SPECIAL INSPECTIONS:

- PRIOR TO BEGINNING ANY WORK, THE OWNER SHALL RETAIN THE SERVICES OF S.E.T., P.C., OR ANOTHER ACCEPTABLE LICENSED PROFESSIONAL ENGINEER WHO SHALL HAVE PROVEN EXPERIENCE ACCEPTABLE TO THE OWNER AND ARCHITECT. MINIMUM REQUIRED QUALIFICATIONS SHALL INCLUDE A PROFESSIONAL LIABILITY INSURANCE COVERAGE OF 1 MILLION DOLLARS AND A MINIMUM PROVEN EXPERIENCE OF 5 YEARS WITH SIMILAR WORK.
- SPECIAL AND PROGRESS (CONTROLLED) INSPECTIONS REQUIRED BY THE NYC BUILDING CODE SHALL BE PERFORMED BY A TESTING AGENCY AND / OR PROFESSIONAL ENGINEER RETAINED BY THE OWNER AT NO COST TO THE CONTRACTOR FOR THE FOLLOWING CHECKED

THE TESTING AGENCY FOR CONTROLLED INSPECTIONS SHALL FILE ALL APPROPRIATE FORMS WITH THE NEW YORK CITY BUILDINGS DEPARTMENT.

- 3. THE CONTRACTORS ENGINEER SHALL PREPARE PLANS, CALCULATIONS, AND NOTES IN THE FORM OF SHOP DRAWINGS, FOR ALL ITEMS OF WORK WHICH DIFFER FROM WHAT IS SHOWN ON THE STRUCTURAL DRAWINGS DUE TO FIELD CONDITIONS. HE SHALL ALSO PREPARE PLANS IN THE FORM OF SHOP DRAWINGS, CALCULATIONS AND NOTES FOR ALL TEMPORARY SHORES AND BRACES AND CLEARLY INDICATE METHOD OF INSTALLATION, SEQUENCE OF OPERATIONS, AND QUALITY CONTROL.
- THESE SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER OF RECORD AND ARCHITECT PRIOR TO CONSTRUCTION. WORK SHALL BE EXECUTED FROM REVIEWED SHOP DRAWINGS ONLY.
- COPIES OF SUCH DRAWINGS WHICH INCLUDE THE ARCHITECT'S AND ENGINEER'S COMMENTS SHALL BE FILED WITH THE DEPARMENT OF BUILDINGS (ON AMENDMENT FORMS). ADDITIONALLY, AT COMPLETION OF WORK, FORMS INCLUDING ALL INSPECTION REPORTS PREPARED BY THE CONTRACTOR'S ENGINEER SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS.
- THE SPECIAL INSPECTIONS ENGINEER SHALL DETERMINE THE FREQUENCY OF INSPECTIONS NEEDED AND WHETHER HE OR SHE SHOULD INSPECT THE SITE PERSONALLY OR SEND A PERSON UNDER HIS OR HER DIRECT SUPERVISION. AT A MINIMUM, THE SITE MUST BE INSPECTED TWICE, ONCE AT A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR AND ONCE DURING CONSTRUCTION OPERATIONS.
- 7. THE SPECIAL INSPECTIONS ENGINEER, SHALL MAINTAIN A LOG IN HIS OR HER OFFICE WHICH INCLUDES THE FOLLOWING INFORMATION:
- (i) ADDRESS OF THE PREMISES, JOB NUMBER, CONTRACTOR NAME AND ADDRESS
- (ii) DATE AND TIME OF EACH INSPECTION INCLUDING (A) NAMES OF PERSONNEL WHO INSPECTED THE SITE
- (B) ANY SIGNIFICANT OBSERVATIONS OR INSTRUCTIONS GIVEN RELATING TO ANY OF THE FOLLOWING:
- DEVIATIONS FROM THE CONTRACT DOCUMENTS. ANTICIPATED FIELD CONDITIONS;
- PROPER EXECUTION OF THE STRUCTURAL WORK;
- GOOD ENGINEERING PRACTICE: PRECAUTIONS TAKEN TO MAINTAIN SAFE CONDITIONS, IF WORK IS STOPPED FOR ANY REASON.
- (iii)THE DATE OF AND PARTICIPANTS IN ANY CONVERSATIONS WITH THE SPECIAL INSPECTIONS ENGINEER OCCURING OFF-SITE AND RELATING
- TO ANY SIGNIFICANT OBSERVATIONS OR INSTRUCTIONS.
- 8. THE SPECIAL INSPECTIONS ENGINEER SHALL RETAIN A COPY OF THE DOCUMENTS DESCRIBED ABOVE IN HIS OR HER OFFICE AND SHALL PROVIDE A COPY TO THE CONTRACTOR AND / OR OWNER TO BE KEPT AT THE CONSTRUCTION SITE.
- 9. THE SPECIAL INSPECTIONS ENGINEER RESPONSIBLE FOR SPECIAL INSPECTION SHALL REPORT UNSAFE CONDITIONS, WHEN AND IF OBSERVED DURING HIS / HER SITE VISITS, TO THE DEPARTMENT OF BUILDINGS AND / OR ANY OTHER AFFECTED PARTIES OR AGENCIES. IT IS TO BE NOTED THAT THE SPECIAL INSPECTIONS ENGINEER AND ENGINEER OF RECORD ARE NOT RESPONSIBLE IN ANY WAY FOR SITE SAFETY. SITE SAFETY SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
- 10. UPON REQUEST OF THE BUILDINGS DEPARTMENT, THE SPECIAL INSPECTIONS ENGINEER SHALL MAKE AVAILABLE FOR REVIEW BY THE BUILDINGS DEPARTMENT DOCUMENTS AND THE LOG DESCRIBED ABOVE.

SAFETY DURING EXECUTION OF WORK:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONDITIONS OF PUBLIC AND WORKER SAFETY DURING EXECUTION OF THE WORK. THIS SHALL INCLUDE COMPLIANCE WITH CHAPTER 33 OF THE NEW YORK CITY BUILDING CODE: SAFEGUARDS DURING CONSTRUCTION.
- 2. THE CONTRACTOR SHALL PROVIDE SIDEWALK PROTECTION AND PROTECTION OF ADJOINING PROPERTIES, AS REQUIRED BY THE NYC BLDG.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND FILING A SITE SAFETY PLAN AND/OR PROVIDING OTHER WRITTEN ASSURANCES OF SAFE OPERATIONS AS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SAFE WORKING ENVIRONMENT FOR ALL WORKERS. THIS SHALL INCLUDE COMPLIANCE WITH ALL OSHA, STATE AND LOCAL LABOR LAWS WHICH MAY GOVERN THIS TYPE OF WORK.
- 5. THE CONTRACTOR SHALL PROVIDE REGULAR PERIODIC INSPECTION OF CONSTRUCTION OPERATIONS AS REQUIRED TO ENSURE ONGOING MAINTENANCE OF ALL SAFETY OPERATIONS AND EQUIPMENT. SUCH INSPECTIONS SHALL BE UNDERTAKEN BY AN AGENT OF THE CONTRACTOR WHO IS QUALIFIED TO EVALUATE SUCH OPERATIONS AND EQUIPMENT. THIS INSPECTOR SHALL PREPARE WRITTEN SAFETY REPORTS WHICH SHALL BE MAINTAINED AT THE JOB SITE FOR REVIEW BY THE AUTHORITIES HAVING JURISDICTION.

GENERAL

- 1. THE DESIGNS ON THESE DRAWINGS ARE INTENDED FOR TEMPORARY SUPPORT OF EXCAVATION ONLY
- 2. THESE DRAWINGS ARE INTENDED TO BE USED BY ONLY AN EXPERIENCED CONTRACTOR AFTER CONSULTATION WITH THIS OFFICE. THIS OFFICE WILL NOT BE RESPONSIBLE FOR JOB SITE PROBLEMS DUE TO FAILURE TO INTERPRET THE DOCUMENTS CORRECTLY. REPRESENTATIVES OF S.E.T., P.C. ARE AVAILABLE TO ANSWER QUESTIONS AND TO ASSIST THE CONTRACTOR BY EXPLAINING THE DESIGN INTENT. FAILURE BY THE CONTRACTOR TO UNDERSTAND THE COMPLEXITIES OF THE PROJECT AND THE SEQUENCE OF CONSTRUCTION CAN RESULT IN INJURY OR DEATH TO WORKERS. PROCEEDING WITH CONSTRUCTION WITHOUT FULL UNDERSTANDING OF THE PROJECT AND WITHOUT A COMPLETE SET OF DESIGN DOCUMENTS WILL PUT BOTH THE PROJECT AND INDIVIDUALS IN PERIL. THE CONTRACTOR ASSUMES TOTAL RESPONSIBILITY FOR ANY CONSEQUENCE OF THAT ACTION.
- 3. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR ADHERING TO THE REQUIREMENTS AS SPELLED OUT IN THESE NOTES. ALL PARTIES MUST CAREFULLY STUDY ALL NOTES FOR ITEMS WHICH MAY PERTAIN TO THEIR TRADES. FAILURE TO READ THESE NOTES DOES NOT PERMIT THE CONTRACTOR TO DEVIATE FROM THEIR REQUIREMENTS.
- 4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT BUILDING CODE OF ALL GOVERNING AUTHORITIES.
- 5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, AND DRAWINGS.
- 6. THE DESIGN PLANS AND NOTES, TO THE BEST OF ENGINEER'S KNOWLEDGE, COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE.
- 7. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
- 8. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND CHECK ALL MEASUREMENTS ON JOB AND SHALL BE RESPONSIBLE FOR SAME.
- 9. ALL DIMENSIONS INDICATED ON THE DRAWINGS ARE APPROXIMATE AND SHOULD NOT BE USED FOR ORDERING AND/OR FABRICATING MATERIAL. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO ORDERING AND/OR FABRICATING MATERIALS.
- 10. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BY MEASUREMENTS AT THE JOB SITE AND SHALL TAKE ANY AND ALL OTHER MEASUREMENTS NECESSARY TO VERIFY THE DRAWINGS AND TO PERFORM WORK PROPERLY.
- 11. DIFFERENT FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF S.E.T., P.C. IMMEDIATELY FOR EVALUATION. IF THE CONDITIONS OBSERVED AS THE EXCAVATION ADVANCES ARE DIFFERENT THAN THE CONDITIONS SHOWN ON THE DESIGN DRAWINGS. THE CONTRACTOR SHALL STOP WORK AND NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER. MODIFICATIONS TO THESE DRAWINGS MAY BE NECESSARY.
- 12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITIES AND BELOW GROUND STRUCTURES IN THE AREA OF WORK PRIOR TO COMMENCEMENT OF WORK.
- 13. NOTIFY DOB 24 TO 48 HOURS PRIOR TO START OF EXCAVATION (RULE 52).
- 14. SIDEWLAK CLOSING FROM NYDOT IS REQUIRED TO OVERCUT THE SIDEWALK OR TO PLACE SUPPORT OF EXCAVATION ELEMENTS IN THE SIDEWALK OR STREET.
- 15. ALL CONTRACTORS AND SUBCONTRACTORS ON THIS PROJECT SHALL BE RESPONSIBLE FOR THE PROPER PERFORMANCE OF THEIR WORK, COORDINATION WITH OTHER TRADES, METHODS, SAFETY AND SECURITY ON THE JOB SITE. S.E.T., P.C. AND ITS AGENTS AND EMPLOYEES ARE NOT RESPONSIBLE OR LIABLE FOR THE ABOVE AND SHALL BE HELD HARMLESS AND INDEMNIFIED BY ALL CONTRACTORS AND SUBCONTRACTORS FROM ANY AND ALL CLAIMS, LOSSES, SUITS AND LEGAL ACTION WHATSOEVER ARISING FROM THE PERFORMANCE OF WORK ON THIS PROJECT.
- 16. ALL WORK PERFORMED WHICH AFFECTS THE ADJACENT BUILDING OPERATIONS SHALL CAUSE MINIMUM DISTURBANCE TO THE NORMAL OPERATION OF AFFECTED PARTS OF THE BUILDING.
- 17. PINS, WIRE MESH, AND PARGING MAY BE REQUIRED TO STABILIZE THE FOUNDATION WALL, OR FOOTINGS. LOOSE AREAS OF FOUNDATION WALL OR FOOTINGS THAT ARE DAMAGED OR LOOSE SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR EVALUATION AND REMEDIAL MEASURES.
- 18. CONSENT FROM OWNERS OF ADJACENT PROPERTIES SHALL BE OBTAINED IF REQUIRED WORK EXTENDS BEYOND PROPERTY LINE.
- 19. ALL CONTRACTORS MUST VISIT SITE AND NOTE ALL EXISTING CONDITIONS AS WELL AS ALL CONDITIONS TO BE MET BEFORE SUBMITTING BID. LACK OF THOROUGH UNDERSTANDING OF THE PROJECT REQUIREMENTS SHALL NOT CONSTITUTE AN EXCUSE FOR ERRORS OR OMISSIONS, NOR JUSTIFY A REQUEST FOR EXTRA COMPENSATION.
- 20. CONTRACTOR SHALL MAKE NO DEVIATION FROM THESE DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
- 21. ACCEPTANCE OF DEVIATIONS FROM ANY OF THE REQUIREMENTS OF THESE NOTES SHALL BE AT THE SOLE DISCRETION OF THE ENGINEER. ACCEPTANCE OF A DEVIATION FROM ANY REQUIREMENT SHALL NOT BE CONSTRUED AS PERMITTING ANY OTHER DEVIATION.
- 22. A PERMIT SHALL BE OBTAINED FROM DOT FOR SIDEWALK CLOSURE TO INSTALL SOLDIER PILES OR ANY INTRUSION PAST PROPERTY LINE.
- 23. CONSTRUCTION OF NEW CONCRETE WALLS AGAINST EXISTING STRUCTURES SHALL COMPLY WITH NYCDOB BUILDINGS BULLETIN #2009-11

BIDDERS WARRANTY:

BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE BIDDER WARRANTS THAT:

- 1. THE BIDDER AND ALL SUBCONTRACTORS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND OTHER CONSTRUCTION CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM AMBIGUITIES AND SUFFICIENT FOR THE CONTRACTOR TO BID, FABRICATE, AND INSTALL THE WORK ON TIME, FURTHER THAT,
- 2. THE BIDDER AND ALL WORKMEN, EMPLOYEES AND SUBCONTRACTORS HE INTENDS TO USE ARE SKILLED AND EXPERIENCED IN THE TYPE OF CONSTRUCTION REPRESENTED BY THE CONSTRUCTION CONTRACT DOCUMENTS BID UPON; FURTHER THAT,
- NEITHER THE BIDDER NOR ANY OF HIS EMPLOYEES, AGENTS INTENDED SUPPLIERS OR SUBCONTRACTORS HAVE RELIED UPON ANY VERBAL REPRESENTATIONS, ALLEGEDLY AUTHORIZED OR UNAUTHORIZED FROM THE OWNER, HIS EMPLOYEES OR AGENTS INCLUDING ARCHITECTS, ENGINEERS OR CONSULTANTS, IN ASSEMBLING THE BID FIGURE; AND FURTHER THAT, THE BID FIGURE IS BASED SOLELY UPON THE CONSTRUCTION CONTRACT DOCUMENTS AND PROPERLY ISSUED WRITTEN ADDENDA AND NOT UPON ANY OTHER WRITTEN REPRESENTATION.
- 4. THE BIDDER ALSO WARRANTS THAT HE HAS CAREFULLY EXAMINED THE SITE OF THE WORK AND THAT FROM HIS OWN INVESTIGATIONS HE HAS SATISFIED HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK AND THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS AND DIFFICULTIES TO BE ENCOUNTERED. THE KIND AND EXTENT OF EQUIPMENT AND OTHER FACILITIES NEEDED FOR THE PERFORMANCE OF THE WORK, THE GENERAL AND LOCAL CONDITIONS, AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR ITS PERFORMANCE.

