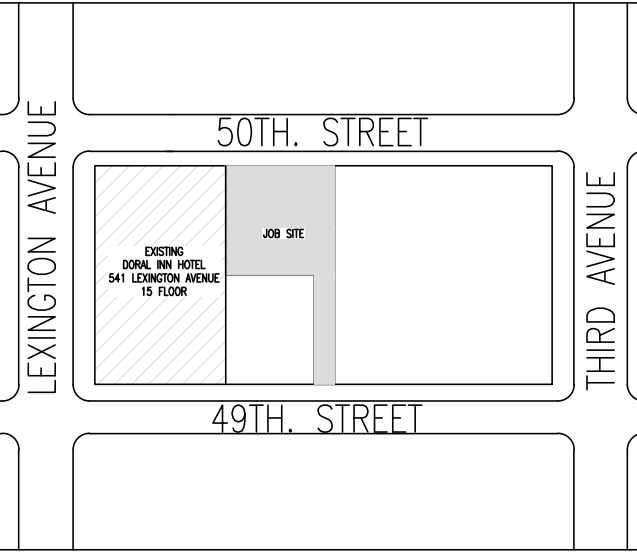
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138 EAST 50TH STREET

NEW YORK | NEW YORK

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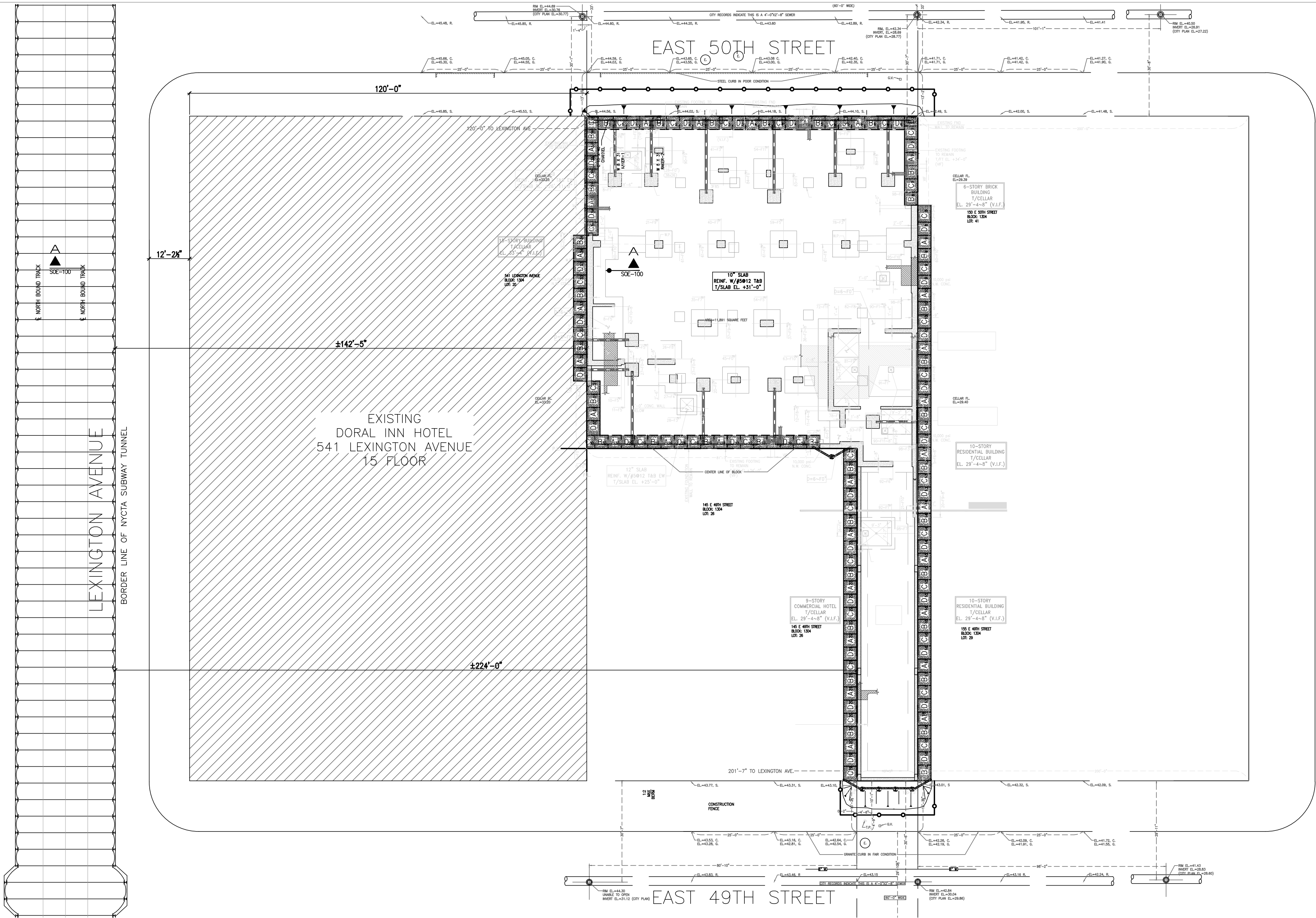


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GENERAL PLAN

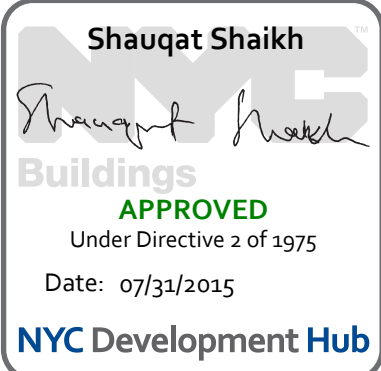
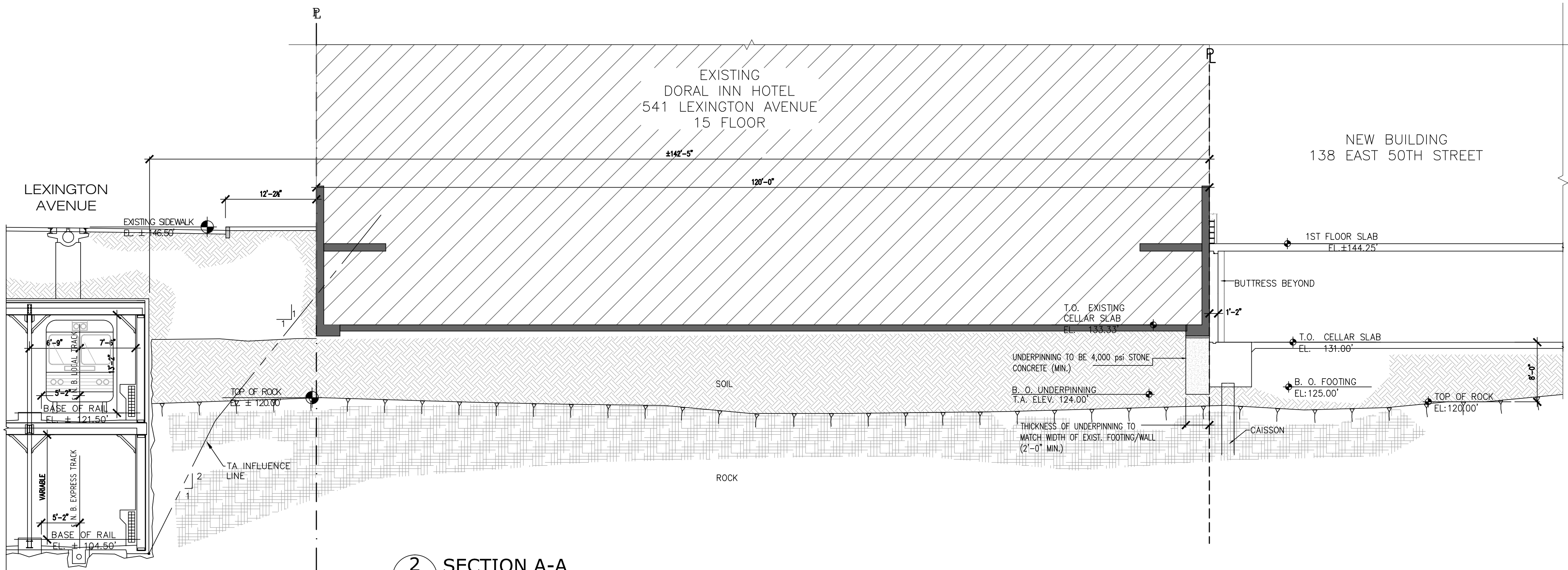
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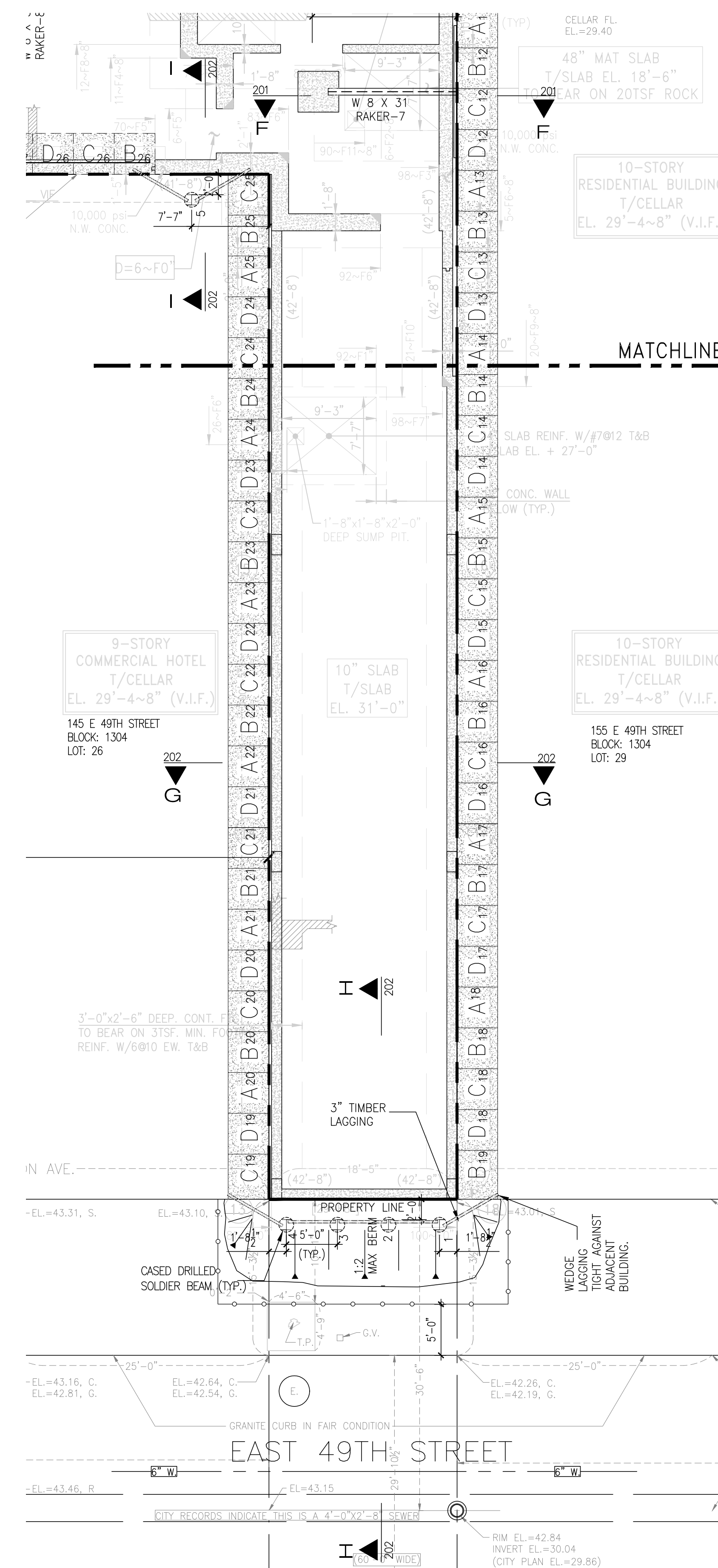
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1 SITE PLAN
100 SCALE: 1" = 20'-0"



2 SECTION A-A
100 SCALE: 1" = 10'-0"






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1 SUPPORT OF EXCAVATION PLAN
101 SCALE: 1/8" = 1'-0"

Shauqat Shaikh
Shauqat Shaikh
 Buildings
APPROVED
 Under Directive 2 of 1975
 Date: 07/31/2015
NYC Development Hub

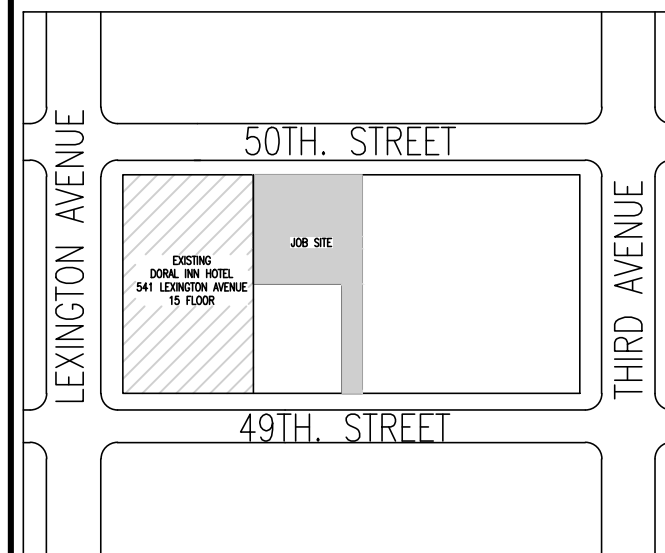
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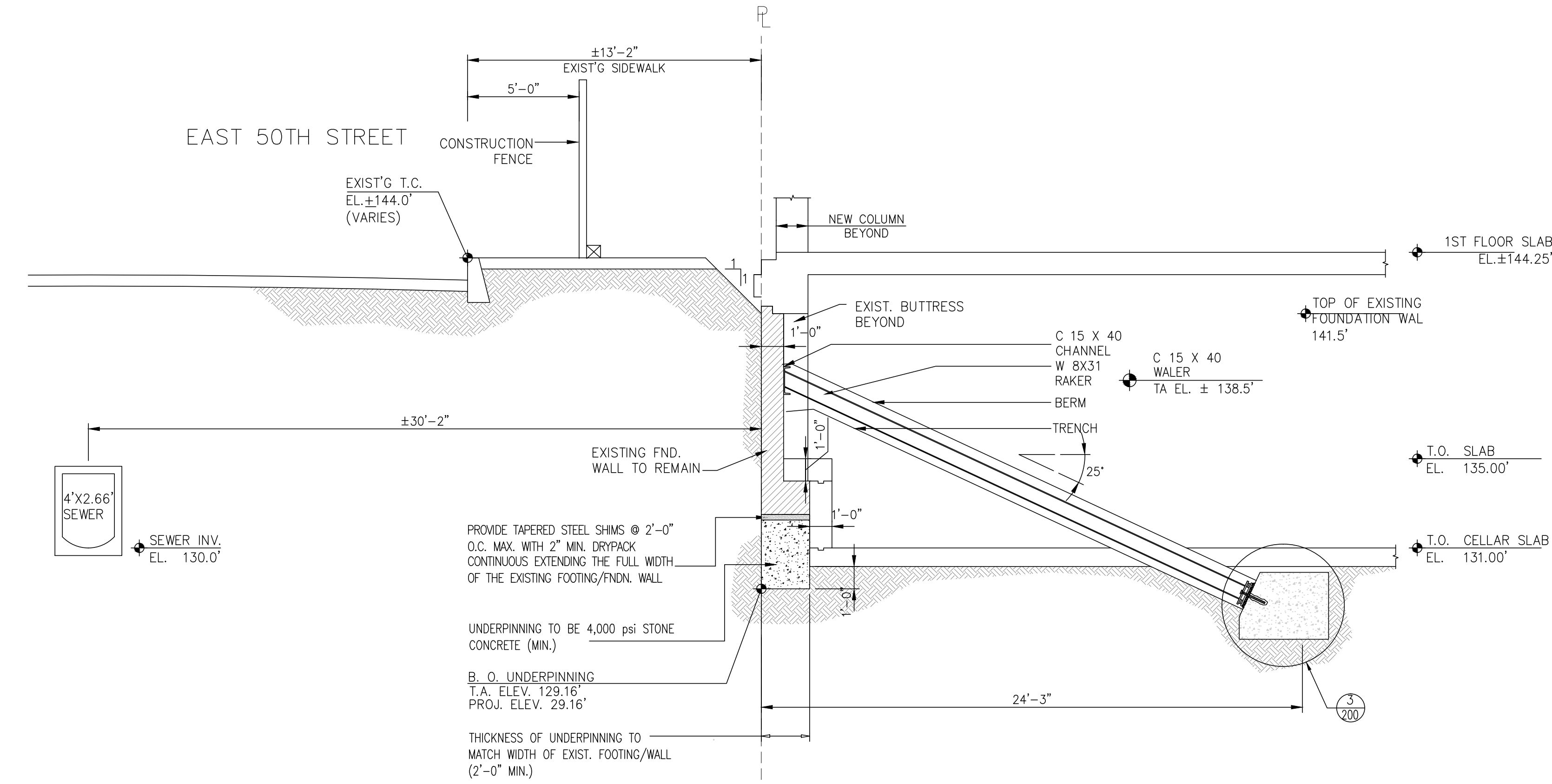
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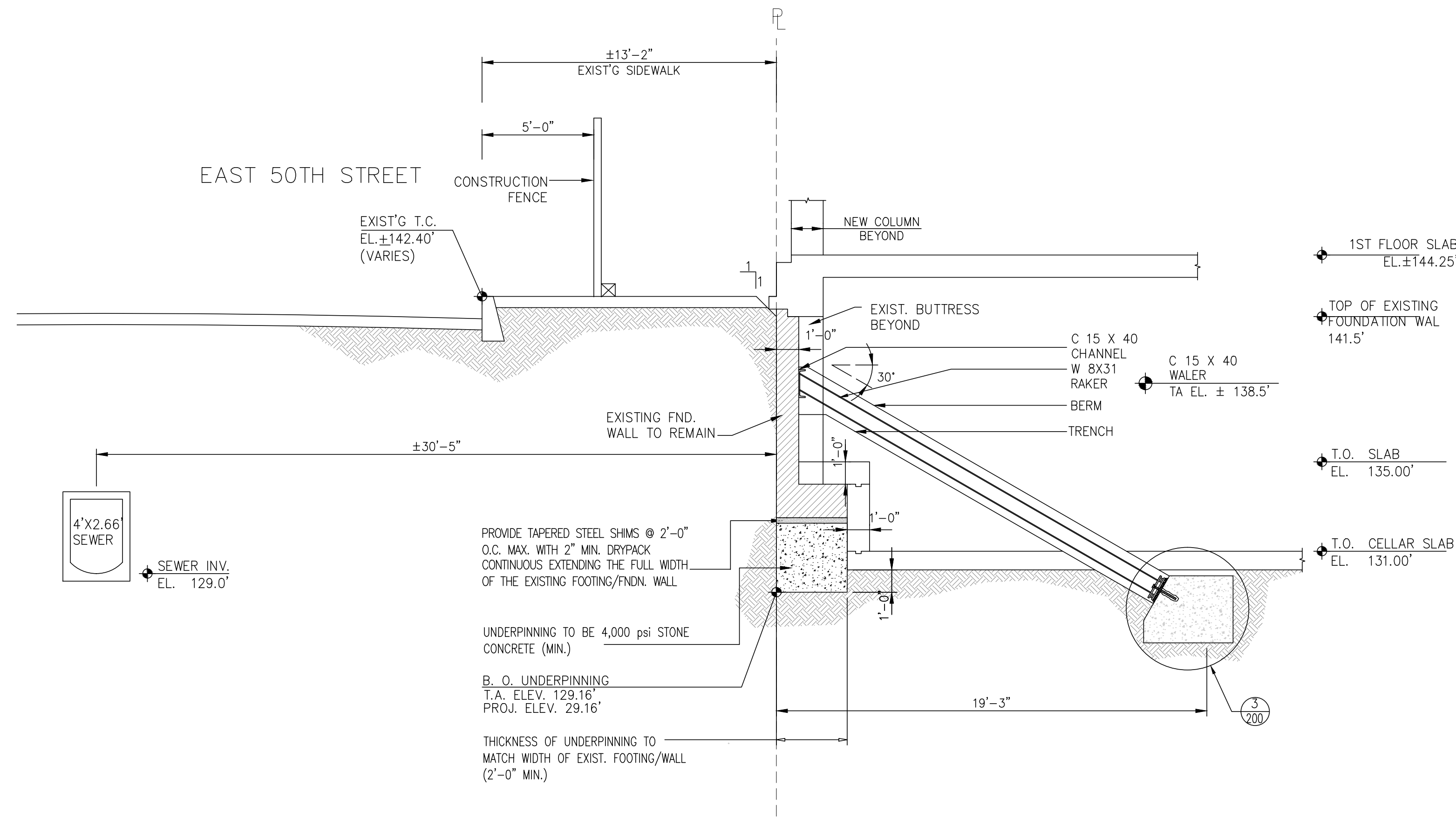


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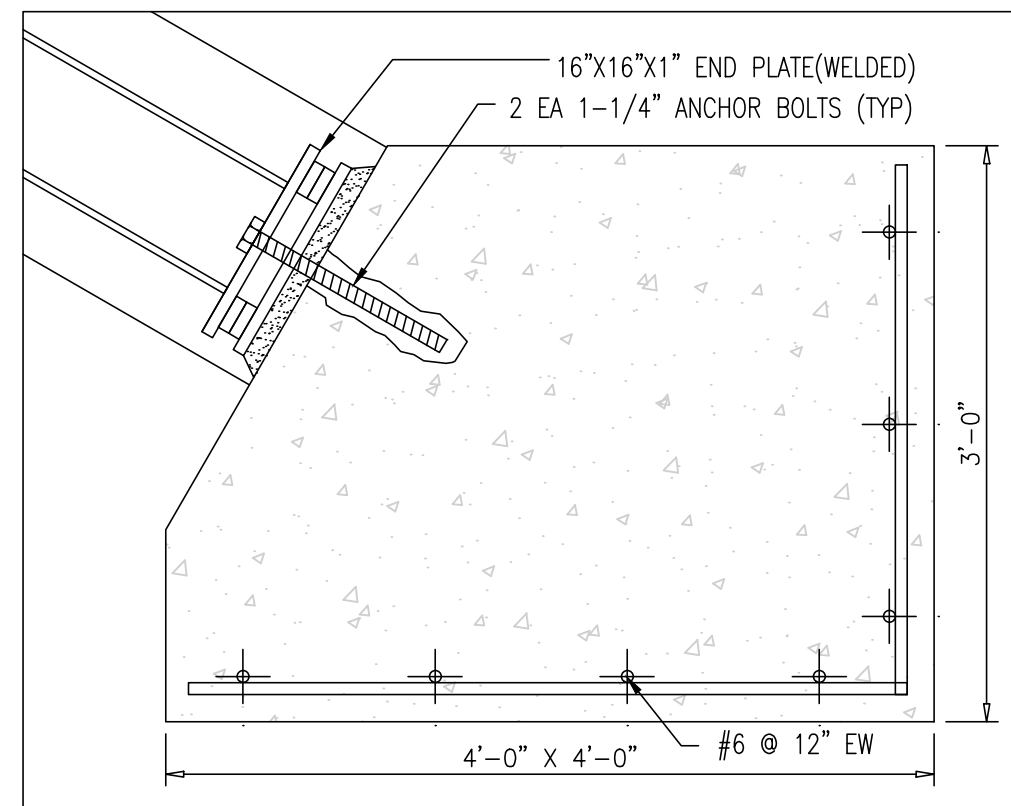
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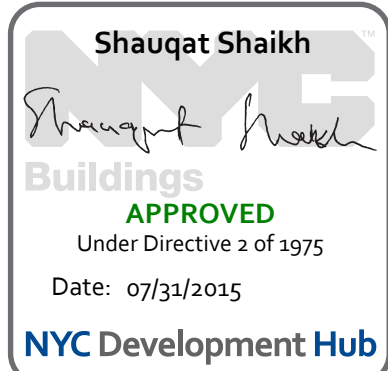
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2 SECTION B-B
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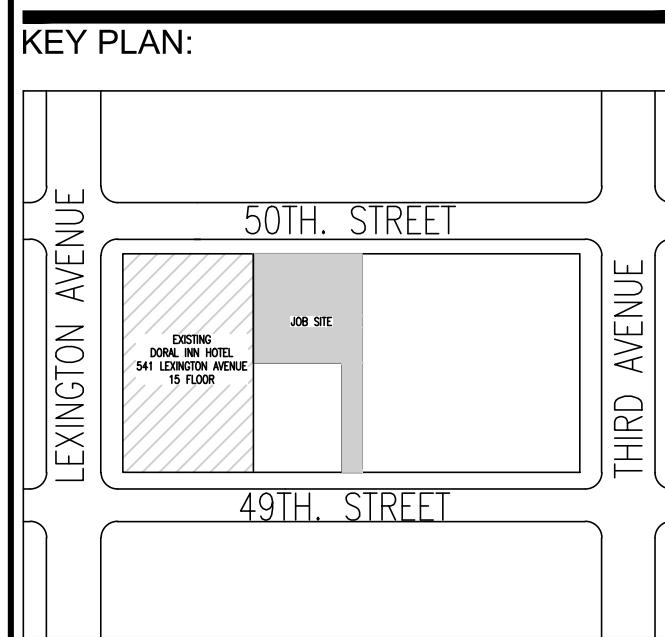