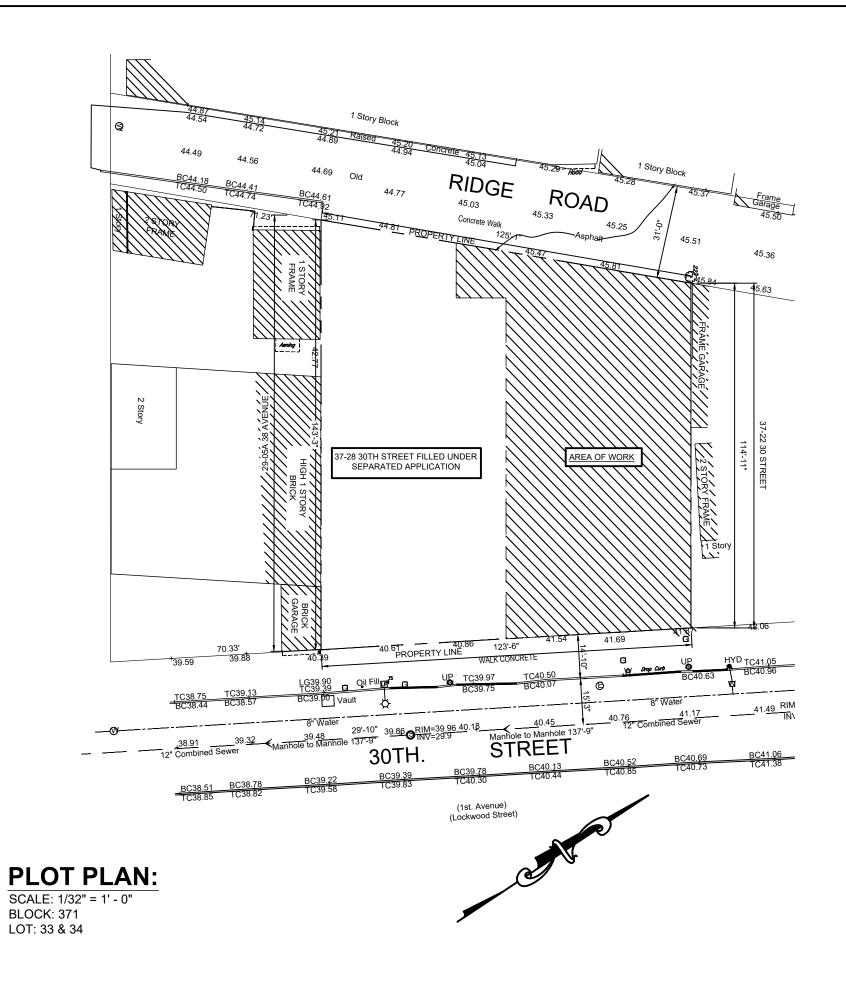
DISCLAIMER:

THE DRAWINGS HEREIN ARE RELATED TO A NEW BUILDING STRUCTURE. THE STRUCTURAL DESIGN WAS BASED UPON AS MUCH OBSERVATION. MEASUREMENT, TESTING, ETC. AS CIRCUMSTANCES PERMITTED, HOWEVER, THERE WERE ASSUMPTIONS MADE ABOUT UNKNOWN CONDITIONS. SHOULD THE OWNER DECIDE NOT TO UTILIZE S.E.T., P.C. TO VERIFY AND INSPECT THESE CONDITIONS IN THE FIELD, S.E.T., P.C. WILL NOT BE RESPONSIBLE FOR ANY FAILURE, DAMAGE, INJURY, DELAY, LOSS OF INCOME, EXTRA COST, OR ANY OTHER LOSS DUE TO **EXISTING CONDITIONS.**

SHOP DRAWING REVIEW:

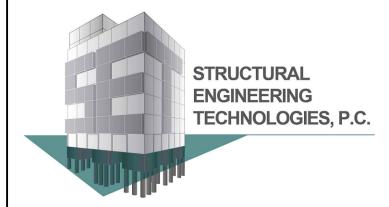
THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS WITH RESPECT TO CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE SPECIFICATIONS. SHOP DRAWINGS SHALL BE SUBMITTED IN DUPLICATE. EXCESS DRAWINGS WILL BE DISCARDED. IF REQUIRED BY SPECIFICATIONS, SHOP DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A LICENSED ENGINEER WHO IS LICENSED IN THE STATE WHERE THE PROJECT IS TO BE CONSTRUCTED. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, INCLUDING REFLECTION OF EXISTING FIELD CONDITIONS, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR; APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER WILL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION FROM THE CONTRACT UNLESS CONTRACTOR ADVISES THE ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY THE ENGINEER IN WRITING. IN THE EVENT THAT THE ENGINEER WILL REQUIRE MORE THAN TEN (10) WORKING DAYS TO PERFORM REVIEW, THE ENGINEER WILL SO NOTIFY THE CONTRACTOR. THE ENGINEER WILL RETURN WITHOUT REVIEW MATERIAL WHICH HAS NOT BEEN APPROVED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER

S.E.T., P.C. MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED AS TO S.E.T., P.C. FINDINGS, RECOMMENDATIONS, PLANS, SPECIFICATIONS, OR PROFESSIONAL ADVICE. S.E.T., P.C. HAS ENDEAVORED AND WILL ENDEAVOR TO PERFORM ITS SERVICES IN ACCORDANCE WITH GENERALLY ACCEPTED STANDARDS OR PRACTICE IN EFFECT AT THE TIME OF PERFORMANCE. BY UTILIZING THESE DOCUMENTS (OR HAVING OTHERS UTILIZE THEM) FOR ANY PURPOSE WHATSOEVER THE OWNER OR DEVELOPER RECOGNIZES THAT NEITHER S.E.T., P.C. OR ANY OF S.E.T., P.C. SUBCONSULTANTS OR SUBCONTRACTORS OWES ANY FIDUCIARY RESPONSIBILITY TO THE OWNER OR DEVELOPER.



DRAWING INDEX			
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CONSULTING STRUCTURAL, GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

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ALL RIGHTS RESERVED

ALL DRAWINGS SPECIFICATIONS AND COPIES THEREOF FURNISHED BY S.E.T., P.C. ARE AND WILL REMAIN THEIR PROPERTY. THEY ARE NOT TO BE USED ON THIS OR ANY OTHER PROJECT UNLESS WRITTEN PERMISSION IS GIVEN.

OWNER:

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C. HAS NOT BEEN RETAINED TO PERFORM CONTROLLED INSPECTIONS OF ANY KIND FOR THIS PROJECT.

THE DESIGN PROFESSIONAL SHALL BE RELEASED FROM ANY AND ALL LIABILITY IN THE COMMENCEMENT OF ANY WORK PERFORMED WITHIN THESE DOCUMENTS PRIOR TO OBTAINING ALL REQUIRED PERMITS FROM THE RESPECTIVE JURISDICTIONAL AGENCIES

140.	DATE	DESCRIPTION
NO.	DATE	DESCRIPTION
	05/30/19	PRELIMINARY
	07/02/19	UPDATED
	09/10/19	UPDATED
	10/28/19	UPDATED
	06/04/20	UPDATED
	08/13/20	ADDED DETAIL
	09/15/20	UPDATED FOR PAA
	09/29/20	UPDATED PER FO

IREVISIONS: NB-420666023 DOB #:

PROJECT

37-24 30TH STREET QUEENS, NY 11101

SUPPORT OF EXCAVATION

DRAWING TITLE:

PLOT PLAN AND

SEAL & SIGNATURE



DATE: 05-28-19 PROJECT NO: SCALE: AS NOTED DRAWING BY: A.M.C CHECKED BY: G.J.C

SOE-001.01

SHEET NO: | 1 OF 8

DWG NO:

BSCAN STICKER

SURVEY AND MONITORING NOTES:

- 1. A BUILDING PROTECTION PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THE NYCDOB TECHNICAL POLICY AND PROCEDURE NOTICE #10/88 (TP/PN #0/88) SHOULD BE PREPARED FOR LANDMARKED BUILDINGS.
- 2. A PRE-CONSTRUCTION (PRE-CONDITION) SURVEY OF THE ADJACENT STRUCTURES SHALL BE PERFORMED PRIOR TO CONSTRUCTION IN ACCORDANCE WITH THE BUILDING PROTECTION PLAN. 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.
- MONITOR ADJACENT STRUCTURES BY OPTICAL SURVEY AT ABOUT 25-FT INTERVALS FOR VERTICAL AND LATERAL MOVEMENT. NOTE THAT BUILDING MONITORING LOCATIONS ARE NOT SHOWN ON THE SUPPORT OF EXCAVATION PLAN FOR CLARITY.
- CRACK GAUGES SHALL BE INSTALLED ON EXISTING NEIGHBORING BUILDING CRACKS AND MONITORED DURING EXCAVATION AND FOUNDATION CONSTRUCTION.
- CRACK MONITORING THRESHOLD SHALL BE 2-MM, IF REACHED THE CONTRACTOR AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR COURSE OF ACTION.
- 6. OBTAIN BASELINE READINGS OF THE MONITORING POINTS PRIOR TO EXCAVATION AND NEW CONSTRUCTION. HORIZONTAL AND VERTICAL SURVEY DATA TO BE OBTAINED BY A NEW YORK STATE LICENSED SURVEYOR.
- 7. OBTAIN AMBIENT TEMPERATURE DURING EACH OPTICAL MONITORING MEASUREMENT.
- 8. PERFORM OPTICAL SURVEYS AT LEAST TWICE PER WEEK DURING UNDERPINNING, AND ONCE PER WEEK DURING EXCAVATION AND FOUNDATION CONSTRUCTION, UNTIL FOUNDATION WALL IS BRACED AND BACKFILL IS COMPLETE. IF MOVEMENT OCCURS, INCREASE THE FREQUENCY OF THE READINGS AS RECOMMENDED BY THE CONTRACTOR OR ENGINEER.
- VIBRATION MONITORS (SEISMOGRAPHS) SHALL BE PLACED ADJACENT TO AREAS WHERE WORK IS BEING PERFORMED AS NEGOTIATED WITH THE NEIGHBORING BUILDINGS. BASELINE READINGS SHALL BE OBTAINED AT LEAST ONE WEEK PRIOR TO START OF EXCAVATION.

10. LANDMARK BUILDING MOVEMENT AND VIBRATION CRITERIA:

- 10.1. ALL MONITORING FREQUENCIES SHALL COMPLY WITH TP/PN #10/88.
- 10.2. IF THE VERTICAL OR LATERAL BUILDING MOVEMENT REACHED 1/8-IN, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER. 10.3. IF THE VERTICAL OR LATERAL BUILDING MOVEMENT REACHED 1/4-IN, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER,
- 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.
- 10.4. IF THE VIBRATIONS EXCEEDED 0.25-IPS, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER.
- 10.5. IF THE VIBRATIONS EXCEEDED 0.5-IPS, AND/OR ANY INDIVIDUAL CRACK GAUGE READING EXCEEDS 1mm. IMMEDIATELY INFORM THE CONSTRUCTION MANAGER. OWNER. AND ENGINEER. AND STOP WORK. INFORM NYCDOB EXCAVATION UNIT. OBSERVE NEIGHBORING STRUCTURE CONDITIONS, AND REVIEW AND MODIFY MEANS AND METHODS FOR EXCAVATION AND SUPPORT OF EXCAVATION AS NECESSARY. WORK SHALL NOT RESUME UNTIL AGREED UPON CORRECTIVE ACTION IS SUPPLEMENTED BY THE CONTRACTOR AND UPON APPROVAL BY THE CONSTRUCTION MANAGER AND THE ENGINEER.

11. NON-LANDMARK BUILDING MOVEMENT AND VIBRATION CRITERIA:

- 11.1. IF THE VERTICAL OR LATERAL BUILDING MOVEMENT REACHED 1/4-IN, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER
- 11.2. IF THE VERTICAL OR LATERAL BUILDING MOVEMENT REACHED 1/2-IN, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, 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.
- 11.3. IF THE VIBRATIONS EXCEEDED 1.0-IPS, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER.
- 11.4. IF THE VIBRATIONS EXCEEDED 2.0-IPS, AND/OR ANY INDIVIDUAL CRACK GAUGE READING EXCEEDS 2mm. IMMEDIATELY INFORM THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER, AND STOP WORK. INFORM NYCDOB EXCAVATION UNIT, OBSERVE NEIGHBORING STRUCTURE CONDITIONS, AND REVIEW AND MODIFY MEANS AND METHODS FOR EXCAVATION AND SUPPORT OF EXCAVATION AS NECESSARY. WORK SHALL NOT RESUME UNTIL AGREED UPON CORRECTIVE ACTION IS SUPPLEMENTED BY THE CONTRACTOR AND UPON APPROVAL BY THE CONSTRUCTION MANAGER AND THE ENGINEER.

12. NEW YORK CITY TRANSIT STRUCTURE MOVEMENT AND VIBRATION CRITERIA:

- 12.1. IF THE VERTICAL OR LATERAL MOVEMENT OF THE NYCT STRUCTURE REACHED 1/4-IN, NOTIFY THE NYCT AND ADJUST MEANS AND
- 12.2. IF THE VERTICAL OR LATERAL MOVEMENT OF THE NYCT STRUCTURE REACHED 1/2-IN, DISCUSS REMEDIAL ACTION WITH THE NYCT.
- 12.3. VIBRATION MONITORING DATA SHALL BE AVAILABLE AT THE JOB SITE. 12.4. IF THE VIBRATIONS EXCEEDED 0.5-IPS, NOTIFY THE NYCT.
- 13. VIBRATION MONITORS SHALL TAKE REAL-TIME READING
- 14. ALL MONITORING DATA SHALL BE PRESENTED TO THE CONSTRUCTION MANAGER, OWNER, ENGINEER, AND SPECIAL INSPECTOR AT THE END OF EACH DAY, OR AT AGREED-UPON INTERVALS.
- 15. CONTRACTOR IS REQUIRED TO OBTAIN CONSENT LETTER FROM ADJACENT PROPERTY OWNER TO UNDERPIN THEIR WALL, INSTALL SOIL

MATERIALS AND TESTING NOTES:

- 1. THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN INDEPENDENT TESTING COMPANY
- 2. STRUCTURAL CONCRETE FOR UNDERPINNING PIERS SHALL HAVE A MINIMUM DESIGN COMPRESSIVE STRENGTH OF 4000-PSI AT 28 DAYS.
- 3. CONCRETE PLACEMENT TIME SHALL NOT EXCEED 2 HOURS OR AS RECOMMENDED BY THE TESTING COMPANY
- 4. PERFORM ONE SLUMP TEST FOR EACH BATCH OF CONCRETE. SLUMP SHALL BE BETWEEN 4- AND 6-IN FOR UNDERPINNING.
- 5. MAKE A SET OF MINIMUM 5 CYLINDERS EACH DAY CONCRETE IS CAST FOR UNDERPINNING OR GROUT IS BEING PLACED FOR SOLDIER PILES OR TIE-BACKS.
- PERFORM COMPRESSION TEST ON 1 CYLINDER AT 7 DAYS AND 1 AT 14 DAYS. IF THE DESIGN STRENGTH IS ACHIEVED AT 14 DAYS, NO FURTHER TESTING IS REQUIRED, OTHERWISE TEST 1 OR 2 CYLINDERS AT 28 DAYS. 1 OR 2 SAMPLES SHALL BE SAVED FOR 56 DAYS TESTING IF THE PREVIOUS CYLINDERS FAIL TO MEET DESIGN STRENGTH REQUIREMENTS.
- PROVIDE TESTING RESULTS TO THE CONTRACTOR.
- 8. IF THE DESIGN STRENGTH REQUIREMENTS ARE NOT MET, APPROVED REMEDIATION SHALL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 9. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.1 USING E-70 ELECTRODES.
- 10. ALL STRUCTURAL STEEL SHALL BE GRADE 50, ASTM A-572.
- 11. 1-BAG MIX SHALL CONSIST OF 1 94-LB BAG OF CEMENT TO 1 CUBIC YARD OF SAND. QUANTITY OF WATER SHALL BE ADEQUATE TO ALLOW THE MIX TO FLOW.
- 12. TIMBER LAGGIN SHALL BE ROUGH CUT, FULL SIZE CONSTRUCTION GRADE, WITH A MINIMUM ALLOWABLE BENDING STRESS OF 1200-PSI.
- 13. MISCELLANEOUS STEEL (PLATES AND WEDGES) SHALL BE ASTM A-36.

DEWATERINGNOTES:

- ANY WATER INFLOW INTO THE EXCAVATION AREA SHALL BE CONTROLLED BY SUMPING OR OTHER SUITABLE METHODS. DISPOSAL OF WATER SHALL BE MADE OUT OF THE EXCAVATED AREA IN ACCORDANCE WITH LOCAL REGULATIONS. THE ELEVATION OF THE WATER LEVELS BEYOND THE LIMITS OF THE PROJECT SITE SHALL NOT BE LOWERED SO AS TO CAUSE DISTRESS AND/OR SETTLEMENT TO ADJOINING STRUCTURES. CONTRACTOR SHALL PROVIDE MEANS AND METHODS TO PREVENT LOSS OF FINES DURING DEWATERING.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING THAT MAY BE REQUIRED FOR THIS PROJECT.
- 3. IF DEWATERING SYSTEM IS REQUIRED, THE CONTRACTOR SHALL CONSULT A DEWATERING ENGINEER.

STRUCTURAL STABILITY NOTES:

- 1. CONTROLLED INSPECTION OF THE STABILITY AND INTEGRITY OF EXISTING STRUCTURES DURING CONSTRUCTION OPERATIONS IS REQUIRED BY THE NEW YORK CITY BUILDING CODE CHAPTER 17.
- 2. CONTRACTOR SHALL PREPARE A STRUCTURAL STABILITY PLAN, TO BE SUBMITTED TO THE STRUCTURAL ENGINEER (SIGNED AND SEALED BY THE PROFESSIONAL ENGINEERS RESPONSIBLE FOR ITS DESIGN) FOR REVIEW, AND APPROVAL PRIOR TO ANY DEMOLITION WORK OR MODIFICATIONS TO THE EXISTING STRUCTURE. THIS STRUCTURAL STABILITY PLAN SHALL INCLUDE:
 - A. LAYOUT AND DETAILS OF SHORING, BRACING, UNDERPINNING AND OTHER WORK REQUIRED TO MAINTAIN THE STABILITY AND INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION OPERATIONS.
- B. PHASING, STAGING, AND SEQUENCING OF SUCH OPERATIONS.
- C. DESIGN LOADS FOR WHICH THE STABILITY SYSTEM HAS BEEN DESIGNED
- 3. OWNER SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE STRUCTURAL STABILITY INSPECTION. THE CONTROLLED INSPECTION ENGINEER SHALL MAINTAIN RECORDS AS REQUIRED BY THE NEW YORK CITY BUILDING CODE. THE CONTROLLED INSPECTION ENGINEER SHALL USE THE STRUCTURAL STABILITY PLAN PREPARED BY THE CONTRACTOR AND APPROVED BY THE STRUCTURAL ENGINEER AS THE BASIS FOR THE CONTROLLED INSPECTIONS.

SAFETY DURING EXECUTION OF WORK:

- 1. THESE DRAWINGS DO NOT ADDRESS SAFETY ISSUES RELATED TO THE EXCAVATION AND SHORING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND FILING A SITE SAFETY PLAN AND/OR PROVIDING OTHER WRITTEN ASSURANCES OF SAFE OPERATIONS AS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
- 2. THE CONTRACTOR SHALL PROVIDE BARRIERS AND FENCING AROUND THE SITE AND/OR SIDEWALK PROTECTION AND PROTECTION OF ADJOINING PROPERTIES. AS REQUIRED BY THE NYC BUILDING CODE AND ALL APPLICABLE LAWS.
- 3. THE EXCAVATION / UNDERPINNING / SHEETING CONTRACTOR SHALL EXERCISE CAUTION IN THE PROCESS OF THE WORK. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ALL ADJACENT STRUCTURES. IF DAMAGE OCCURS TO THE ADJACENT BUILDING ELEMENTS OR CONTENTS, DUE TO THE NEGLIGENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD RESPONSIBLE TO RECTIFY ALL DAMAGE AND/OR REIMBURSE PROPERTY OWNERS FOR ANY AND ALL DAMAGES. TO THE SATISFACTION OF ALL CONCERNED PARTIES.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONDITIONS OF PUBLIC AND WORKER SAFETY DURING EXECUTION OF THE WORK. THIS SHALL INCLUDE COMPLIANCE WITH CHAPTER 33 OF THE NEW YORK CITY BUILDING CODE: SAFEGUARDS DURING CONSTRUCTION, OSHA, AND OTHER STATE AND LOCAL LABOR LAWS WHICH MAY GOVERN THIS TYPE OF WORK.
- 5. THE CONTRACTOR SHALL PROVIDE REGULAR PERIODIC INSPECTION OF CONSTRUCTION OPERATIONS AS REQUIRED TO ENSURE ONGOING MAINTENANCE OF ALL SAFETY OPERATIONS AND EQUIPMENT. SUCH INSPECTIONS SHALL BE UNDERTAKEN BY AN AGENT OF THE CONTRACTOR WHO IS QUALIFIED TO EVALUATE SUCH OPERATIONS AND EQUIPMENT. THIS INSPECTOR SHALL PREPARE WRITTEN SAFETY REPORTS WHICH SHALL BE MAINTAINED AT THE JOB SITE FOR REVIEW BY THE AUTHORITIES HAVING JURISDICTION.

REFERENCES:

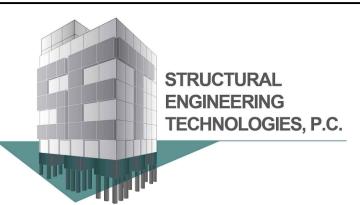
- ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- 2. SOE PLANS AND SECTIONS ARE BASED ON:
- ARCHITECTURAL SURVEY BY ERLANDSEN-CROWELL & SHAW DATED AUGUST 1, 2018.
- ARCHITECTURAL DRAWINGS BY COSTA ARCHITECTURE & ENGINEERING RECEIVED ON MAY 28, 2019. STRUCTURAL DRAWINGS BY STRUCTURAL ENGINEERING TECHNOLOGIES DATED JULY 12, 2019.
- 3. SUB-SURFACE INFORMATION OBTAINED FROM:
- BORING LOGS BY GTA ENGINEERING SERVICES OF NEW YORK DATED NOVEMBER 26, 2018.
- 3.2 TEST PIT LOGS NOT RECEIVED.
- GEOTECHNICAL REPORT BY GTA ENGINEERING SERVICES OF NEW YORK DATED NOVEMBER 26, 2018.
- 4. LOCATIONS AND ELEVATIONS OF ALL PROPOSED STRUCTURAL BUILDING ELEMENTS SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND SHALL BE SUPERSEDED BY FINAL STRUCTURAL AND ARCHITECTURAL DRAWINGS

EXCAVATION NOTES:

- 1. CONTRACTOR SHALL CALL 811 BEFORE ANY EXCAVATION BEGINS, FOR UTILITY COMPANIES TO MARK OUT ALL EXISTING UTILITY LINES.
- 2. PRIOR TO COMMENCEMENT OF MASS EXCAVATION. THE ADJOINING PROPERTIES AND STREETS SHALL BE VISUALLY SURVEYED BY THE CONTRACTOR, SUITABLY MARKED WITH PERMANENT MONITORING POINTS TO BE MEASURED DURING CONSTRUCTION FOR THE PURPOSES OF DETERMINING CONSTRUCTION-RELATED EFFECTS. REPORT WITH PHOTOGRAPHS SHALL BE PROVIDED TO ARCHITECT AND ENGINEER IN TRIPLICATE COPIES. A PRE-CONSTRUCTION DAMAGE CONDITION SURVEY OF THE ADJOINING PROPERTIES SHALL BE MADE IN WRITTEN AND PICTORIAL FORM, AND TWO COPIES SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE.
- 3. A COMPETENT REPRESENTATIVE OF THE CONTRACTOR SHALL INSPECT THE SUBGRADE OF THE EXCAVATION, ANY AND ALL BRACING AND BLOCKING. AT THE COMMENCEMENT OF EACH SHIFT. TO ASSURE INTEGRITY. PRIOR TO PERMITTING WORKMEN TO WORK WITHIN ANY EXCAVATED AREA. ALL SIDES OR SLOPES OF EXCAVATIONS SHALL BE INSPECTED FOR STABILITY AFTER RAINSTORMS.
- 4. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SUBGRADE CONDITIONS PRIOR TO START OF WORK. THESE DRAWINGS DISCOUNT UNDERGROUND WATER CONDITIONS.
- 5. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY EXCAVATION RESTRAINT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT. IF A SHEETING OR BRACING SYSTEM IS TO BE UTILIZED, THE DETAILS ARE TO BE SHOWN ON SHOP DRAWINGS TO BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ARCHITECT AND ENGINEER OF RECORD BEFORE COMMENCEMENT OF WORK.
- 6. ALL EXCAVATION GREATER THAN 5-FT IN DEPTH SHALL BE SHEETED, OR LAGGED AND BRACED.
- 7. IF BRACING IS USED TO SUPPORT THE EXCAVATION, PROVIDE THE REACTION TO THE BRACING BY PRE-LOADING OR BY THE USE OF SUITABLE WEDGES PROPERLY DRIVEN INTO THE JOINTS UNTIL THE NECESSARY REACTION IS PRODUCED AGAINST THE BANKS.
- 8. IF MATERIAL BEHIND LAGGING IS LOST OR DISTURBED, LEAVE A 1- TO 1.5-IN SPACE BETWEEN LAGGING BOARDS AND IMMEDIATELY BACKFILL
- NO MATERIAL STORAGE SHALL BE PLACED WITHIN 10-FT OF EXCAVATION PERIMETER.
- 10. BOTTOM OF EXCAVATION ELEVATION AS SHOWN ON THESE DRAWINGS SHALL BE VERIFIED AND COORDINATED IN FIELD WITH CONTRACT
- 11. EXCAVATION ELEVATIONS SHOWN ON THESE DRAWINGS ARE BASED ON ELEVATIONS SHOWN ON DESIGN STRUCTURAL / ARCHITECTURAL DRAWINGS. ADDITIONAL EXCAVATION MAY BE REQUIRED AS PER STRUCTURAL DESIGN AND CONSTRUCTION REQUIREMENTS.
- 12. USE HAND TOOLS TO EXCAVATE WITHIN 5-FT OF UNDERGROUND UTILITIES.
- 13. PROVIDE BLOCK OUTS USING HIGH DENSITY FOAM IN CONCRETE STRUCTURE WHERE SHORING STRUCTURE ELEMENTS PENETRATE NEW FOUNDATION WALL.
- 14. THOUGH USUALLY SMALL, SETTLEMENT NEARLY ALWAYS ACCOMPANIES EXCAVATION / UNDERPINNING / SHEETING WORK. THE AMOUNT OF SETTLEMENT, IF ANY, WILL VARY BASED ON THE TYPE OF BUILDING, THE CLASS OF SOILS UPON WHICH IT RESTS, THE PRESENCE OR ABSENCE OF GROUNDWATER, THE RESERVE FOUNDATION LOAD CAPACITY OF THE ORIGINAL FOUNDATION AND THE EXCELLENCE AND CARE OF THE WORKMANSHIP OF THE CONTRACTOR INSTALLING THE EXCAVATION / UNDERPINNING / SHEETING. BY USING THESE DRAWINGS TO COMPLETE THE EXCAVATION / UNDERPINNING / SHEETING WORK, THE CONTRACTOR AND THE OWNER UNDERSTAND THE INHERENT RISK AND ASSUME ALL RESPONSIBILITY FOR THE EFFECTS OF ANY SETTLEMENT THAT MIGHT OCCUR. ALL EXCAVATION / UNDERPINNING / SHEETING WORK SHALL BE STOPPED IMMEDIATELY AND THE ENGINEER OF RECORD SHALL BE NOTIFIED IF SETTLEMENTS SHOULD EXCEED
- 15. HAY OR FILTER FABRIC SHALL BE USED TO MINIMIZE MIGRATION OF FINES INTO THE EXCAVATION AREA.