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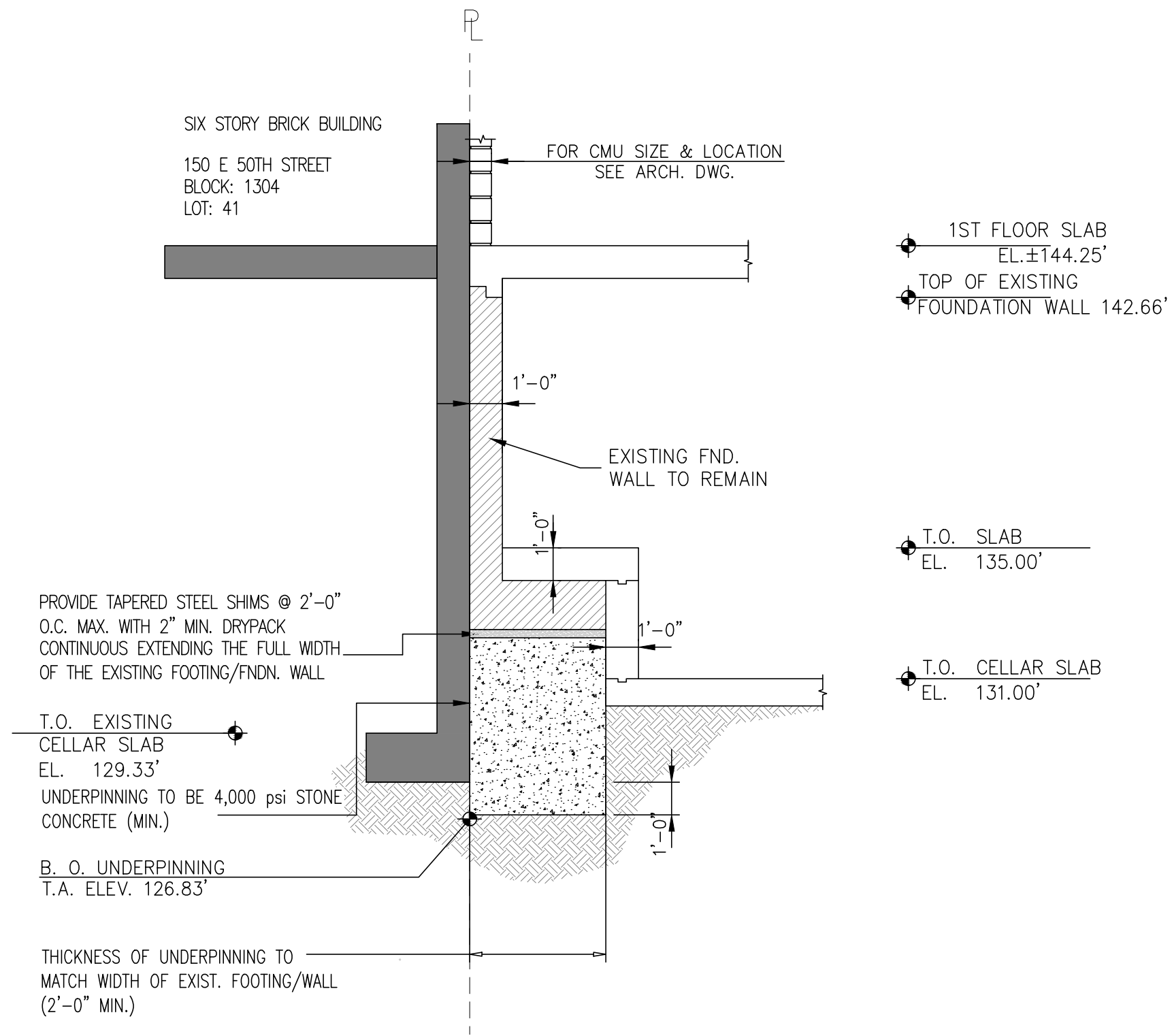
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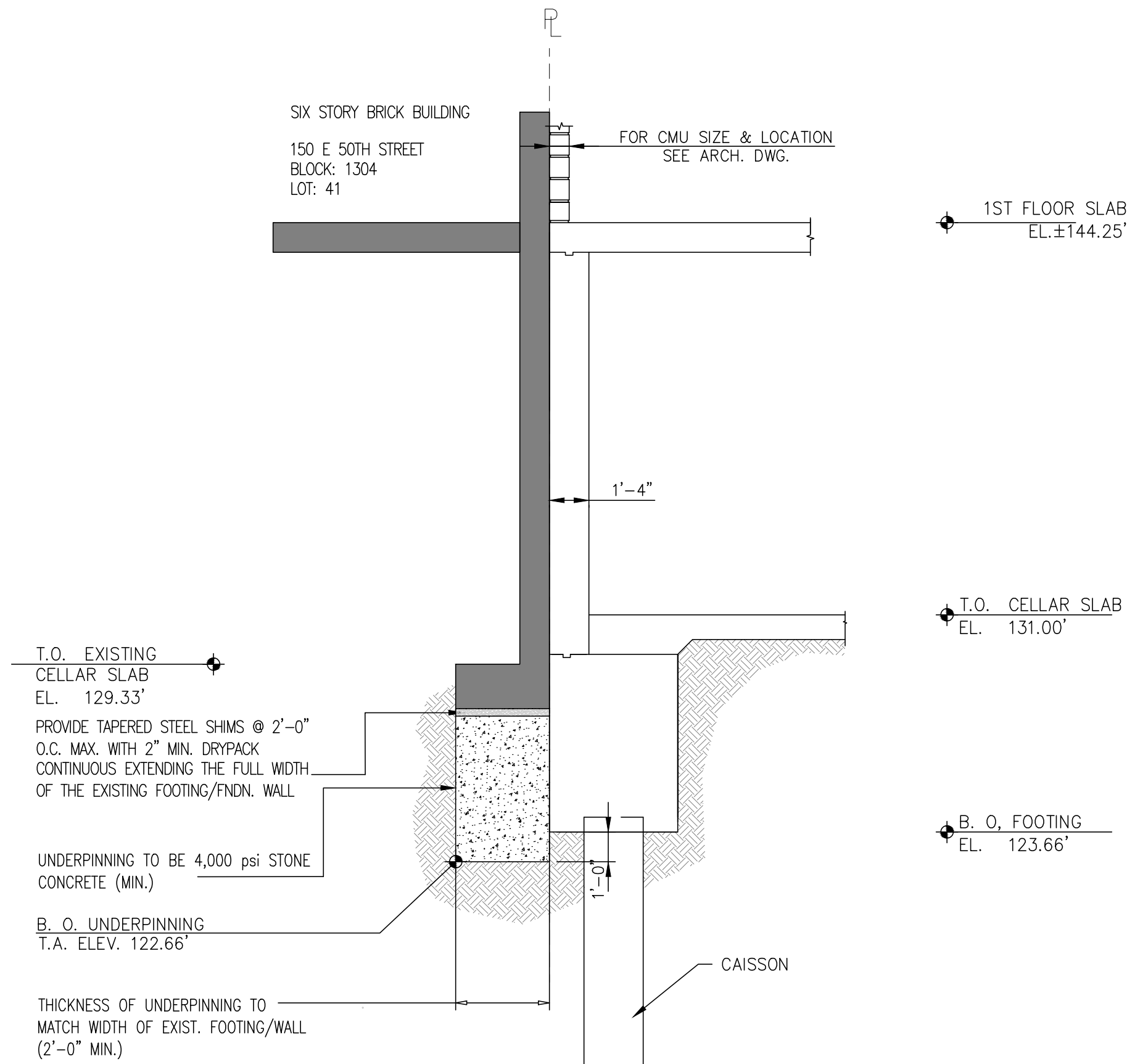
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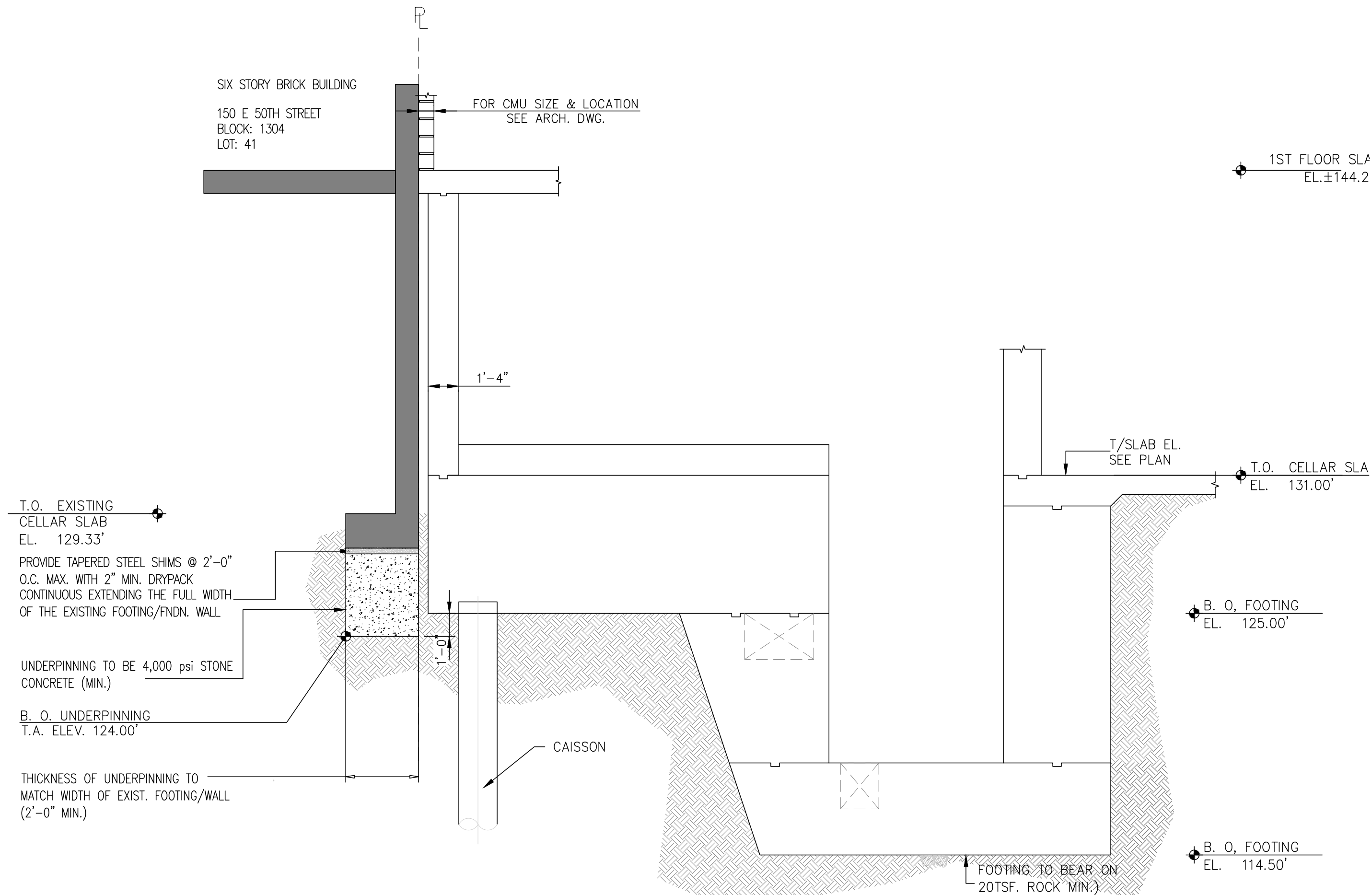
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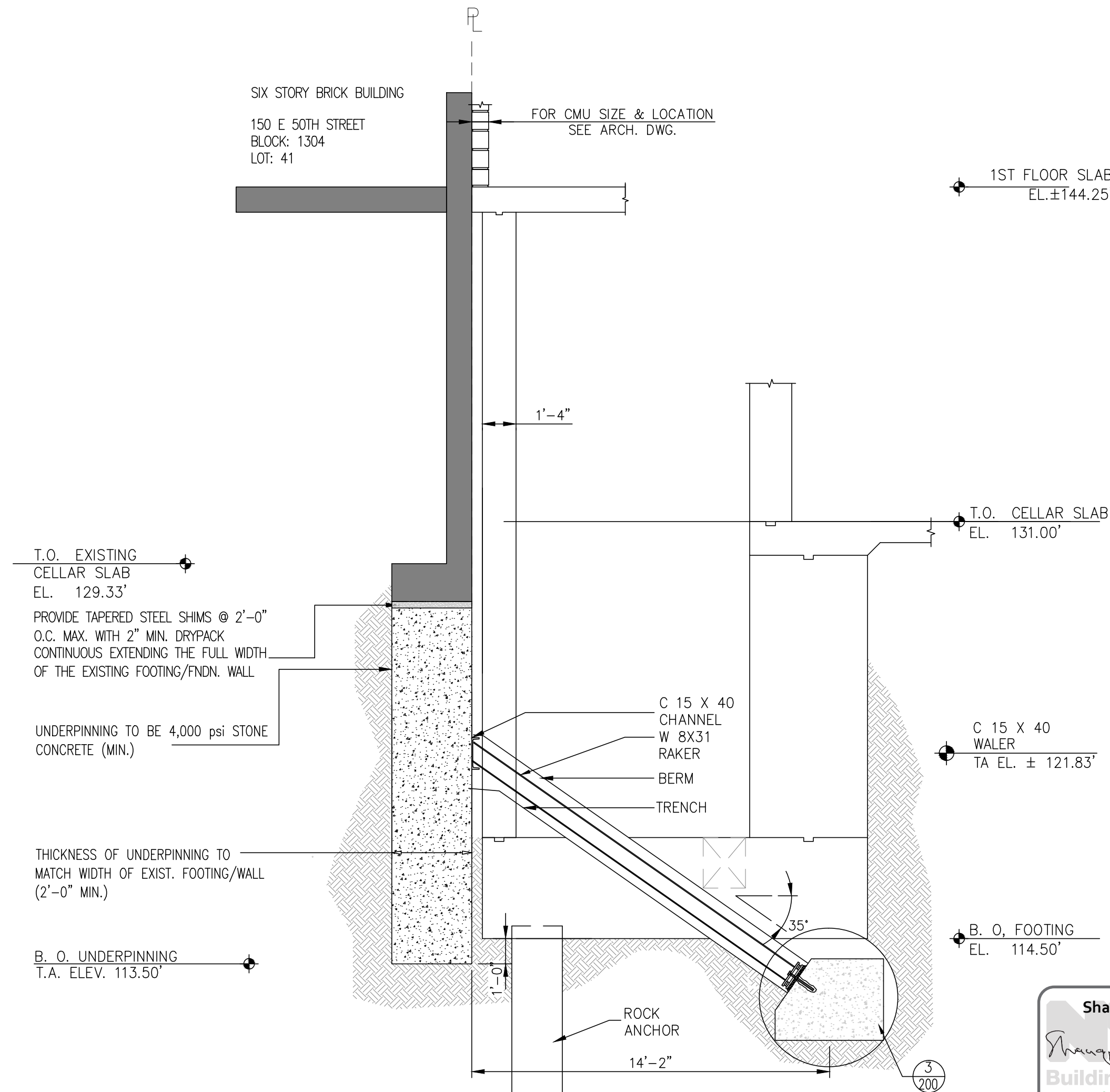
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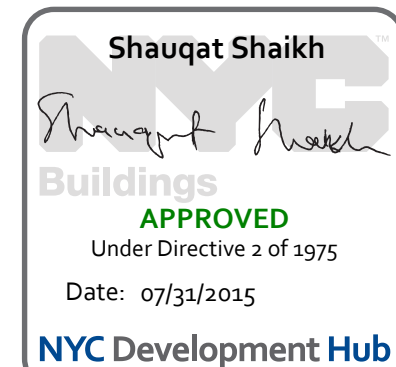
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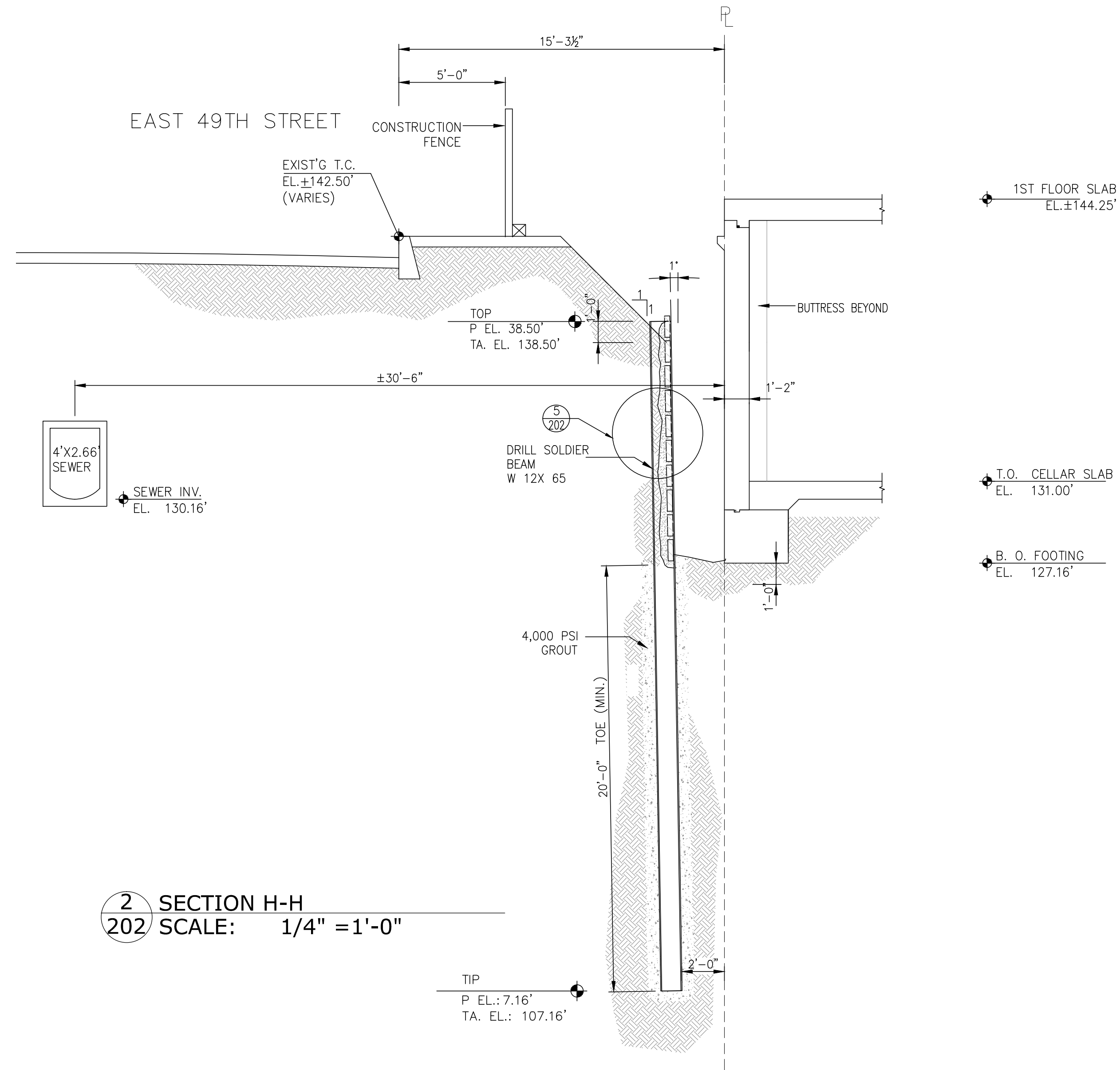
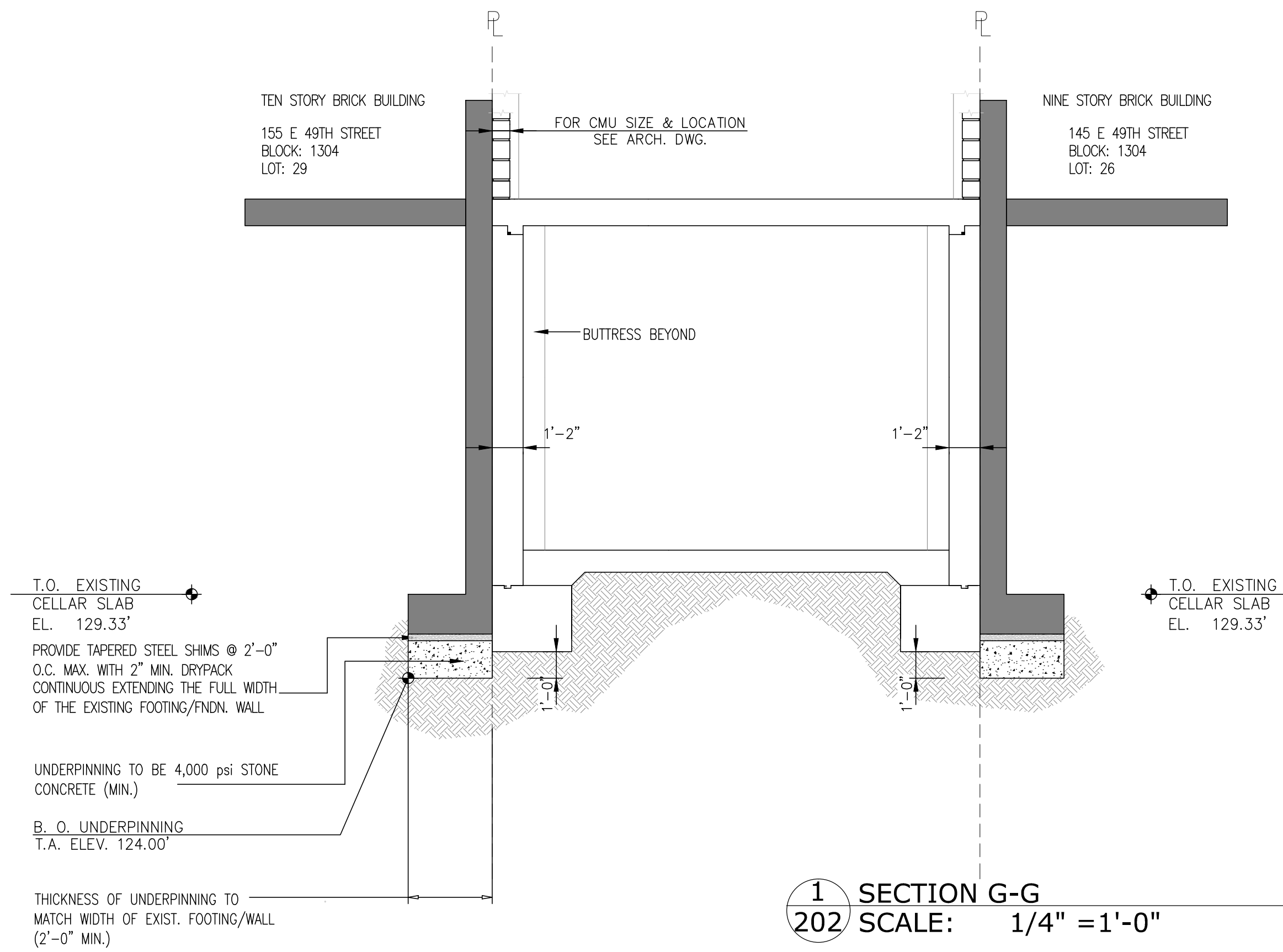


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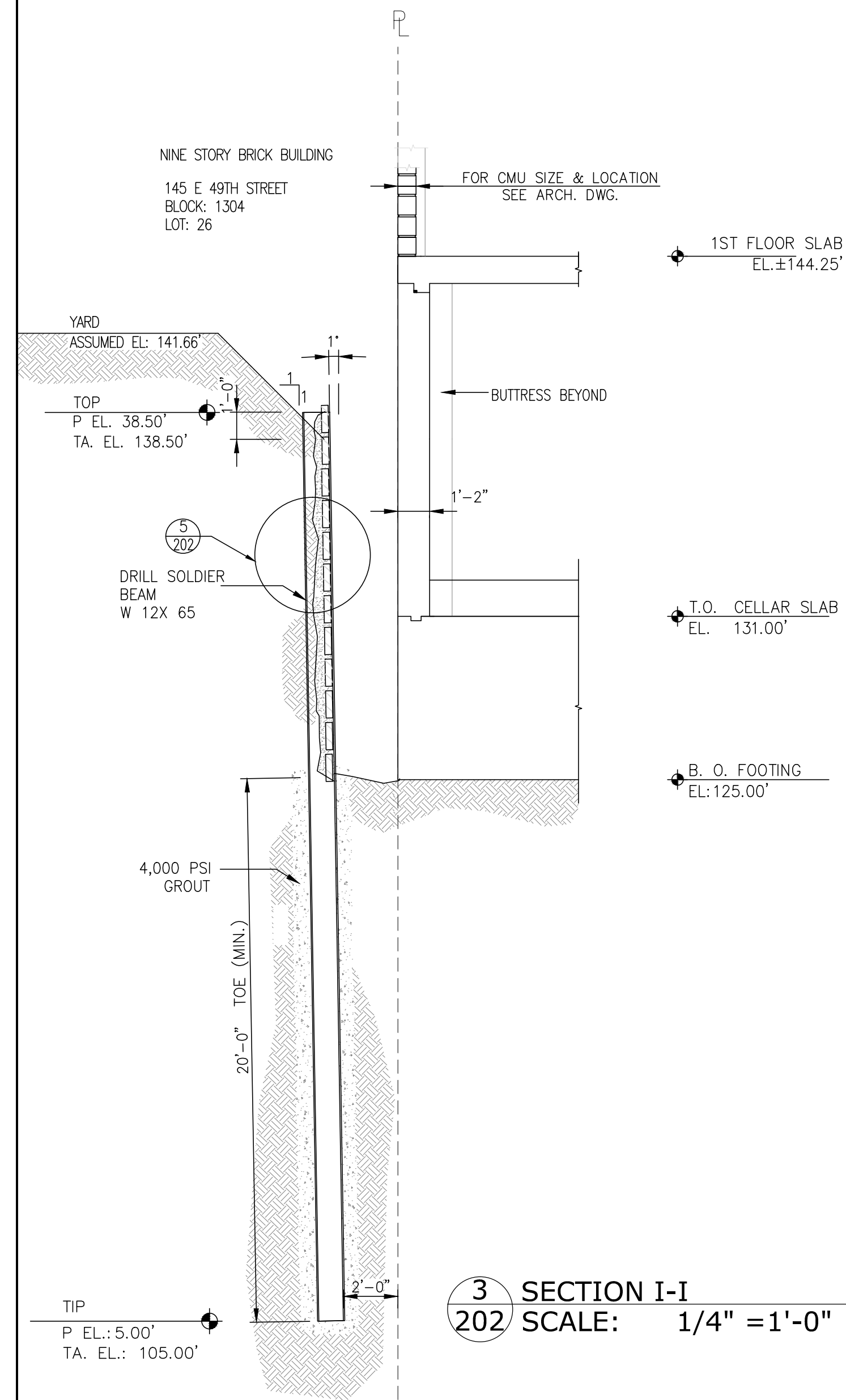