DRILLED IN SOLDIER PILE AND LAGGING NOTES:

- 1. ALL SOLDIER PILES SHALL BE INSTALLED IN THE LOCATION SHOWN ON THESE DRAWINGS
- 2. THE CONTRACTOR SHALL PERFORM UTILITY IDENTIFICATION AND EXPLORATION AS NECESSARY PRIOR TO THE DRILLING OPERATIONS.
- 3. SOLDIER PILE CASING SHALL BE INSTALLED USING INTERNAL FLUSH DUPLEX DRILLING METHOD.
- NO LOSS OF MATERIAL FROM THE OUTSIDE OF THE SOLDIER PILE IS PERMITTED. THE CONTRACTOR SHALL ADOPT THE NECESSARY DRILLING PROCEDURES TO PREVENT LOSS OF MATERIAL BETWEEN THE ANNULUS AND THE SOLDIER PILE.
- THE CONTRACTOR SHALL ADJUST DRILLING PROCEDURES AS REQUIRED TO PREVENT SETTLEMENT AND LATERAL MOVEMENT OF BUILDINGS, UTILITIES, AND OTHER STRUCTURES.
- 6. STEEL CASING SHALL HAVE A MINIMUM WALL THICKNESS OF 0.5-IN. SPLICES IN CASINGS SHALL BE THREADED AND FULLY TIGHTENED.
- 7. THE BOTTOM CASING OF EACH SOLDIER PILE SHALL BE PROTECTED BY A HIGH-STRENGTH CUTTING SHOE WITH HARDENED CUTTING
- NO CONCRETE OR GROUT SHALL BE PLACED AT ANY SOLDIER PILE LOCATION UNTIL TIP ELEVATION HAS BEEN CONFIRMED, CLEANED OF MUD AND ANY EXTRANEOUS MATERIAL, AND INSPECTED AND APPROVED BY THE SPECIAL INSPECTOR.
- 9. CONCRETE OR GROUT SHALL BE PLACED CONTINUOUSLY FOR THE FULL DEPTH OF THE SOLDIER PILE STARTING AT THE BOTTOM OF THE SOCKET AND UP TO THE DESIGNED CUTOFF ELEVATION. NO COLD JOINT IS ALLOWED.
- 10. THE ENGINEER MAY DIRECT AN INCREASE IN SOLDIER PILE LENGTH FROM THAT SPECIFIED ON THESE DRAWINGS IF INFERIOR SOIL OR ROCK IS ENCOUNTERED ABOVE THE ORIGINAL MINIMUM TIP ELEVATION.
- 11. NO SOLDIER PILE SHALL BE OUT OF PLUMB MORE THAN ONE PERCENT (1%) OF ITS EMBEDDED LENGTH.
- 12. IF ANY OF THE ABOVE TOLERANCES ARE EXCEEDED, AND IN THE OPINION OF THE ENGINEER REQUIRES CORRECTIVE MEASURES, SUCH CORRECTIVE MEASURES, INCLUDING COSTS OF ENGINEERING AND REDESIGN, SHALL BE PAID FOR BY THE CONTRACTOR.
- 13. BEFORE LATERAL BRACING (ANCHORS AND/OR RAKERS) IS INSTALLED. MAXIMUM EXCAVATION BELOW BRACING LEVEL IS 1.5-FT UNLESS NOTED ON THESE DRAWINGS.
- 14. LATERAL BRACING AND SHEETING/SHORING SHALL NOT BE REMOVED UNTIL THE NEW GROUND FLOOR SLAB IS INSTALLED AND THE NEW CONCRETE HAS REACHED THE DESIGN COMPRESSIVE STRENGTH.
- 15. AT COMPLETION OF THE NEW STRUCTURE, BURN OFF SOLDIER PILES 1-FT BELOW PROPOSED FINISH GRADE.
- 16. INSTALL CONTROLLED BACKFILL IN ACCORDANCE WITH DESIGN DOCUMENTS. AS REQUIRED.



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	09/15/20	UPDATED FOR PAA
	09/29/20	UPDATED PER FO

IREVISIONS: DOB #: NB-420666023

PROJECT

37-24 30TH STREET QUEENS, NY 11101

SUPPORT OF EXCAVATION

NOTES

DATE:

DRAWING TITLE:



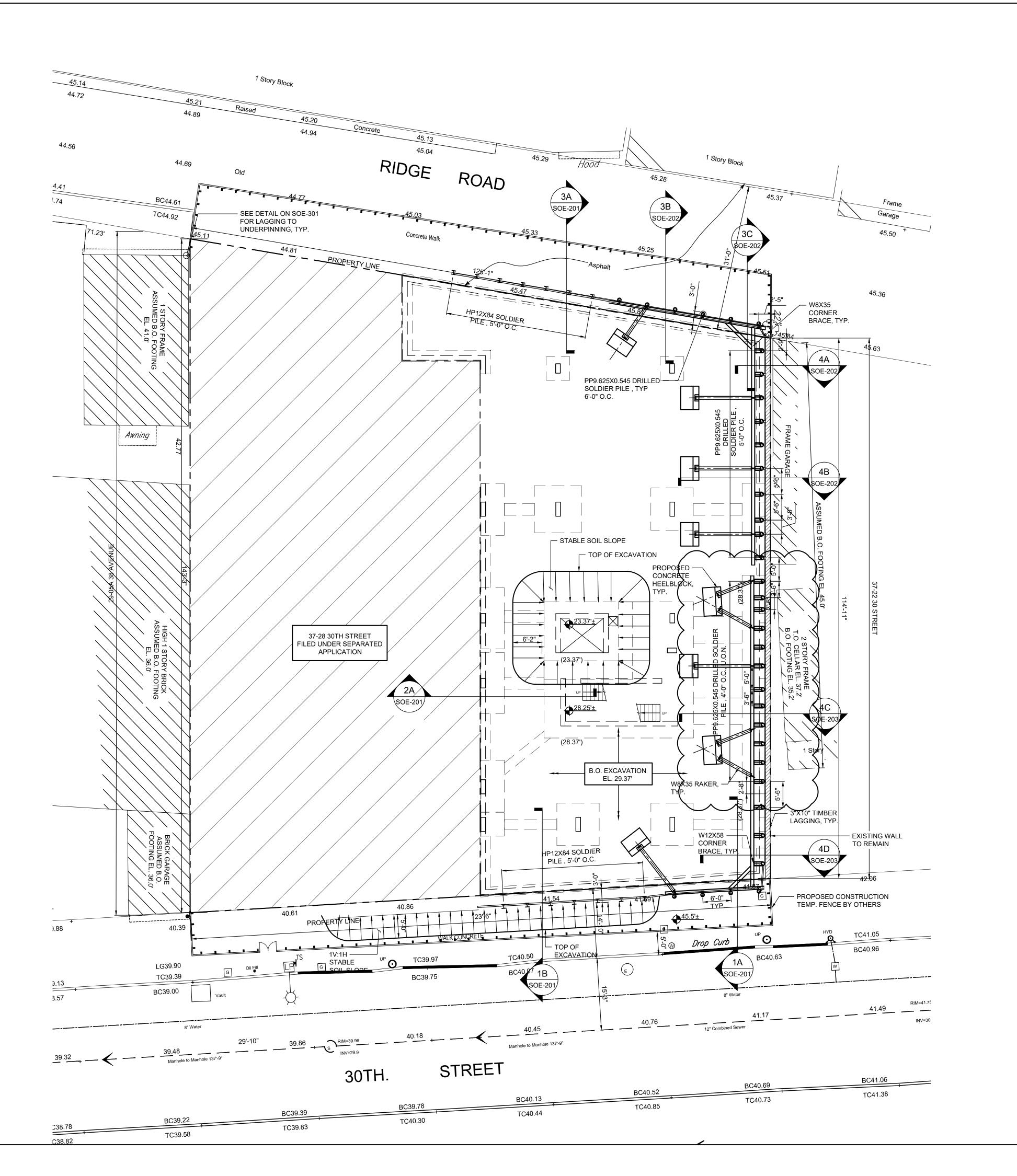
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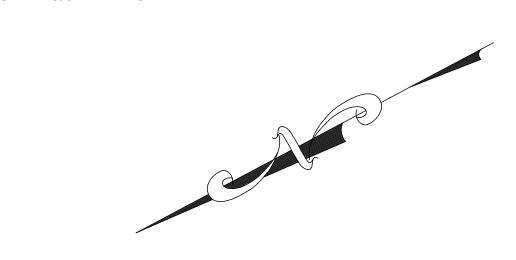
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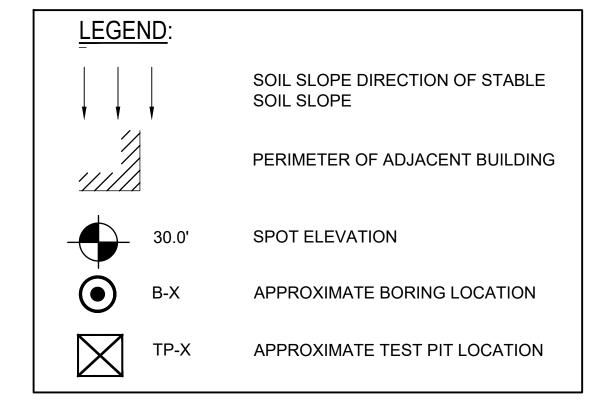
BSCAN STICKER



SUPPORT OF EXCAVATION PLAN

SCALE: 3/32" = 1' - 0"







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SUPPORT OF EXCAVATION

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SUPPORT OF EXCAVATION PLAN

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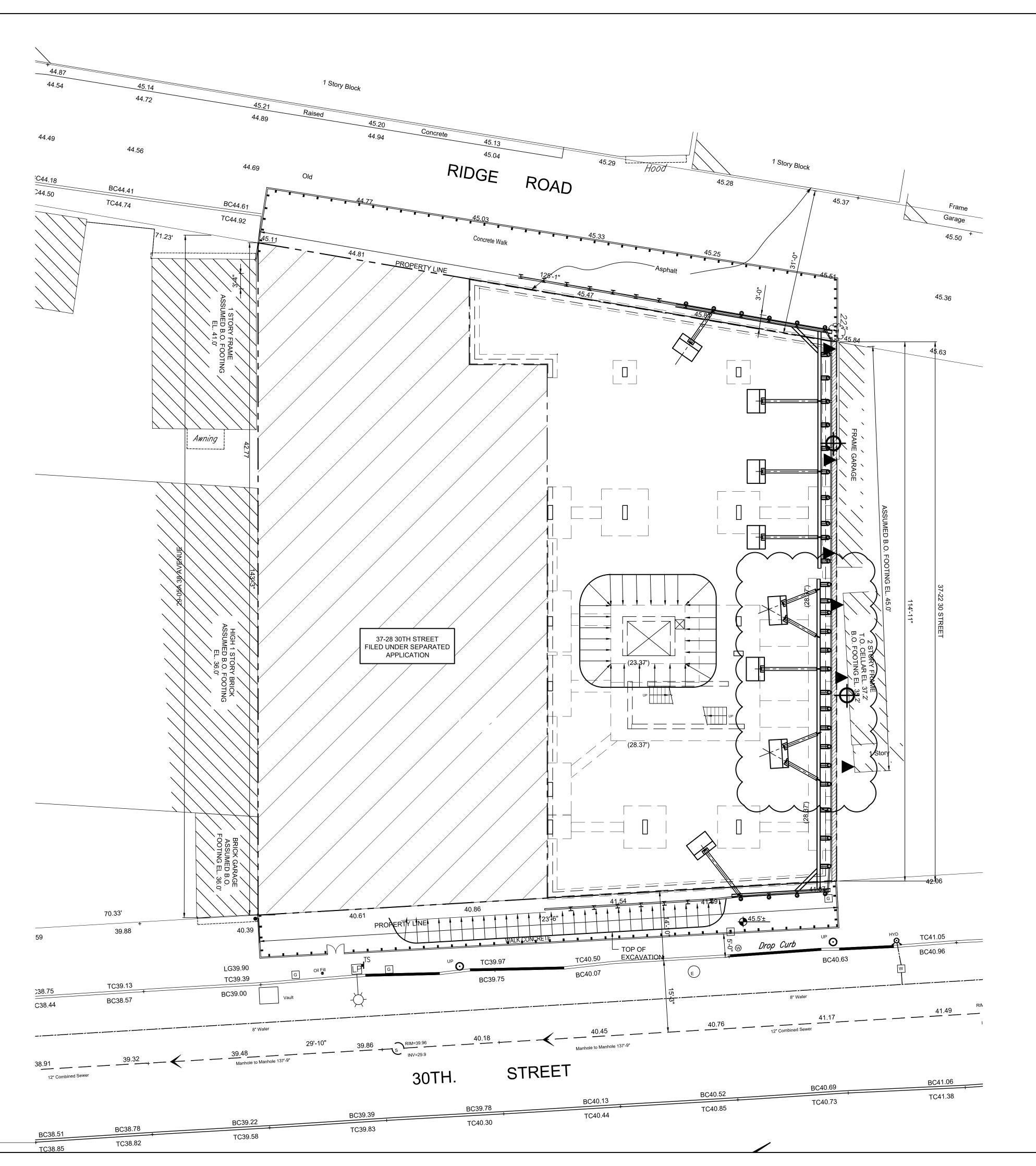
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DRAWING BY: A M C

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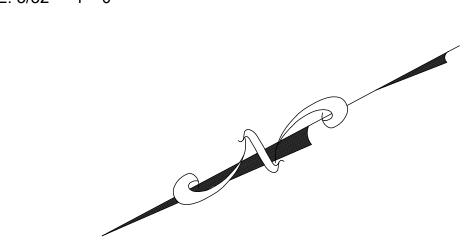
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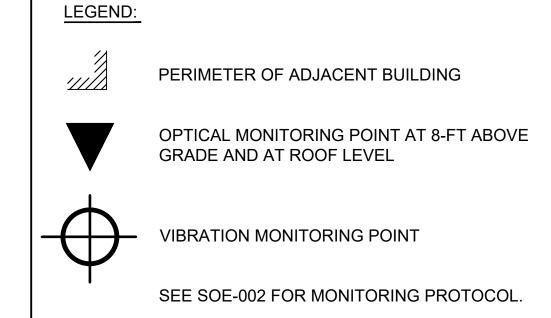
BSCAN STICKER



MONITORING PLAN

SCALE: 3/32" = 1' - 0"





THRESHOLD TYPE			
REVIEW LEVEL	ACTION LEVEL		
ICAL			
1/4 INCH	1/2 INCH		
1/2 INCH	1 INCH		
VIBRATION			
1.0 INCH/SECOND	2.0 INCH/SECOND		
3 MILLIMETERS	6 MILLIMETERS		
	REVIEW LEVEL IICAL 1/4 INCH 1/2 INCH ATION 1.0 INCH/SECOND		



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SUPPORT OF EXCAVATION

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MONITORING PLAN

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SCALE: AS NOTED

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CHECKED BY: G.J.C.

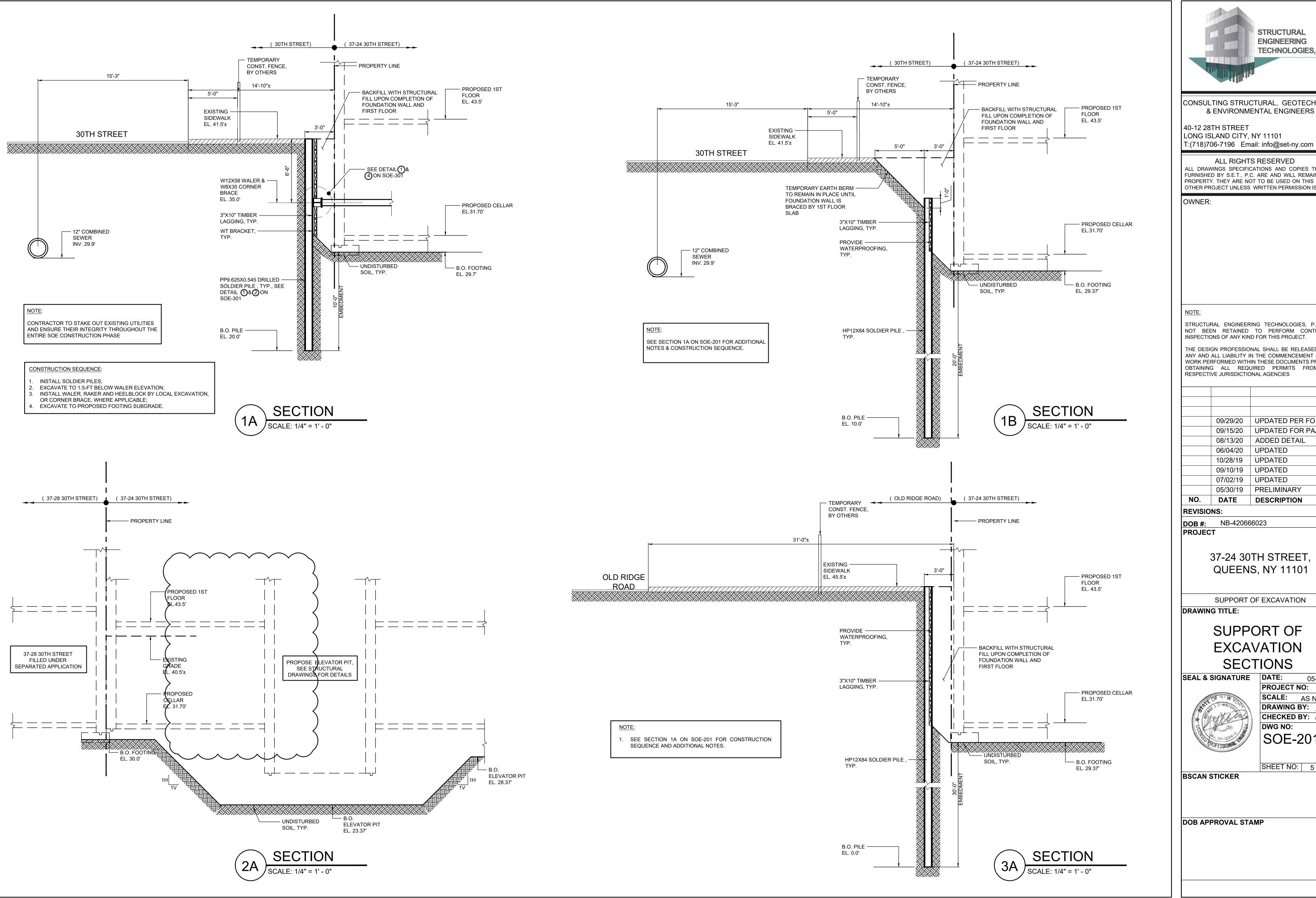
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SHEET NO: 4 OF 8