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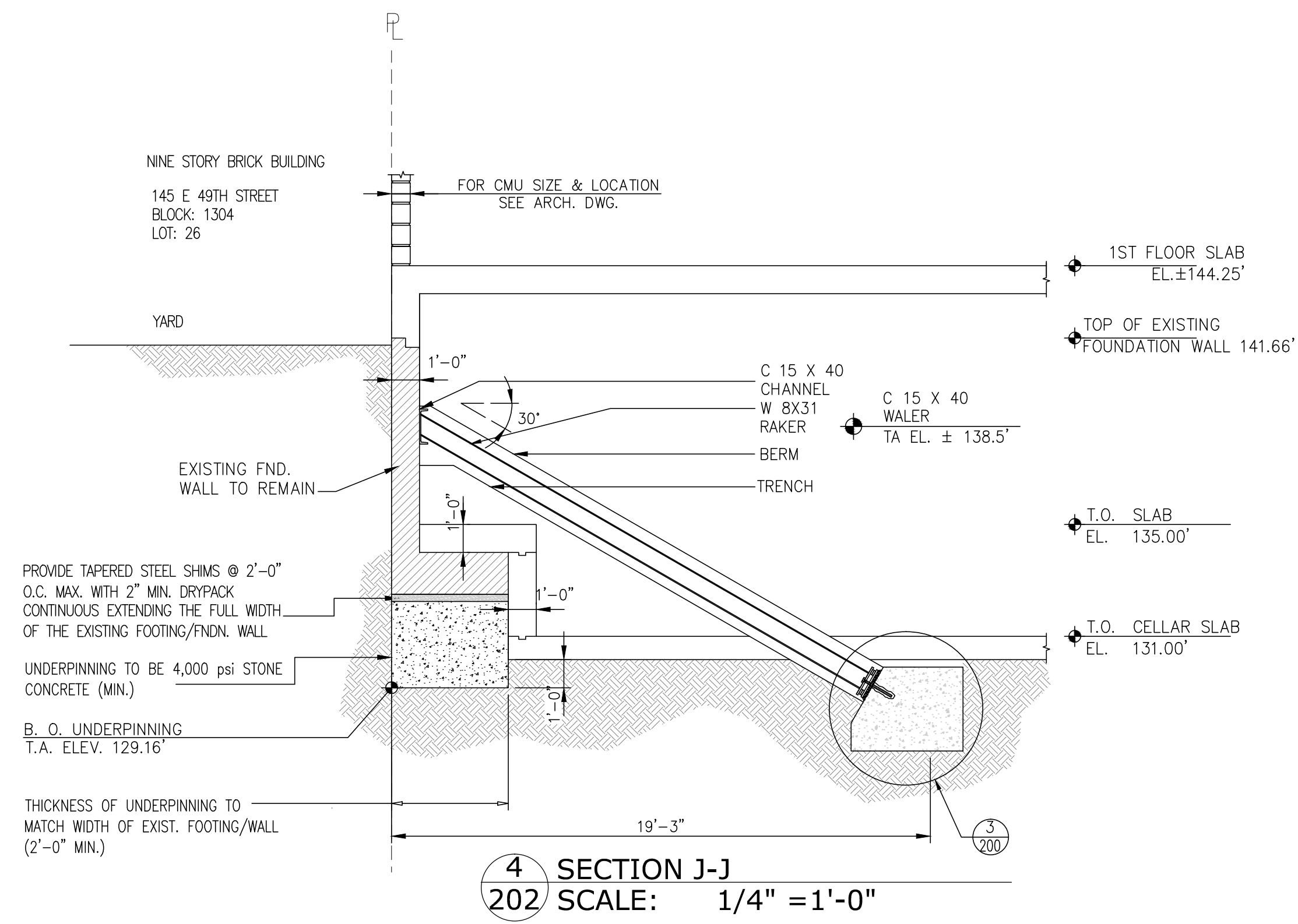




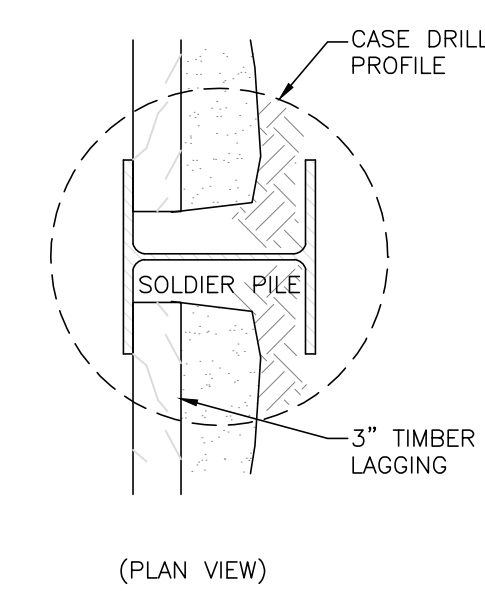
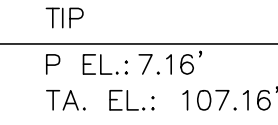
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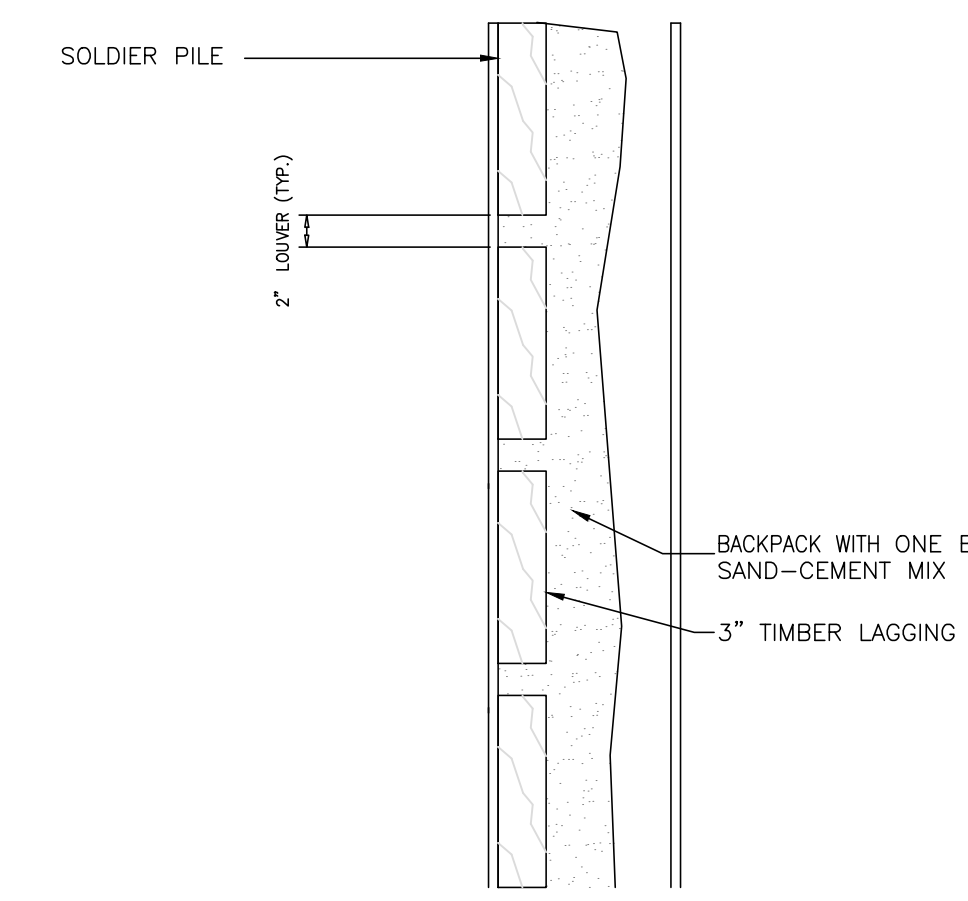
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4 SECTION J-J
202 SCALE: 1/4" = 1'-0"



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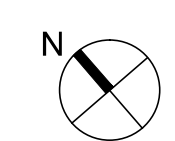


5 DETAIL B (TYPICAL)
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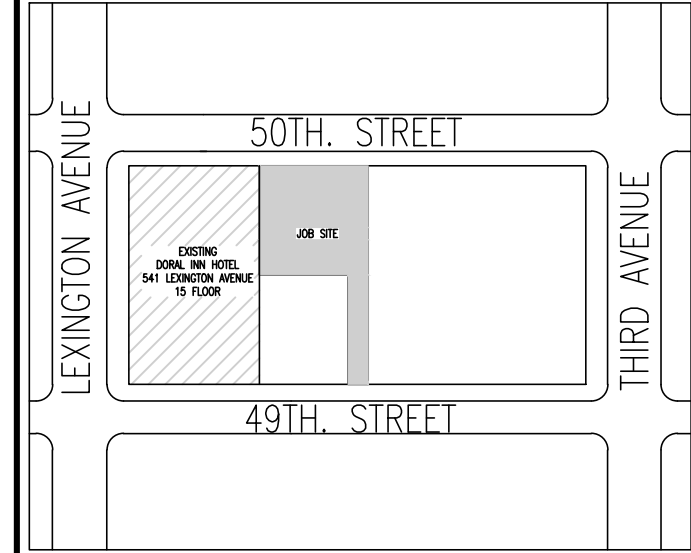
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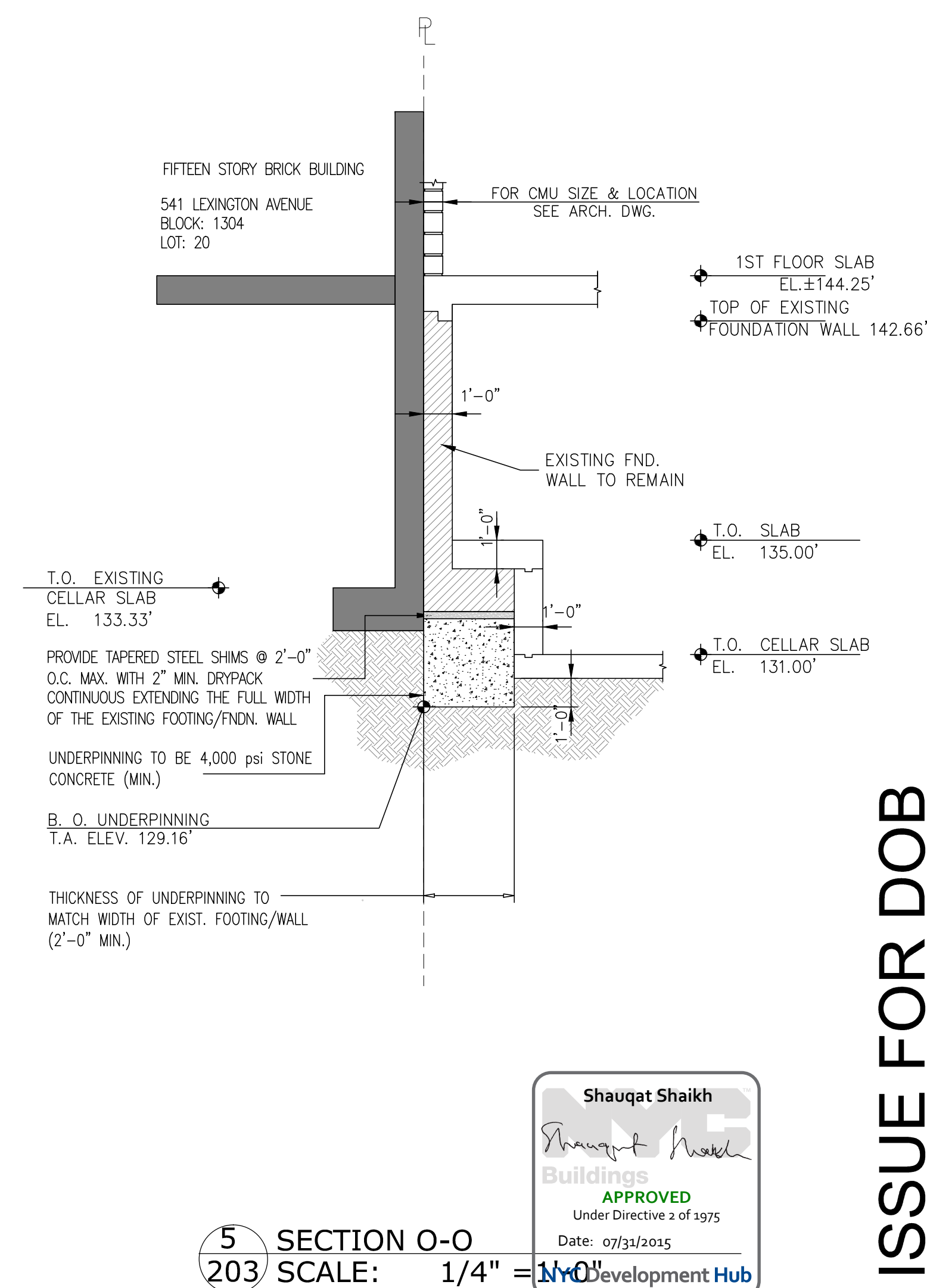
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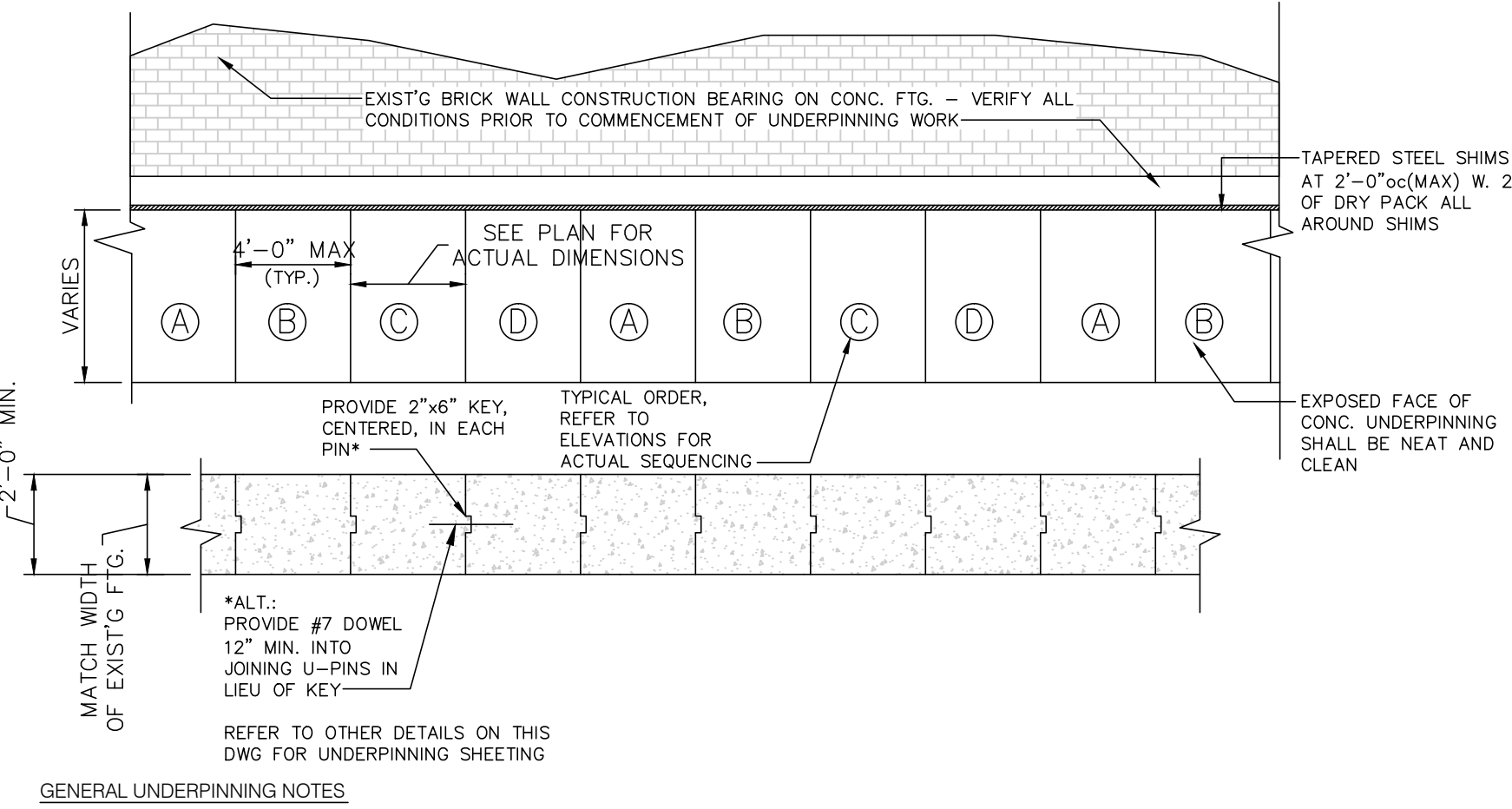
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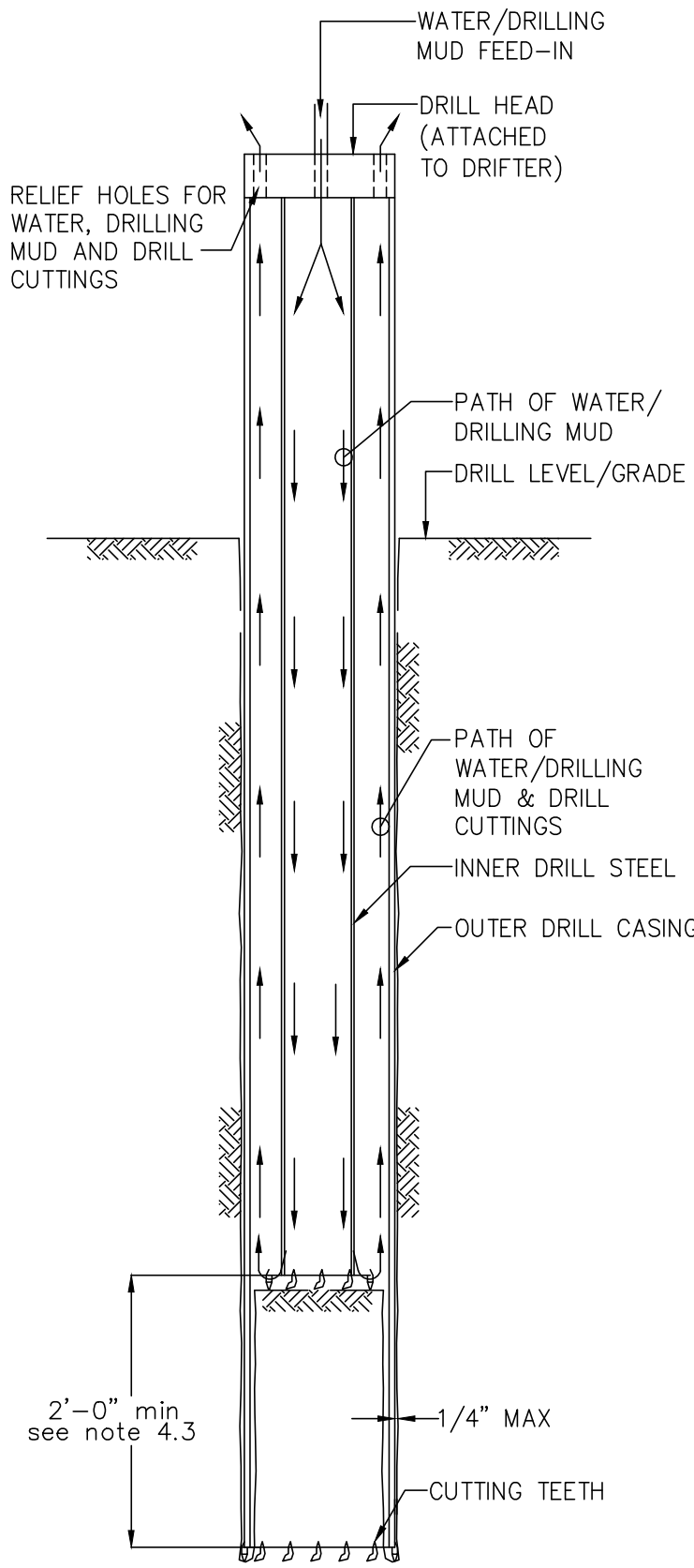
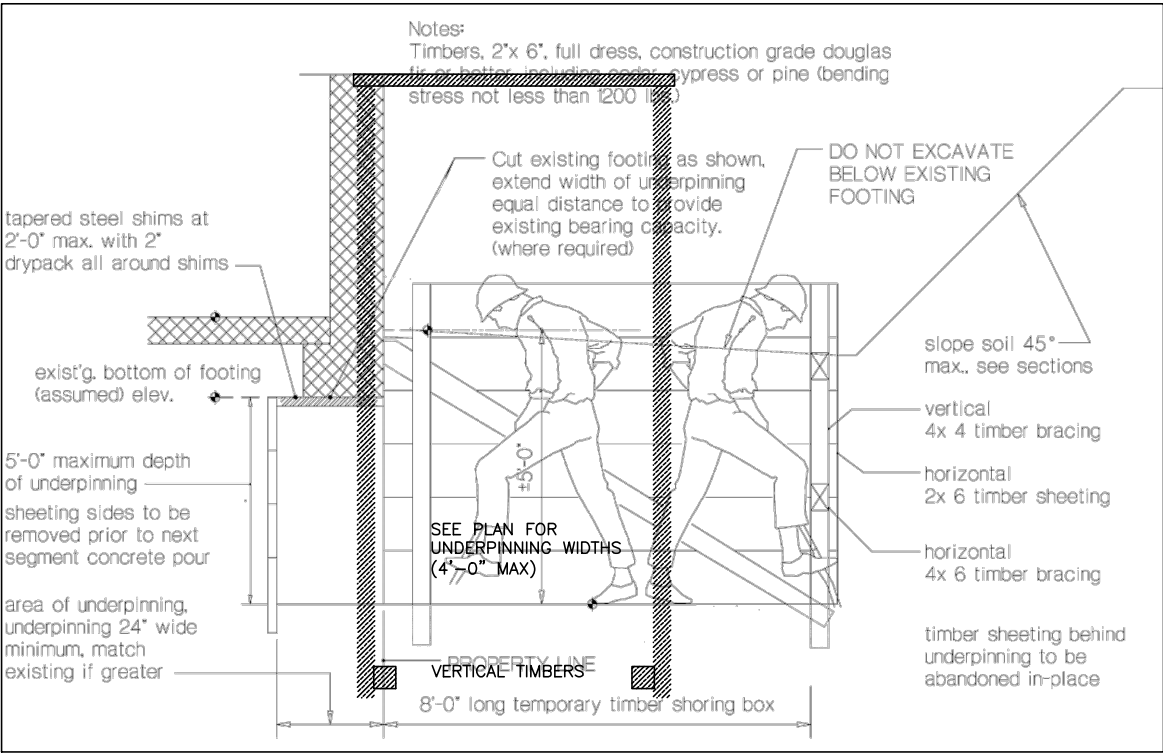
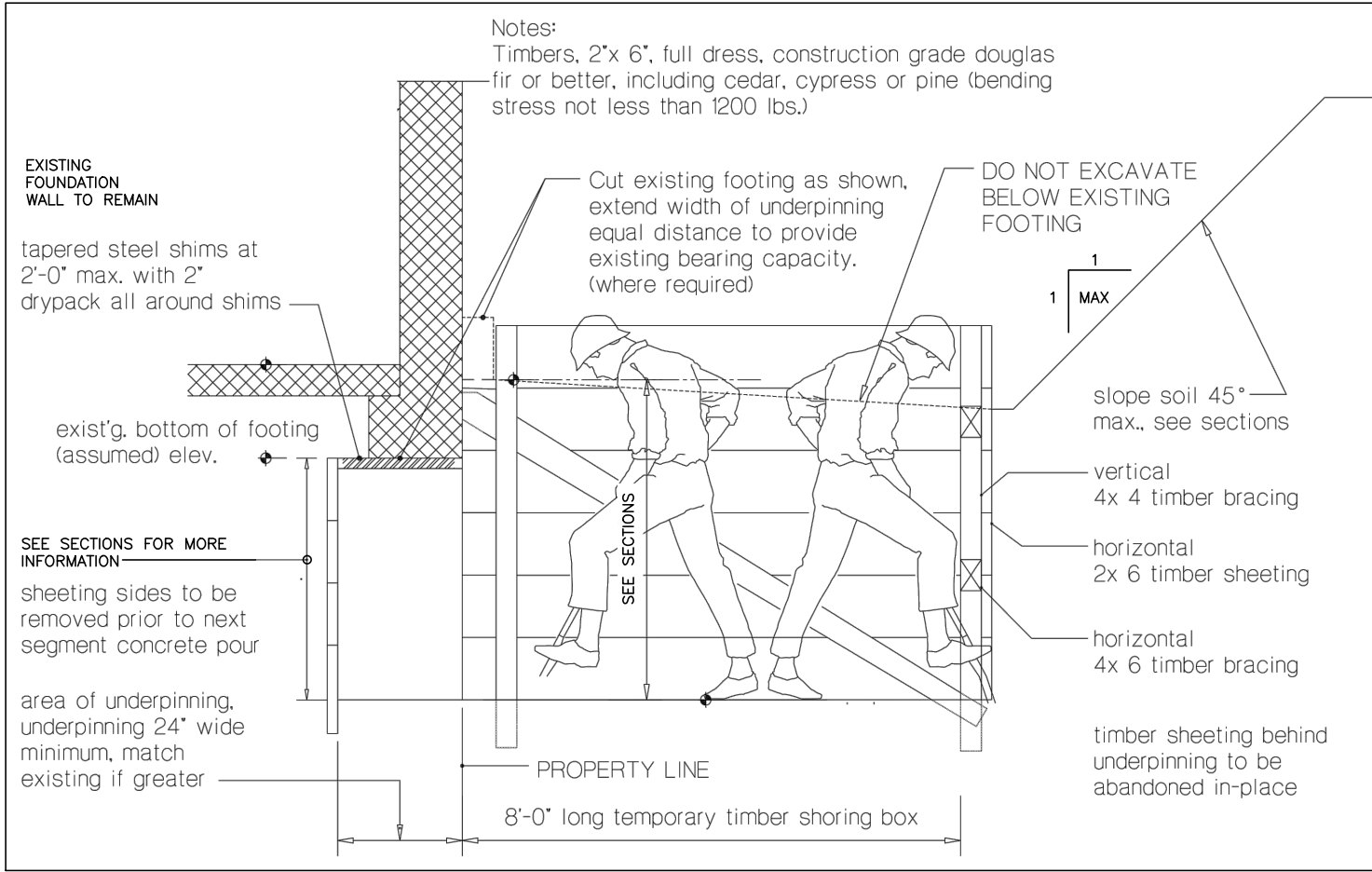
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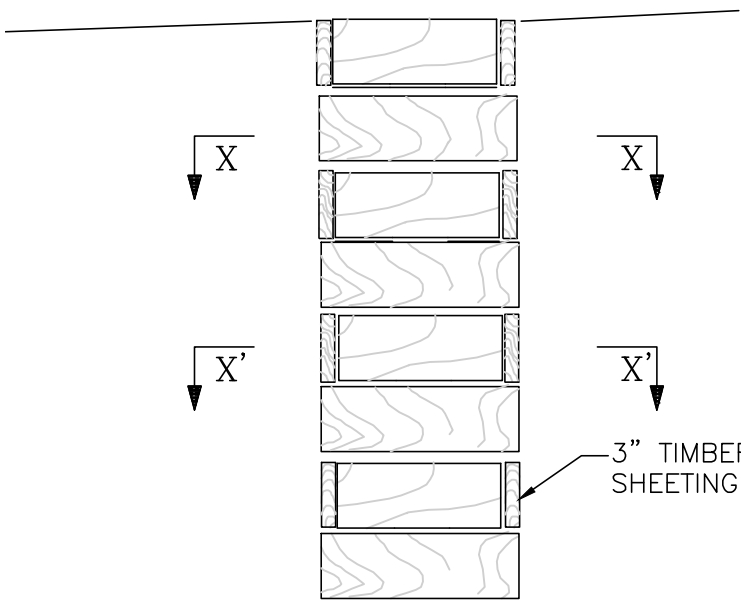