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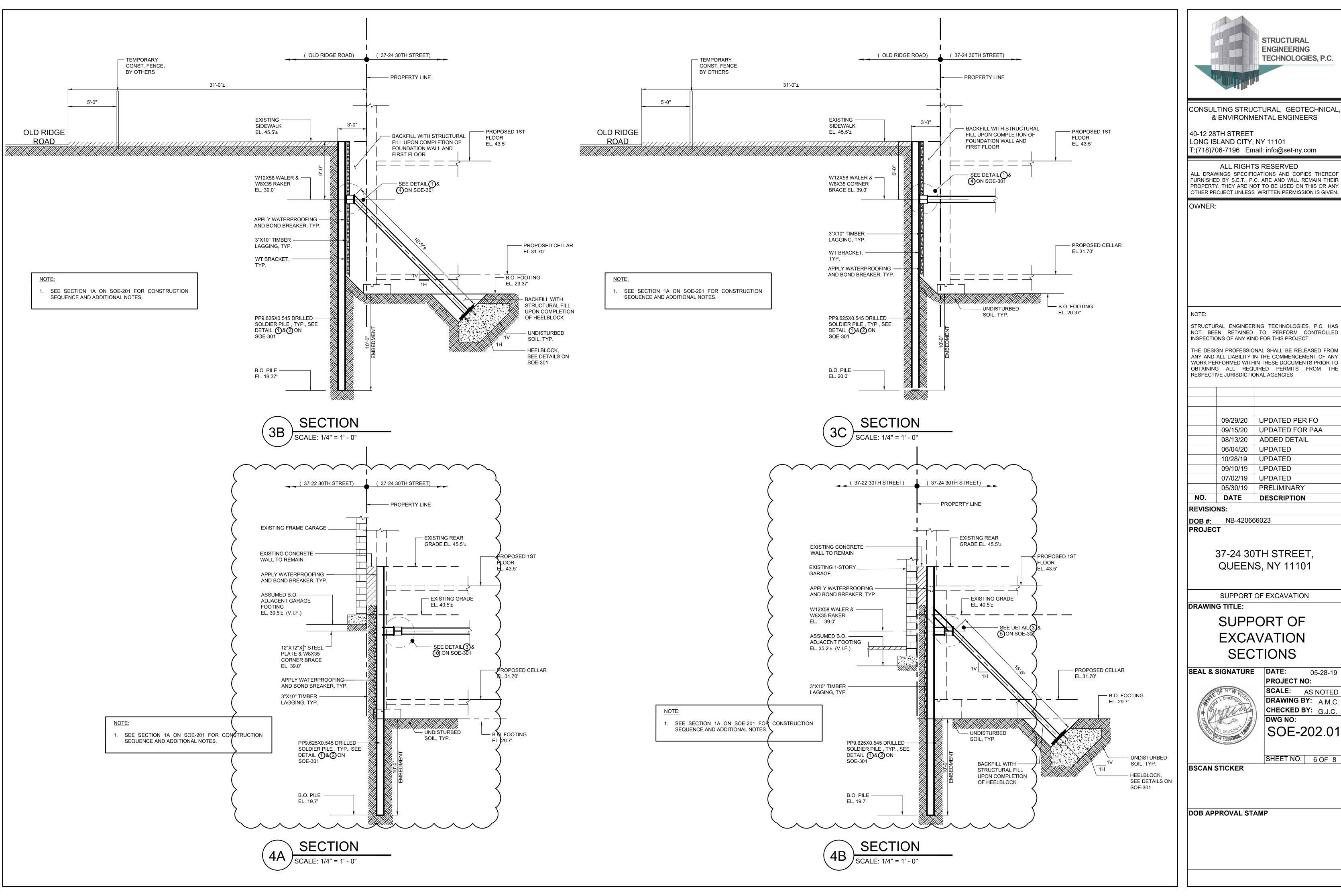
SUPPORT OF EXCAVATION

SUPPORT OF **EXCAVATION SECTIONS**

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CHECKED BY: G.J.C. DWG NO: SOE-201.01

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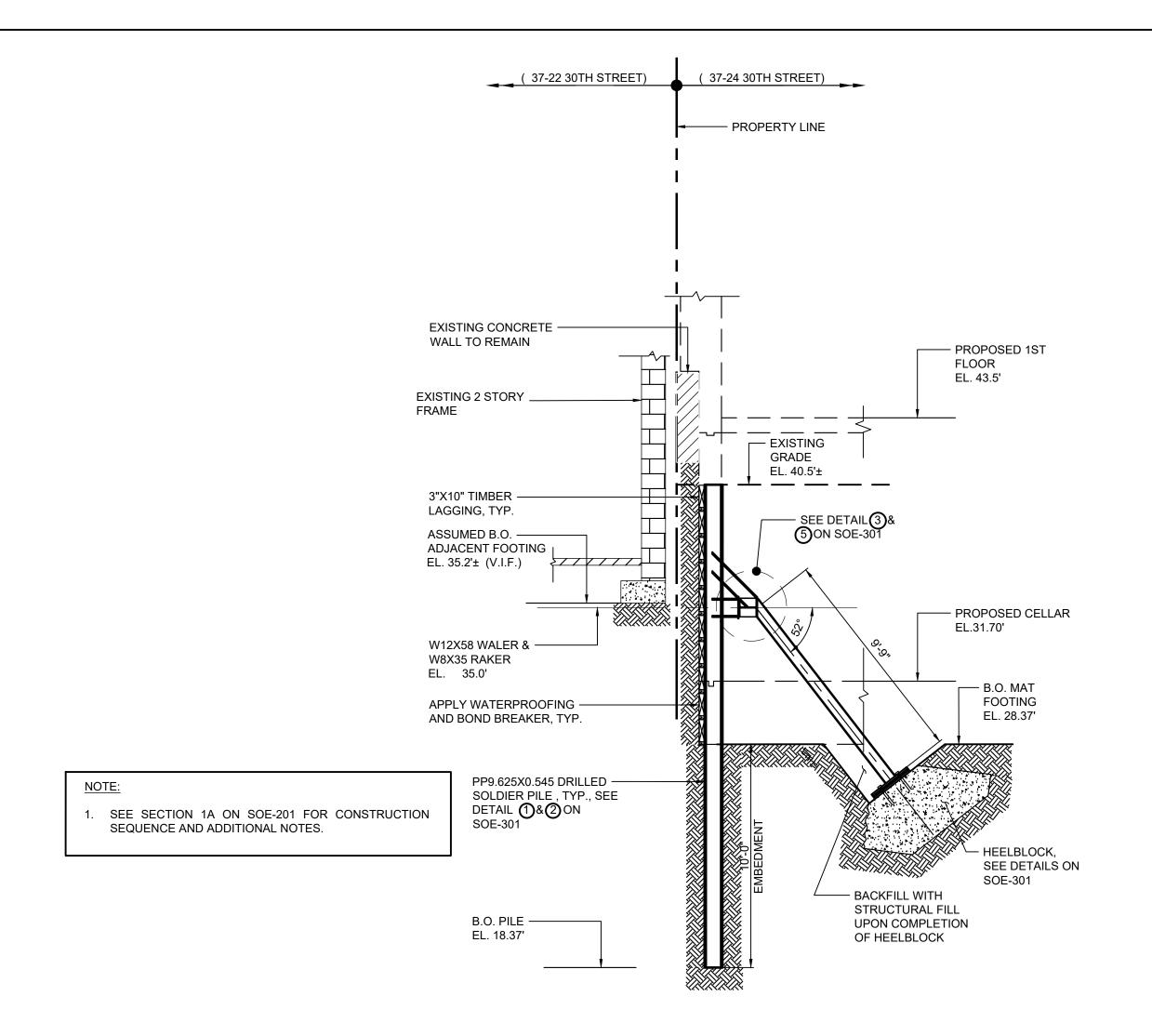




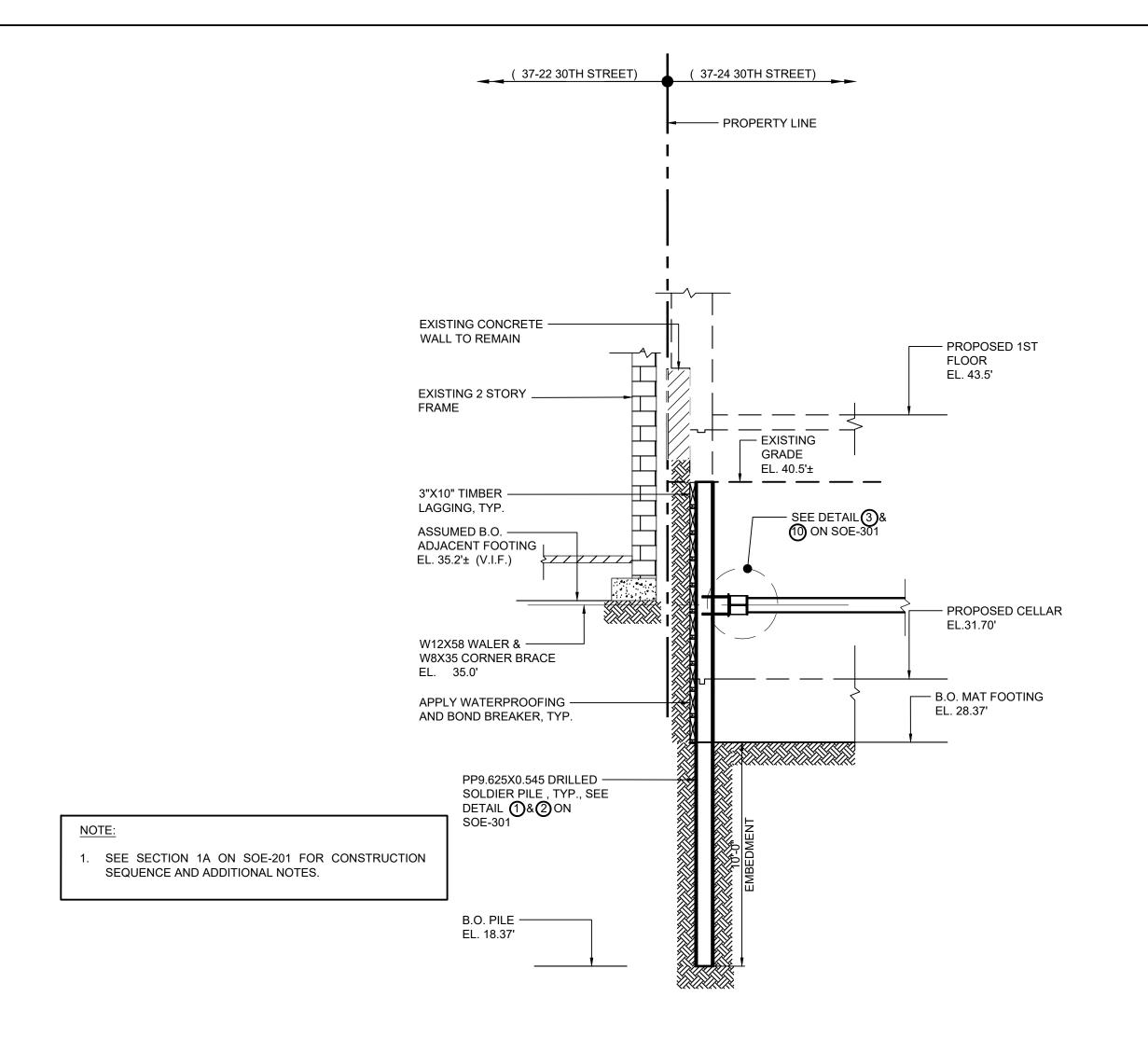
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SUPPORT OF EXCAVATION

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SUPPORT OF EXCAVATION SECTIONS