- GENERAL UNDERPINNING NOTES**
- THE CONTRACTOR SHALL COMPLY WITH ALL RELEVANT PROVISIONS OF THE NYC BUILDING CODE.
 - ALL FOUNDATIONS AND EARTHWORK OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NYC BUILDING CODE. ALL LOTS, BUILDINGS AND SERVICES ADJOINING THE FOUNDATION AND EARTHWORK AREAS SHALL BE PROTECTED AND PROPERLY SUPPORTED.
 - ALL TEST PITS, BORINGS, EXCAVATION WORK AND UNDERPINNING OPERATIONS ARE SUBJECT TO CONTROLLED INSPECTIONS.
 - THE OWNER SHALL RETAIN A LICENSED SURVEYOR TO SURVEY ALL LOAD BEARING WALLS, PIERS AND COLUMNS TO BE UNDERPINNED (UNLESS CONTRACTUALLY DEFINED OTHERWISE). THE SURVEYOR SHALL CHECK THE DATUM OF SUCH STRUCTURAL ELEMENTS EVERY TWO WEEKS FOR THE DURATION OF THE WORK.
 - THERE SHALL BE A PRE-CONSTRUCTION MEETING WITH THE OWNER, ARCHITECT, ENGINEER OF RECORD, GENERAL CONTRACTOR AND FOUNDATION SUB-CONTRACTOR(S) PRIOR TO WORK COMMENCING.
 - ALL ADJACENT PROPERTIES, INCLUDING BUT NOT LIMITED TO EXTERIOR WALLS AND FOOTINGS ARE TO BE OBSERVED BY THE ENGINEER OF RECORD AND ENGINEER RESPONSIBLE FOR THE CONTROLLED INSPECTIONS PRIOR TO WORK COMMENCING.
 - THE CONTRACTOR SHALL REQUEST PERMISSION TO ENTER BUILDINGS DIRECTLY ADJACENT TO THE AREAS OF PROPOSED UNDERPINNING.
 - NO FOUNDATION OR EARTHWORK PERMIT SHALL BE ISSUED UNTIL AT LEAST FIVE DAYS AFTER A WRITTEN NOTICE OF THE PERMIT APPLICATION HAS BEEN PROVIDED BY THE APPLICANT TO THE OWNER OF ALL ADJOINING LOTS, BUILDINGS AND SERVICE FACILITIES, WHOM MAY BE AFFECTED BY THE PROPOSED FOUNDATION WORK OR EARTHWORK OPERATIONS.
 - THE UNDERPINNING FOUNDATIONS SHALL BEAR ON SUBGRADE HAVING A BEARING CAPACITY EQUAL TO OR GREATER THAN THE SUBGRADE OF THE EXISTING FOUNDATION. THE SUBGRADE AT THE LEVEL OF THE EXISTING FOUNDATION SHALL BE INSPECTED BY A LICENSED PROFESSIONAL ENGINEER RETAINED BY THE OWNER (UNLESS CONTRACTUALLY DEFINED OTHERWISE) TO VERIFY THE BEARING CAPACITY, AND DEFICIENCIES BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD.
 - DO NOT TRANSFER THE BUILDING LOAD ONTO NEW UNDERPINNING WALLS UNTIL ALL WALLS HAVE ATTAINED 50% OF THE CONCRETE DESIGN STRENGTH, AS CONFIRMED BY THE CYLINDER TESTS, OR 96 HOURS.
 - DO NOT PLACE BACKFILL AGAINST NEW UNDERPINNING WALLS UNTIL CONFIRMED BY THE CYLINDER TEST, OR 96 HOURS.
 - ALL CONCRETE SHALL BE NORMAL WEIGHT TYPE 2 STONE CONCRETE WITH A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
 - ALL GROUT SHALL BE NONSHRINK WITH A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.
 - ALL DRYPACK SHALL BE A MIXTURE OF 1 PART CEMENT AND 2 PARTS DAMP SAND, WITH 0" SLUMP.
 - ALL UNDERPINNING SHEETING AND BRACING TO REMAIN SHALL BE 20 GA. 1-1/2" GALV. CORRUGATED METAL DECK OR PRESSURE TREATED LUMBER AND/OR OTHER APPROVED MATERIAL.
 - THE EXTENT OF THE UNDERPINNING SHALL BE DETERMINED UPON REVIEW OF THE SOILS REPORT, TEST PIT DATA AND EXISTING CONDITIONS BY A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER RETAINED BY THE OWNER AND DETAILS SHALL BE REPORTED TO THE ARCHITECT, OR ENGINEER OF RECORD.
 - EXCAVATION BELOW THE WATER TABLE SHOULD BE AVOIDED, IF POSSIBLE. DEWATER THE SITE PRIOR TO EXCAVATION. EXCAVATION MAY ONLY PROCEED AFTER REVIEW BY THE ENGINEER OF RECORD.
 - IF WATER IS ENCOUNTERED IN THE PIT, PROVIDE WELL POINTS AND DETERMINE THE LOCATIONS(S) OF THE WELL POINT(S) AND THE METHOD(S) OF REMOVING WATER FROM THE PIT.
 - ALL SIDES OR SLOPES OF EXCAVATIONS OR EMBANKMENTS SHALL BE INSPECTED AFTER RAINSTORMS.
 - THE UNDERPINNING SHALL BE INSTALLED IN A MANNER SUCH THAT THE EXPOSED FACE OF THE CONCRETE IS VERTICAL (OR AS OTHERWISE SPECIFIED), CLEAN AND NEAT.