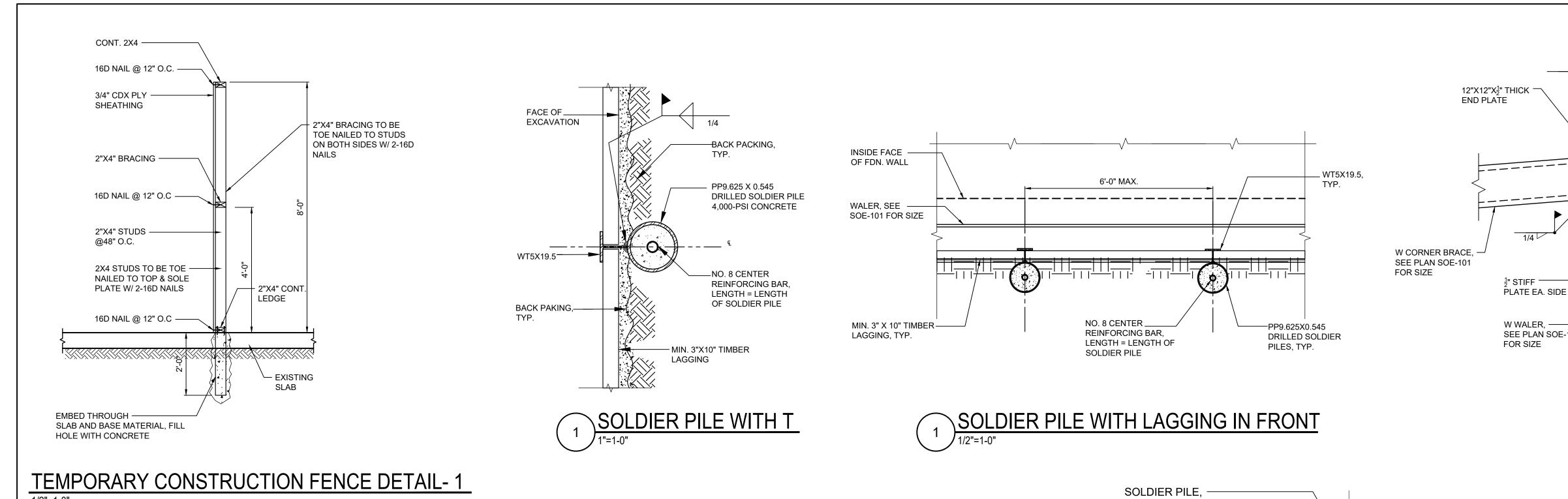
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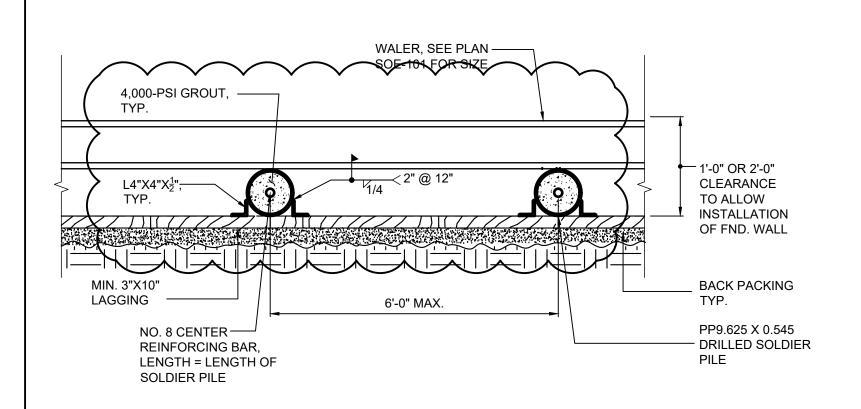
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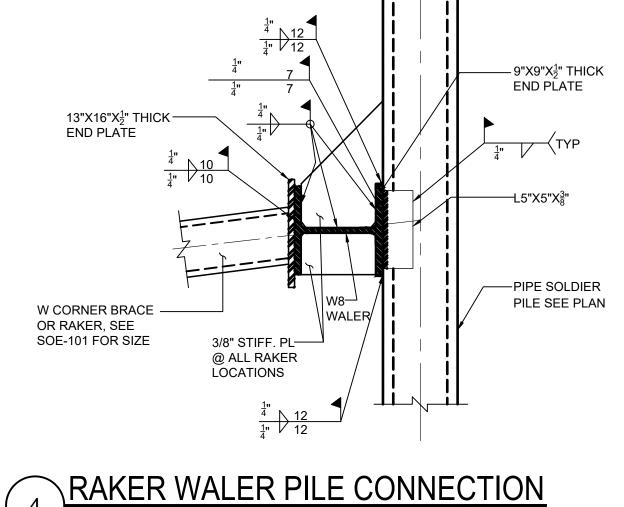
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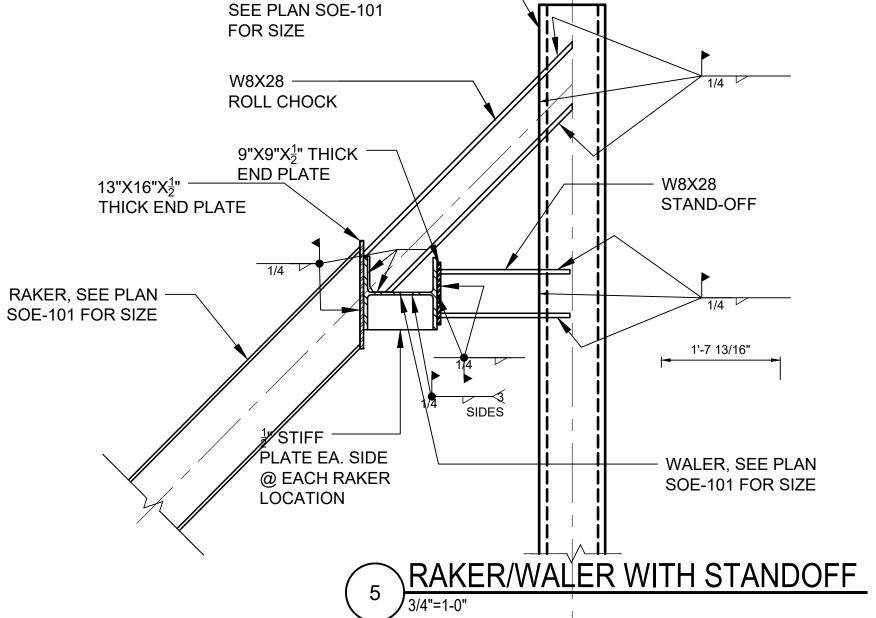
BSCAN STICKER



SOLDIER PILE, SEE PLAN SOE-101 FOR SIZE _____ PLATE EA. SIDE - STANDOFF 10" MIN W8X31 SEE PLAN SOE-101 FOUNDATION WALL 📗







SOLDIER PILE WITH LAGGING BEHIND 3 1/2"=1-0"

RAKER, SEE PLAN SOE-101 FOR SIZE

12"X12"X1/2"

HEEL BLOCK √4000 PSI

12"X12"X1/2" -----END PLATE WELDED

TO END OF RAKER

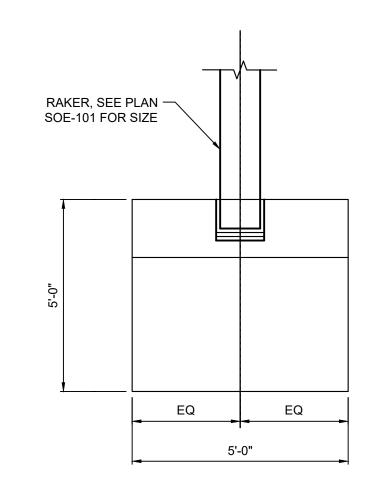
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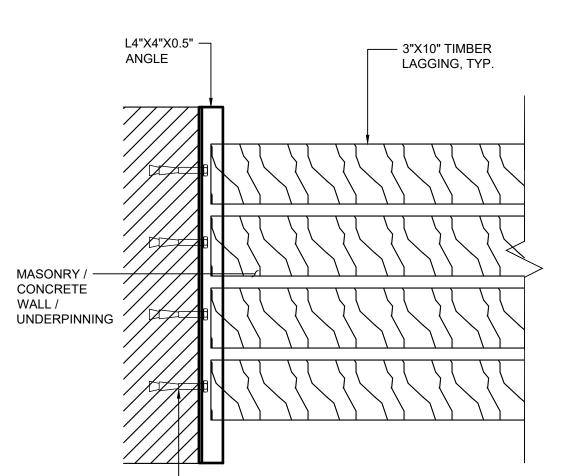
BETWEEN PLATES

AND SHIMS

MIN. 12"

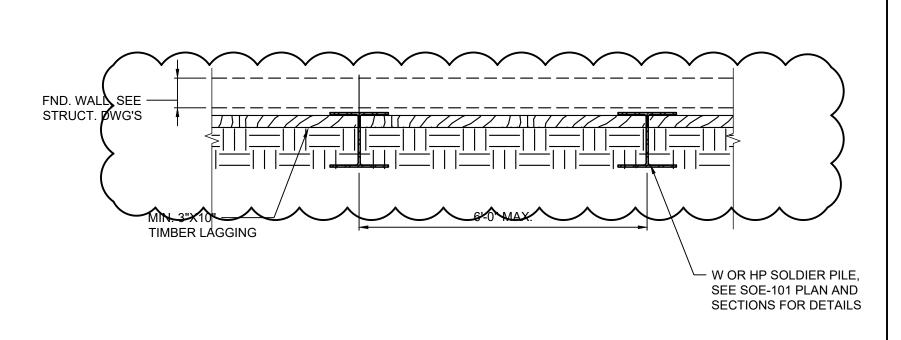
FULLY COMPACTED/ -UNDISTURBED SOIL





— 1" Ø EXPANSION ANCHOR

MIN. 6" EMBEDMENT ,12" O.C., TYP



6 HEELBLOCK SECTION VIEW

HEELBLOCK PLAN VIEW

8 LAGGING TO WALL CONNECTION
8 3/4"=1-0"

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	10/28/19	UPDATED
	06/04/20	UPDATED
	08/13/20	ADDED DETAIL
	09/15/20	UPDATED FOR PAA
	09/29/20	UPDATED PER FO

REVISIONS: DOB #: NB-420666023

PROJECT

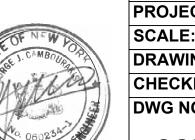
37-24 30TH STREET QUEENS, NY 11101

SUPPORT OF EXCAVATION

DRAWING TITLE:

SUPPORT OF EXCAVATION DETAILS

SEAL & SIGNATURE DATE:



PROJECT NO: SCALE: AS NOTED DRAWING BY: A.M.C. CHECKED BY: G.J.C. DWG NO:

05-28-19

SOE-301.01

SHEET NO: 8 OF 8

BSCAN STICKER

SPECIAL INSPECTIONS:

- PRIOR TO BEGINNING ANY WORK, THE OWNER SHALL RETAIN THE SERVICES OF S.E.T., P.C., OR ANOTHER ACCEPTABLE LICENSED PROFESSIONAL ENGINEER WHO SHALL HAVE PROVEN EXPERIENCE ACCEPTABLE TO THE OWNER AND ARCHITECT. MINIMUM REQUIRED QUALIFICATIONS SHALL INCLUDE A PROFESSIONAL LIABILITY INSURANCE COVERAGE OF 1 MILLION DOLLARS AND A MINIMUM PROVEN EXPERIENCE OF 5 YEARS WITH SIMILAR WORK.
- SPECIAL AND PROGRESS (CONTROLLED) INSPECTIONS REQUIRED BY THE NYC BUILDING CODE SHALL BE PERFORMED BY A TESTING AGENCY AND / OR PROFESSIONAL ENGINEER RETAINED BY THE OWNER AT NO COST TO THE CONTRACTOR FOR THE FOLLOWING CHECKED

	SPECIAL INSPECTION CATEGORIES	
X	STRUCTURAL STEEL WELDING	BC 1704.3.1
	STRUCTURAL STEEL DETAILS	BC 1704.3.2
	STRUCTURAL STEEL HIGH STRENGTH BOLTING	BC 1704.3.3
	STRUCTURAL COLD-FORMED STEEL	BC 1704.3.4
\times	CONCRETE CAST-IN-PLACE	BC 1704.3.4
	MASONRY	BC 1704.3.5
\times	SUBGRADE INSPECTION	BC 1704.7.1
	SUBSURFACE CONDITIONS FILL PLACEMENT & IN-PLACE DENSITY	BC 1704.7.2, BC 1704.7.3
	DEEP FOUNDATION ELEMENTS	BC 1704.8
	HELICAL PILES (BB # 2014-020)	BC 1704.8.5
	STRUCTURAL STABILITY EXISTING BUILDING	BC 1704.20.1
\times	EXCAVATIONSSHEETING, SHORING, BRACING	BC 1704.20.2
	UNDERPINNING	BC 1704.20.3, BC 1814
	MECHANICAL DEMOLITION	BC 1704.20.4
	POST-INSTALLED ANCHORS (BB #2014-018, 2014-019)	BC 1704.32
	CONCRETE DESIGN MIX	BC 1905.3, BC 1913.5
	CONCRETE SAMPLING AND TESTING	BC 1905.6, BC 1913.10
	PROGRESS INSPECTION CATEGORIES	
X	FOOTING AND FOUNDATION	BC 110.3.1
	STRUCTURAL WOOD FRAME	BC 110.3.3
X	FINAL	28-116.2.4.2,
	BC	110.5, DIRECTIVE 14 OF 1975, AND 1 RCNY § 101-10

THE TESTING AGENCY FOR CONTROLLED INSPECTIONS SHALL FILE ALL APPROPRIATE FORMS WITH THE NEW YORK CITY BUILDINGS DEPARTMENT.

- 3. THE CONTRACTORS ENGINEER SHALL PREPARE PLANS, CALCULATIONS, AND NOTES IN THE FORM OF SHOP DRAWINGS, FOR ALL ITEMS OF WORK WHICH DIFFER FROM WHAT IS SHOWN ON THE STRUCTURAL DRAWINGS DUE TO FIELD CONDITIONS. HE SHALL ALSO PREPARE PLANS IN THE FORM OF SHOP DRAWINGS, CALCULATIONS AND NOTES FOR ALL TEMPORARY SHORES AND BRACES AND CLEARLY INDICATE METHOD OF INSTALLATION, SEQUENCE OF OPERATIONS, AND QUALITY CONTROL.
- THESE SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER OF RECORD AND ARCHITECT PRIOR TO CONSTRUCTION. WORK SHALL BE EXECUTED FROM REVIEWED SHOP DRAWINGS ONLY.
- COPIES OF SUCH DRAWINGS WHICH INCLUDE THE ARCHITECT'S AND ENGINEER'S COMMENTS SHALL BE FILED WITH THE DEPARMENT OF BUILDINGS (ON AMENDMENT FORMS). ADDITIONALLY, AT COMPLETION OF WORK, FORMS INCLUDING ALL INSPECTION REPORTS PREPARED BY THE CONTRACTOR'S ENGINEER SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS.
- THE SPECIAL INSPECTIONS ENGINEER SHALL DETERMINE THE FREQUENCY OF INSPECTIONS NEEDED AND WHETHER HE OR SHE SHOULD INSPECT THE SITE PERSONALLY OR SEND A PERSON UNDER HIS OR HER DIRECT SUPERVISION. AT A MINIMUM, THE SITE MUST BE INSPECTED TWICE, ONCE AT A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR AND ONCE DURING CONSTRUCTION OPERATIONS.
- 7. THE SPECIAL INSPECTIONS ENGINEER, SHALL MAINTAIN A LOG IN HIS OR HER OFFICE WHICH INCLUDES THE FOLLOWING INFORMATION:
- (i) ADDRESS OF THE PREMISES, JOB NUMBER, CONTRACTOR NAME AND ADDRESS
- (ii) DATE AND TIME OF EACH INSPECTION INCLUDING
- (A) NAMES OF PERSONNEL WHO INSPECTED THE SITE (B) ANY SIGNIFICANT OBSERVATIONS OR INSTRUCTIONS GIVEN RELATING TO ANY OF THE FOLLOWING:
- DEVIATIONS FROM THE CONTRACT DOCUMENTS.
- ANTICIPATED FIELD CONDITIONS;
- PROPER EXECUTION OF THE STRUCTURAL WORK; GOOD ENGINEERING PRACTICE:
- PRECAUTIONS TAKEN TO MAINTAIN SAFE CONDITIONS, IF WORK IS STOPPED FOR ANY REASON.
- (iii)THE DATE OF AND PARTICIPANTS IN ANY CONVERSATIONS WITH THE SPECIAL INSPECTIONS ENGINEER OCCURING OFF-SITE AND RELATING TO ANY SIGNIFICANT OBSERVATIONS OR INSTRUCTIONS.
- 8. THE SPECIAL INSPECTIONS ENGINEER SHALL RETAIN A COPY OF THE DOCUMENTS DESCRIBED ABOVE IN HIS OR HER OFFICE AND SHALL PROVIDE A COPY TO THE CONTRACTOR AND / OR OWNER TO BE KEPT AT THE CONSTRUCTION SITE.
- 9. THE SPECIAL INSPECTIONS ENGINEER RESPONSIBLE FOR SPECIAL INSPECTION SHALL REPORT UNSAFE CONDITIONS, WHEN AND IF OBSERVED DURING HIS / HER SITE VISITS, TO THE DEPARTMENT OF BUILDINGS AND / OR ANY OTHER AFFECTED PARTIES OR AGENCIES. IT IS TO BE NOTED THAT THE SPECIAL INSPECTIONS ENGINEER AND ENGINEER OF RECORD ARE NOT RESPONSIBLE IN ANY WAY FOR SITE SAFETY. SITE SAFETY SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
- 10. UPON REQUEST OF THE BUILDINGS DEPARTMENT, THE SPECIAL INSPECTIONS ENGINEER SHALL MAKE AVAILABLE FOR REVIEW BY THE BUILDINGS DEPARTMENT DOCUMENTS AND THE LOG DESCRIBED ABOVE.

SAFETY DURING EXECUTION OF WORK:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONDITIONS OF PUBLIC AND WORKER SAFETY DURING EXECUTION OF THE WORK. THIS SHALL INCLUDE COMPLIANCE WITH CHAPTER 33 OF THE NEW YORK CITY BUILDING CODE: SAFEGUARDS DURING CONSTRUCTION.
- 2. THE CONTRACTOR SHALL PROVIDE SIDEWALK PROTECTION AND PROTECTION OF ADJOINING PROPERTIES, AS REQUIRED BY THE NYC BLDG.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND FILING A SITE SAFETY PLAN AND/OR PROVIDING OTHER WRITTEN ASSURANCES OF SAFE OPERATIONS AS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SAFE WORKING ENVIRONMENT FOR ALL WORKERS. THIS SHALL INCLUDE COMPLIANCE WITH ALL OSHA, STATE AND LOCAL LABOR LAWS WHICH MAY GOVERN THIS TYPE OF WORK.
- 5. THE CONTRACTOR SHALL PROVIDE REGULAR PERIODIC INSPECTION OF CONSTRUCTION OPERATIONS AS REQUIRED TO ENSURE ONGOING MAINTENANCE OF ALL SAFETY OPERATIONS AND EQUIPMENT. SUCH INSPECTIONS SHALL BE UNDERTAKEN BY AN AGENT OF THE CONTRACTOR WHO IS QUALIFIED TO EVALUATE SUCH OPERATIONS AND EQUIPMENT. THIS INSPECTOR SHALL PREPARE WRITTEN SAFETY REPORTS WHICH SHALL BE MAINTAINED AT THE JOB SITE FOR REVIEW BY THE AUTHORITIES HAVING JURISDICTION.

GENERAL

- 1. THE DESIGNS ON THESE DRAWINGS ARE INTENDED FOR TEMPORARY SUPPORT OF EXCAVATION ONLY
- 2. THESE DRAWINGS ARE INTENDED TO BE USED BY ONLY AN EXPERIENCED CONTRACTOR AFTER CONSULTATION WITH THIS OFFICE. THIS OFFICE WILL NOT BE RESPONSIBLE FOR JOB SITE PROBLEMS DUE TO FAILURE TO INTERPRET THE DOCUMENTS CORRECTLY. REPRESENTATIVES OF S.E.T., P.C. ARE AVAILABLE TO ANSWER QUESTIONS AND TO ASSIST THE CONTRACTOR BY EXPLAINING THE DESIGN INTENT. FAILURE BY THE CONTRACTOR TO UNDERSTAND THE COMPLEXITIES OF THE PROJECT AND THE SEQUENCE OF CONSTRUCTION CAN RESULT IN INJURY OR DEATH TO WORKERS. PROCEEDING WITH CONSTRUCTION WITHOUT FULL UNDERSTANDING OF THE PROJECT AND WITHOUT A COMPLETE SET OF DESIGN DOCUMENTS WILL PUT BOTH THE PROJECT AND INDIVIDUALS IN PERIL. THE CONTRACTOR ASSUMES TOTAL RESPONSIBILITY FOR ANY CONSEQUENCE OF THAT ACTION.
- 3. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR ADHERING TO THE REQUIREMENTS AS SPELLED OUT IN THESE NOTES. ALL PARTIES MUST CAREFULLY STUDY ALL NOTES FOR ITEMS WHICH MAY PERTAIN TO THEIR TRADES. FAILURE TO READ THESE NOTES DOES NOT PERMIT THE CONTRACTOR TO DEVIATE FROM THEIR REQUIREMENTS.
- 4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT BUILDING CODE OF ALL GOVERNING AUTHORITIES.
- 5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, AND DRAWINGS.
- 6. THE DESIGN PLANS AND NOTES, TO THE BEST OF ENGINEER'S KNOWLEDGE, COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE.
- 7. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
- 8. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND CHECK ALL MEASUREMENTS ON JOB AND SHALL BE RESPONSIBLE FOR SAME.
- 9. ALL DIMENSIONS INDICATED ON THE DRAWINGS ARE APPROXIMATE AND SHOULD NOT BE USED FOR ORDERING AND/OR FABRICATING MATERIAL. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO ORDERING AND/OR FABRICATING MATERIALS.
- 10. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BY MEASUREMENTS AT THE JOB SITE AND SHALL TAKE ANY AND ALL OTHER MEASUREMENTS NECESSARY TO VERIFY THE DRAWINGS AND TO PERFORM WORK PROPERLY.
- 11. DIFFERENT FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF S.E.T., P.C. IMMEDIATELY FOR EVALUATION. IF THE CONDITIONS OBSERVED AS THE EXCAVATION ADVANCES ARE DIFFERENT THAN THE CONDITIONS SHOWN ON THE DESIGN DRAWINGS. THE CONTRACTOR SHALL STOP WORK AND NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER. MODIFICATIONS TO THESE DRAWINGS MAY BE NECESSARY.
- 12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITIES AND BELOW GROUND STRUCTURES IN THE AREA OF WORK PRIOR TO COMMENCEMENT OF WORK.
- 13. NOTIFY DOB 24 TO 48 HOURS PRIOR TO START OF EXCAVATION (RULE 52).
- 14. SIDEWLAK CLOSING FROM NYDOT IS REQUIRED TO OVERCUT THE SIDEWALK OR TO PLACE SUPPORT OF EXCAVATION ELEMENTS IN THE SIDEWALK OR STREET.
- 15. ALL CONTRACTORS AND SUBCONTRACTORS ON THIS PROJECT SHALL BE RESPONSIBLE FOR THE PROPER PERFORMANCE OF THEIR WORK, COORDINATION WITH OTHER TRADES, METHODS, SAFETY AND SECURITY ON THE JOB SITE. S.E.T., P.C. AND ITS AGENTS AND EMPLOYEES ARE NOT RESPONSIBLE OR LIABLE FOR THE ABOVE AND SHALL BE HELD HARMLESS AND INDEMNIFIED BY ALL CONTRACTORS AND SUBCONTRACTORS FROM ANY AND ALL CLAIMS, LOSSES, SUITS AND LEGAL ACTION WHATSOEVER ARISING FROM THE PERFORMANCE OF WORK ON THIS PROJECT.
- 16. ALL WORK PERFORMED WHICH AFFECTS THE ADJACENT BUILDING OPERATIONS SHALL CAUSE MINIMUM DISTURBANCE TO THE NORMAL OPERATION OF AFFECTED PARTS OF THE BUILDING.
- 17. PINS, WIRE MESH, AND PARGING MAY BE REQUIRED TO STABILIZE THE FOUNDATION WALL, OR FOOTINGS. LOOSE AREAS OF FOUNDATION WALL OR FOOTINGS THAT ARE DAMAGED OR LOOSE SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR EVALUATION AND REMEDIAL MEASURES.
- 18. CONSENT FROM OWNERS OF ADJACENT PROPERTIES SHALL BE OBTAINED IF REQUIRED WORK EXTENDS BEYOND PROPERTY LINE.
- 19. ALL CONTRACTORS MUST VISIT SITE AND NOTE ALL EXISTING CONDITIONS AS WELL AS ALL CONDITIONS TO BE MET BEFORE SUBMITTING BID. LACK OF THOROUGH UNDERSTANDING OF THE PROJECT REQUIREMENTS SHALL NOT CONSTITUTE AN EXCUSE FOR ERRORS OR OMISSIONS. NOR JUSTIFY A REQUEST FOR EXTRA COMPENSATION.
- 20. CONTRACTOR SHALL MAKE NO DEVIATION FROM THESE DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
- 21. ACCEPTANCE OF DEVIATIONS FROM ANY OF THE REQUIREMENTS OF THESE NOTES SHALL BE AT THE SOLE DISCRETION OF THE ENGINEER. ACCEPTANCE OF A DEVIATION FROM ANY REQUIREMENT SHALL NOT BE CONSTRUED AS PERMITTING ANY OTHER DEVIATION.
- 22. A PERMIT SHALL BE OBTAINED FROM DOT FOR SIDEWALK CLOSURE TO INSTALL SOLDIER PILES OR ANY INTRUSION PAST PROPERTY LINE.
- 23. CONSTRUCTION OF NEW CONCRETE WALLS AGAINST EXISTING STRUCTURES SHALL COMPLY WITH NYCDOB BUILDINGS BULLETIN #2009-11

BIDDERS WARRANTY:

BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE BIDDER WARRANTS THAT:

- 1. THE BIDDER AND ALL SUBCONTRACTORS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND OTHER CONSTRUCTION CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM AMBIGUITIES AND SUFFICIENT FOR THE CONTRACTOR TO BID, FABRICATE, AND INSTALL THE WORK ON TIME, FURTHER THAT,
- 2. THE BIDDER AND ALL WORKMEN, EMPLOYEES AND SUBCONTRACTORS HE INTENDS TO USE ARE SKILLED AND EXPERIENCED IN THE TYPE OF CONSTRUCTION REPRESENTED BY THE CONSTRUCTION CONTRACT DOCUMENTS BID UPON; FURTHER THAT,
- NEITHER THE BIDDER NOR ANY OF HIS EMPLOYEES, AGENTS INTENDED SUPPLIERS OR SUBCONTRACTORS HAVE RELIED UPON ANY VERBAL REPRESENTATIONS, ALLEGEDLY AUTHORIZED OR UNAUTHORIZED FROM THE OWNER, HIS EMPLOYEES OR AGENTS INCLUDING ARCHITECTS, ENGINEERS OR CONSULTANTS. IN ASSEMBLING THE BID FIGURE: AND FURTHER THAT.THE BID FIGURE IS BASED SOLELY UPON THE CONSTRUCTION CONTRACT DOCUMENTS AND PROPERLY ISSUED WRITTEN ADDENDA AND NOT UPON ANY OTHER WRITTEN REPRESENTATION.
- 4. THE BIDDER ALSO WARRANTS THAT HE HAS CAREFULLY EXAMINED THE SITE OF THE WORK AND THAT FROM HIS OWN INVESTIGATIONS HE HAS SATISFIED HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK AND THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS AND DIFFICULTIES TO BE ENCOUNTERED. THE KIND AND EXTENT OF EQUIPMENT AND OTHER FACILITIES NEEDED FOR THE PERFORMANCE OF THE WORK, THE GENERAL AND LOCAL CONDITIONS, AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR ITS PERFORMANCE.

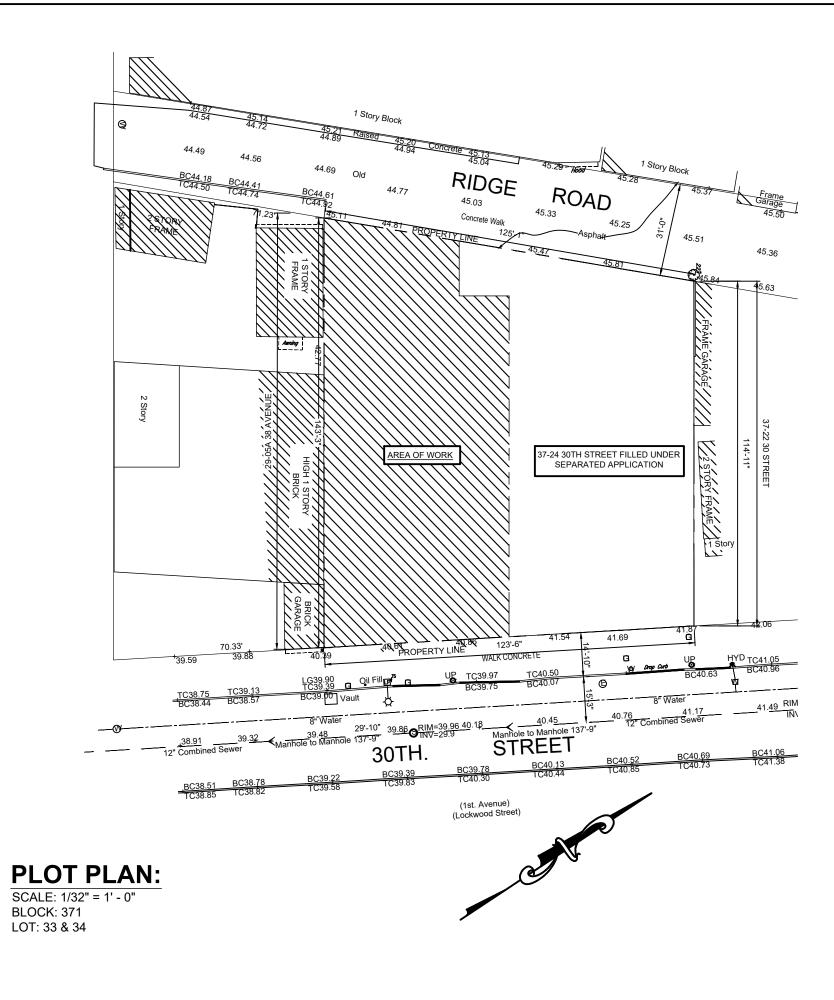
DISCLAIMER:

THE DRAWINGS HEREIN ARE RELATED TO A NEW BUILDING STRUCTURE. THE STRUCTURAL DESIGN WAS BASED UPON AS MUCH OBSERVATION. MEASUREMENT, TESTING, ETC. AS CIRCUMSTANCES PERMITTED, HOWEVER, THERE WERE ASSUMPTIONS MADE ABOUT UNKNOWN CONDITIONS. SHOULD THE OWNER DECIDE NOT TO UTILIZE S.E.T., P.C. TO VERIFY AND INSPECT THESE CONDITIONS IN THE FIELD, S.E.T., P.C. WILL NOT BE RESPONSIBLE FOR ANY FAILURE, DAMAGE, INJURY, DELAY, LOSS OF INCOME, EXTRA COST, OR ANY OTHER LOSS DUE TO **EXISTING CONDITIONS.**

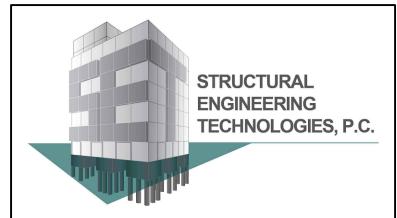
SHOP DRAWING REVIEW:

THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS WITH RESPECT TO CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE SPECIFICATIONS. SHOP DRAWINGS SHALL BE SUBMITTED IN DUPLICATE. EXCESS DRAWINGS WILL BE DISCARDED. IF REQUIRED BY SPECIFICATIONS, SHOP DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A LICENSED ENGINEER WHO IS LICENSED IN THE STATE WHERE THE PROJECT IS TO BE CONSTRUCTED. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, INCLUDING REFLECTION OF EXISTING FIELD CONDITIONS, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR; APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER WILL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION FROM THE CONTRACT UNLESS CONTRACTOR ADVISES THE ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY THE ENGINEER IN WRITING. IN THE EVENT THAT THE ENGINEER WILL REQUIRE MORE THAN TEN (10) WORKING DAYS TO PERFORM REVIEW, THE ENGINEER WILL SO NOTIFY THE CONTRACTOR. THE ENGINEER WILL RETURN WITHOUT REVIEW MATERIAL WHICH HAS NOT BEEN APPROVED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER

S.E.T., P.C. MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED AS TO S.E.T., P.C. FINDINGS, RECOMMENDATIONS, PLANS, SPECIFICATIONS, OR PROFESSIONAL ADVICE. S.E.T., P.C. HAS ENDEAVORED AND WILL ENDEAVOR TO PERFORM ITS SERVICES IN ACCORDANCE WITH GENERALLY ACCEPTED STANDARDS OR PRACTICE IN EFFECT AT THE TIME OF PERFORMANCE. BY UTILIZING THESE DOCUMENTS (OR HAVING OTHERS UTILIZE THEM) FOR ANY PURPOSE WHATSOEVER THE OWNER OR DEVELOPER RECOGNIZES THAT NEITHER S.E.T., P.C. OR ANY OF S.E.T., P.C. SUBCONSULTANTS OR SUBCONTRACTORS OWES ANY FIDUCIARY RESPONSIBILITY TO THE OWNER OR DEVELOPER.