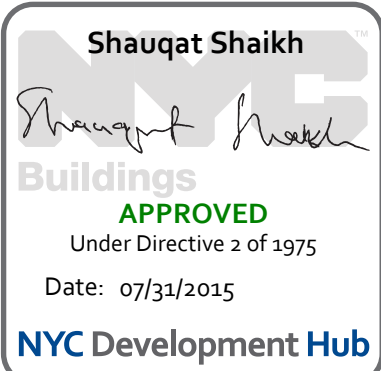
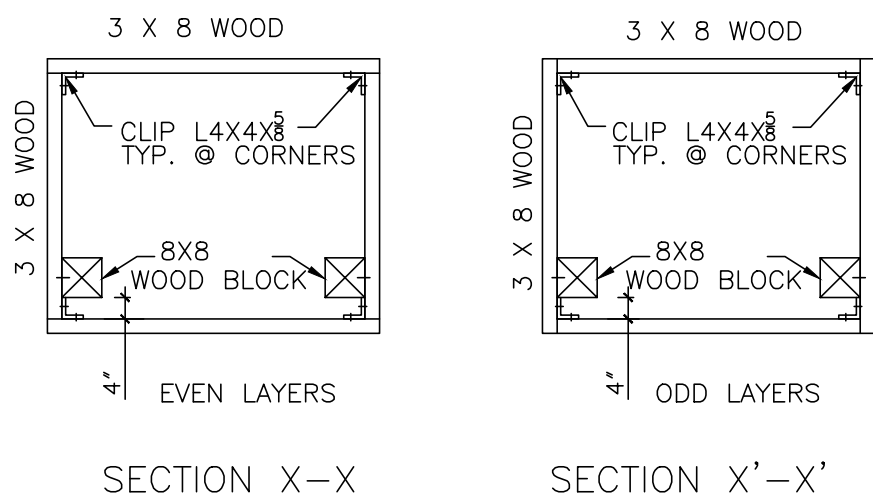
- UNDERPINNING NOTES & PROCEDURES**
- STARTING WITH SEGMENTS "A" ONLY, DIG PITS 4-0" WIDE MAXIMUM UNLESS OTHERWISE DIMENSIONED ON THESE DRAWINGS. SIMULTANEOUSLY PLACING REQUIRED SHEETING AND BRACING ALL PITS TO BE SHEETED ON ALL FOUR SIDES. PACK VOIDS BETWEEN SHEETING AND SOIL WITH SOIL CEMENT. LEAVE A MINIMUM OF 12'-0" OF EXISTING SOIL BETWEEN PITS. CLEAN BOTTOM OF EXISTING FOOTING AND RECOMPACT DISTURBED SOIL AT BOTTOM OF PIT WITH PAN TAMPERS (NOT APPLICABLE TO ROCK). COMPACT TO 95% OF MAXIMUM DENSITY OF SOIL. LOSS OF GROUND SHOULD BE KEPT TO A MINIMUM BY BACK FILLING BEHIND THE BOARDS WHERE AND WHEN POSSIBLE WITH GROUT PUMPED INTO VOIDS.
 - IF UNDERPINNING TO ROCK SURFACE, PREPARE ROCK SURFACE BY CLEANING WITH BRUSHES AND/OR COMPRESSED AIR TO REMOVE ANY LOOSE MATERIAL OR EXCAVATION SPOILS PRIOR TO PLACEMENT OF CONCRETE.
 - THE CONTRACTOR SHALL INSTALL ADEQUATE LATERAL BRACING SYSTEM(S) TO PREVENT MOVEMENT IN THE EXISTING STRUCTURE(S) AND IN THE NEW UNDERPINNING IF NECESSARY. FOUR NEW CONCRETE UNDERPINNING FOR SEGMENTS "A", AFTER CONCRETE ATTAINS 50% OF DESIGN STRENGTH, OR 96 HOURS, PLACE 2" X 4" TAPERED STEEL WEDGES AT 2'-0" O.C. MAX. THEN PACK SOLID WITH DRYPACK (MIXTURE 1 PART CEMENT, 2 PARTS DAMP SAND, WITH 0" SLUMP) INTO SPACE BETWEEN TOP OF UNDERPINNING AND BOTTOM OF EXISTING FOOTING TO TRANSFER LOAD, ENSURE THE BACK OF VOID IS FORMED SO THAT DRYPACK IS NOT LOST WHEN RAINED INTO THE GAPS. USE 4000 PSI STONE CONCRETE MIN.
 - FOR SEGMENTS "B" ONLY, DIG PITS 4'-0"; MAXIMUM, WIDTH WITH REQUIRED SHEETING AND BRACING.
 - FOR SEGMENTS "B" REPEAT CONCRETING, CLEANING, COMPACTION, STEEL WEDGES AND DRYPACKING AS DESCRIBED IN NOTE 2, 3 AND 4.
 - FOR SEGMENTS "C", DIG PITS 4'-0" MAXIMUM, WIDE WITH REQUIRED SHEETING AND BRACING, AS INDICATED ON DETAILS.
 - FOR SEGMENTS "C" REPEAT CONCRETING, CLEANING, COMPACTION, STEEL WEDGES AND DRYPACKING AS DESCRIBED IN NOTE 2, 3 AND 4.
 - FOR SEGMENTS "D", DIG OUT SOIL BETWEEN COMPLETED SEGMENTS C & A PROVIDE SHEETING AND BRACING, AS INDICATED ON DETAILS.
 - FOR SEGMENTS "D" REPEAT CONCRETING, CLEANING, COMPACTION, STEEL WEDGES AND DRYPACKING AS DESCRIBED IN NOTE 2,3 AND 4.
 - WHERE BOTTOM OF ADJACENT UNDERPINNING PITS ARE AT DIFFERENT ELEVATIONS, DEEPER PIT SHALL BE INSTALLED FIRST.
 - UNDERPINNING PITS CLOSER THAN 12 FEET APART SHALL NOT BE EXCAVATED AT THE SAME TIME.
 - WHEN UNDERPINNING ROCK MATERIAL, CONTRACTOR SHALL TAKE PRECAUTIONS SO AS NOT TO FRACTURE ROCK UNDER ADJOINING SECTION OR DAMAGE CONCRETE ALREADY POURED IN PLACE.



- SOLDIER PILE INSTALLATION NOTES:**
- ALL PILES SHALL BE INSTALLED IN THE LOCATION SHOWN ON THESE DRAWINGS.
 - PERFORM UTILITY IDENTIFICATION AND EXPLORATION AS NECESSARY PRIOR TO COMMENCEMENT OF WORK.
 - THE SOLDIER PILES SHALL BE W 12 X 65 U.O.N. AND SHALL BE INSTALLED USING A CASING PREDRILLED AT EACH LOCATION. THE CASING USED FOR PILE INSTALLATION SHALL BE LARGE ENOUGH (18" MIN.) TO HOUSE THE SOLDIER PILE.
 - INSTALLATION PROCEDURES:
 - SET UP RIG ON PROPER LOCATION AND PLUMB MAST.
 - INSTALL FIRST PIECE OF OUTER CASING WITH ATTACHED CARBIDE CUTTING TEETH.
 - DRILL CASING DOWN AND MAINTAIN POSITIVE FLUID HEAD AT ALL TIMES. DRILLING TO BE PERFORMED USING INTERNAL FLUSH METHOD. OUTSIDE CASING SHALL REMAIN AHEAD OF THE INTERNAL FLUSHING BY A MINIMUM OF 2 FEET. IF OBSTRUCTIONS ARE ENCOUNTERED OR IF OUTSIDE CASING GETS STUCK, ADVANCE INNER CASING THROUGH OBSTRUCTION OR UNTIL OUTER CASING CAN REVOLVE, AND THEN RESUME STANDARD PROCEDURE OF 2 FOOT LEAD OF THE OUTSIDE CASING.
 - IF EXISTING CONCRETE IS DISCOVERED DURING DRILLING PROCESS, USE DOWN-THE-HOLE HAMMERS. FOLLOW UP WITH ADDITIONAL CASING TO ELEVATION SHOWN ON THESE DRAWINGS.
 - REMOVE INNER CASING.
 - FLUSH INSIDE CASING CLEAN OF SPOILS AND DEBRIS.
 - INSERT THE 12 X 65 SOLDIER PILE INTO CASING.
 - FILL VOIDS WITHIN CASING USING ONE BAG SAND/CEMENT FOR THE SOCKET PORTION OF THE SOLDIER PILE. SOIL SPOILS SHALL NOT BE USED FOR BACKFILL.
 - START PULLING CASING. AS THE CASING IS PULLED, CONTINUE TO FILL THE CASING WITH ONE BAG SAND/CEMENT MIX AS TO MAINTAIN AT LEAST 10 FEET OF HEAD ABOVE THE BOTTOM OF CASING.
 - CONTINUE THIS PROCESS UNTIL THE CASING IS COMPLETELY EXTRACTED FROM HOLE.



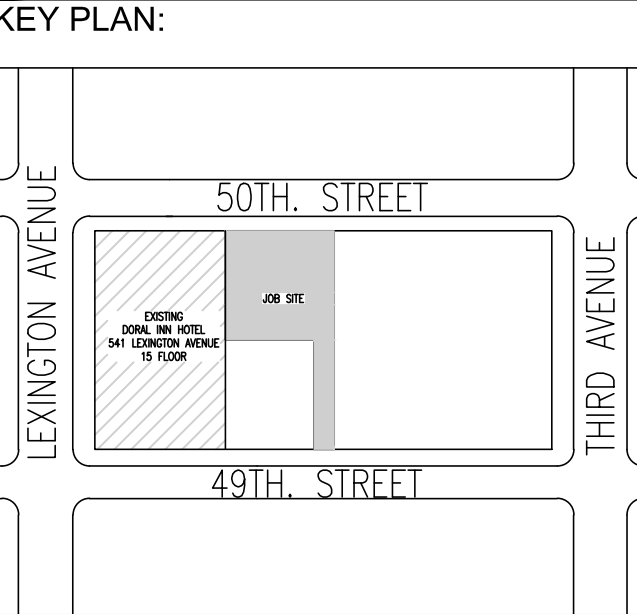
HAND EXCAVATED SHEETED PIT (TYP)



138 EAST 50TH STREET

NEW YORK | NEW YORK

N°	Revision:	Date:



DRAWING TITLE:
SOE DETAILS

SEAL	Date 05-23-14
	PROJECT N°: 14018
	Drawn By: NA
	DWG. N°: SOE-400.00
	9 OF 9