DRAWING INDEX			
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	
1	SOE-001.00	PLOT PLAN AND NOTES	
2	SOE-002.00	NOTES	
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5	SOE-201.00	SUPPORT OF EXCAVATION SECTIONS	
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7	SOE-301.00	SUPPORT OF EXCAVATION DETAILS	
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10	FO-201.00	TYP. FOUNDATION DETAILS	
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CONSULTING STRUCTURAL, GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

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ALL RIGHTS RESERVED

ALL DRAWINGS SPECIFICATIONS AND COPIES THEREOF FURNISHED BY S.E.T., P.C. ARE AND WILL REMAIN THEIR PROPERTY. THEY ARE NOT TO BE USED ON THIS OR ANY OTHER PROJECT UNLESS WRITTEN PERMISSION IS GIVEN.

OWNER:

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C. HAS NOT BEEN RETAINED TO PERFORM CONTROLLED INSPECTIONS OF ANY KIND FOR THIS PROJECT.

THE DESIGN PROFESSIONAL SHALL BE RELEASED FROM ANY AND ALL LIABILITY IN THE COMMENCEMENT OF ANY WORK PERFORMED WITHIN THESE DOCUMENTS PRIOR TO OBTAINING ALL REQUIRED PERMITS FROM THE RESPECTIVE JURISDICTIONAL AGENCIES

NO.	DATE	DESCRIPTION
	05/30/19	PRELIMINARY
	07/02/19	UPDATED
	09/12/19	UPDATED FOR FILING
	06/04/20	UPDATED
	09/11/20	UPDATED

IREVISIONS: DOB #: NB-420666014 PROJECT

> 37-28 30TH STREET QUEENS, NY 11101

SUPPORT OF EXCAVATION

DRAWING TITLE:

PLOT PLAN AND

ISEAL & SIGNATURE

PROJECT NO: SCALE: AS NOTED DRAWING BY: A.M.C CHECKED BY: G.J.C DWG NO:

05-28-19

SOE-001.00

SHEET NO: 1 OF 1 **BSCAN STICKER**

DATE:

DOB APPROVAL STAMP

SURVEY AND MONITORING NOTES:

THE WORK.

- 1. A BUILDING PROTECTION PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THE NYCDOB TECHNICAL POLICY AND PROCEDURE NOTICE #10/88 (TP/PN #0/88) SHOULD BE PREPARED FOR LANDMARKED BUILDINGS.
- 2. A PRE-CONSTRUCTION (PRE-CONDITION) SURVEY OF THE ADJACENT STRUCTURES SHALL BE PERFORMED PRIOR TO CONSTRUCTION IN ACCORDANCE WITH THE BUILDING PROTECTION PLAN. 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
- MONITOR ADJACENT STRUCTURES BY OPTICAL SURVEY AT ABOUT 25-FT INTERVALS FOR VERTICAL AND LATERAL MOVEMENT. NOTE THAT BUILDING MONITORING LOCATIONS ARE NOT SHOWN ON THE SUPPORT OF EXCAVATION PLAN FOR CLARITY.
- CRACK GAUGES SHALL BE INSTALLED ON EXISTING NEIGHBORING BUILDING CRACKS AND MONITORED DURING EXCAVATION AND FOUNDATION CONSTRUCTION.
- CRACK MONITORING THRESHOLD SHALL BE 2-MM, IF REACHED THE CONTRACTOR AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR COURSE OF ACTION.
- 6. OBTAIN BASELINE READINGS OF THE MONITORING POINTS PRIOR TO EXCAVATION AND NEW CONSTRUCTION. HORIZONTAL AND VERTICAL SURVEY DATA TO BE OBTAINED BY A NEW YORK STATE LICENSED SURVEYOR.
- 7. OBTAIN AMBIENT TEMPERATURE DURING EACH OPTICAL MONITORING MEASUREMENT.
- 8. PERFORM OPTICAL SURVEYS AT LEAST TWICE PER WEEK DURING UNDERPINNING, AND ONCE PER WEEK DURING EXCAVATION AND FOUNDATION CONSTRUCTION, UNTIL FOUNDATION WALL IS BRACED AND BACKFILL IS COMPLETE. IF MOVEMENT OCCURS, INCREASE THE FREQUENCY OF THE READINGS AS RECOMMENDED BY THE CONTRACTOR OR ENGINEER.
- 9. VIBRATION MONITORS (SEISMOGRAPHS) SHALL BE PLACED ADJACENT TO AREAS WHERE WORK IS BEING PERFORMED AS NEGOTIATED WITH THE NEIGHBORING BUILDINGS. BASELINE READINGS SHALL BE OBTAINED AT LEAST ONE WEEK PRIOR TO START OF EXCAVATION.

10. LANDMARK BUILDING MOVEMENT AND VIBRATION CRITERIA:

- 10.1. ALL MONITORING FREQUENCIES SHALL COMPLY WITH TP/PN #10/88.
- 10.2. IF THE VERTICAL OR LATERAL BUILDING MOVEMENT REACHED 1/8-IN, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER.
- 10.3. IF THE VERTICAL OR LATERAL BUILDING MOVEMENT REACHED 1/4-IN, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, 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.
- 10.4. IF THE VIBRATIONS EXCEEDED 0.25-IPS, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER.
- 10.5. IF THE VIBRATIONS EXCEEDED 0.5-IPS, AND/OR ANY INDIVIDUAL CRACK GAUGE READING EXCEEDS 1mm. IMMEDIATELY INFORM THE CONSTRUCTION MANAGER. OWNER. AND ENGINEER. AND STOP WORK. INFORM NYCDOB EXCAVATION UNIT. OBSERVE NEIGHBORING STRUCTURE CONDITIONS, AND REVIEW AND MODIFY MEANS AND METHODS FOR EXCAVATION AND SUPPORT OF EXCAVATION AS NECESSARY. WORK SHALL NOT RESUME UNTIL AGREED UPON CORRECTIVE ACTION IS SUPPLEMENTED BY THE CONTRACTOR AND UPON APPROVAL BY THE CONSTRUCTION MANAGER AND THE ENGINEER.

11. NON-LANDMARK BUILDING MOVEMENT AND VIBRATION CRITERIA:

- 11.1. IF THE VERTICAL OR LATERAL BUILDING MOVEMENT REACHED 1/4-IN, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER.
- 11.2. IF THE VERTICAL OR LATERAL BUILDING MOVEMENT REACHED 1/2-IN, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, 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.
- 11.3. IF THE VIBRATIONS EXCEEDED 1.0-IPS, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER.
- 11.4. IF THE VIBRATIONS EXCEEDED 2.0-IPS, AND/OR ANY INDIVIDUAL CRACK GAUGE READING EXCEEDS 2mm. IMMEDIATELY INFORM THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER, AND STOP WORK. INFORM NYCDOB EXCAVATION UNIT, OBSERVE NEIGHBORING STRUCTURE CONDITIONS, AND REVIEW AND MODIFY MEANS AND METHODS FOR EXCAVATION AND SUPPORT OF EXCAVATION AS NECESSARY. WORK SHALL NOT RESUME UNTIL AGREED UPON CORRECTIVE ACTION IS SUPPLEMENTED BY THE CONTRACTOR AND UPON APPROVAL BY THE CONSTRUCTION MANAGER AND THE ENGINEER.

12. NEW YORK CITY TRANSIT STRUCTURE MOVEMENT AND VIBRATION CRITERIA:

- 12.1. IF THE VERTICAL OR LATERAL MOVEMENT OF THE NYCT STRUCTURE REACHED 1/4-IN, NOTIFY THE NYCT AND ADJUST MEANS AND
- 12.2. IF THE VERTICAL OR LATERAL MOVEMENT OF THE NYCT STRUCTURE REACHED 1/2-IN, DISCUSS REMEDIAL ACTION WITH THE NYCT.
- 12.3. VIBRATION MONITORING DATA SHALL BE AVAILABLE AT THE JOB SITE. 12.4. IF THE VIBRATIONS EXCEEDED 0.5-IPS, NOTIFY THE NYCT.
- 13. VIBRATION MONITORS SHALL TAKE REAL-TIME READING
- 14. ALL MONITORING DATA SHALL BE PRESENTED TO THE CONSTRUCTION MANAGER, OWNER, ENGINEER, AND SPECIAL INSPECTOR AT THE END OF EACH DAY, OR AT AGREED-UPON INTERVALS.
- 15. CONTRACTOR IS REQUIRED TO OBTAIN CONSENT LETTER FROM ADJACENT PROPERTY OWNER TO UNDERPIN THEIR WALL, INSTALL SOIL NAILS OR TIE-BACK, ETC.

MATERIALS AND TESTING NOTES:

- 1. THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN INDEPENDENT TESTING COMPANY
- 2. STRUCTURAL CONCRETE FOR UNDERPINNING PIERS SHALL HAVE A MINIMUM DESIGN COMPRESSIVE STRENGTH OF 4000-PSI AT 28 DAYS.
- 3. CONCRETE PLACEMENT TIME SHALL NOT EXCEED 2 HOURS OR AS RECOMMENDED BY THE TESTING COMPANY
- 4. PERFORM ONE SLUMP TEST FOR EACH BATCH OF CONCRETE. SLUMP SHALL BE BETWEEN 4- AND 6-IN FOR UNDERPINNING.
- 5. MAKE A SET OF MINIMUM 5 CYLINDERS EACH DAY CONCRETE IS CAST FOR UNDERPINNING OR GROUT IS BEING PLACED FOR SOLDIER PILES OR TIE-BACKS.
- PERFORM COMPRESSION TEST ON 1 CYLINDER AT 7 DAYS AND 1 AT 14 DAYS. IF THE DESIGN STRENGTH IS ACHIEVED AT 14 DAYS. NO FURTHER TESTING IS REQUIRED, OTHERWISE TEST 1 OR 2 CYLINDERS AT 28 DAYS. 1 OR 2 SAMPLES SHALL BE SAVED FOR 56 DAYS TESTING IF THE PREVIOUS CYLINDERS FAIL TO MEET DESIGN STRENGTH REQUIREMENTS.
- PROVIDE TESTING RESULTS TO THE CONTRACTOR.
- IF THE DESIGN STRENGTH REQUIREMENTS ARE NOT MET, APPROVED REMEDIATION SHALL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 9. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.1 USING E-70 ELECTRODES.
- 10. ALL STRUCTURAL STEEL SHALL BE GRADE 50, ASTM A-572.
- 11. 1-BAG MIX SHALL CONSIST OF 1 94-LB BAG OF CEMENT TO 1 CUBIC YARD OF SAND. QUANTITY OF WATER SHALL BE ADEQUATE TO ALLOW THE MIX TO FLOW.
- 12. TIMBER LAGGIN SHALL BE ROUGH CUT, FULL SIZE CONSTRUCTION GRADE, WITH A MINIMUM ALLOWABLE BENDING STRESS OF 1200-PSI.
- 13. MISCELLANEOUS STEEL (PLATES AND WEDGES) SHALL BE ASTM A-36.

DEWATERINGNOTES:

- ANY WATER INFLOW INTO THE EXCAVATION AREA SHALL BE CONTROLLED BY SUMPING OR OTHER SUITABLE METHODS. DISPOSAL OF WATER SHALL BE MADE OUT OF THE EXCAVATED AREA IN ACCORDANCE WITH LOCAL REGULATIONS. THE ELEVATION OF THE WATER LEVELS BEYOND THE LIMITS OF THE PROJECT SITE SHALL NOT BE LOWERED SO AS TO CAUSE DISTRESS AND/OR SETTLEMENT TO ADJOINING STRUCTURES. CONTRACTOR SHALL PROVIDE MEANS AND METHODS TO PREVENT LOSS OF FINES DURING DEWATERING.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING THAT MAY BE REQUIRED FOR THIS PROJECT.
- 3. IF DEWATERING SYSTEM IS REQUIRED, THE CONTRACTOR SHALL CONSULT A DEWATERING ENGINEER.

STRUCTURAL STABILITY NOTES:

- 1. CONTROLLED INSPECTION OF THE STABILITY AND INTEGRITY OF EXISTING STRUCTURES DURING CONSTRUCTION OPERATIONS IS REQUIRED BY THE NEW YORK CITY BUILDING CODE CHAPTER 17.
- 2. CONTRACTOR SHALL PREPARE A STRUCTURAL STABILITY PLAN, TO BE SUBMITTED TO THE STRUCTURAL ENGINEER (SIGNED AND SEALED BY THE PROFESSIONAL ENGINEERS RESPONSIBLE FOR ITS DESIGN) FOR REVIEW, AND APPROVAL PRIOR TO ANY DEMOLITION WORK OR MODIFICATIONS TO THE EXISTING STRUCTURE. THIS STRUCTURAL STABILITY PLAN SHALL INCLUDE:
- A. LAYOUT AND DETAILS OF SHORING, BRACING, UNDERPINNING AND OTHER WORK REQUIRED TO MAINTAIN THE STABILITY AND INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION OPERATIONS.
- B. PHASING, STAGING, AND SEQUENCING OF SUCH OPERATIONS.
- C. DESIGN LOADS FOR WHICH THE STABILITY SYSTEM HAS BEEN DESIGNED
- OWNER SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE STRUCTURAL STABILITY INSPECTION. THE CONTROLLED INSPECTION ENGINEER SHALL MAINTAIN RECORDS AS REQUIRED BY THE NEW YORK CITY BUILDING CODE. THE CONTROLLED INSPECTION ENGINEER SHALL USE THE STRUCTURAL STABILITY PLAN PREPARED BY THE CONTRACTOR AND APPROVED BY THE STRUCTURAL ENGINEER AS THE BASIS FOR THE CONTROLLED INSPECTIONS.

SAFETY DURING EXECUTION OF WORK:

- 1. THESE DRAWINGS DO NOT ADDRESS SAFETY ISSUES RELATED TO THE EXCAVATION AND SHORING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND FILING A SITE SAFETY PLAN AND/OR PROVIDING OTHER WRITTEN ASSURANCES OF SAFE OPERATIONS AS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
- 2. THE CONTRACTOR SHALL PROVIDE BARRIERS AND FENCING AROUND THE SITE AND/OR SIDEWALK PROTECTION AND PROTECTION OF ADJOINING PROPERTIES, AS REQUIRED BY THE NYC BUILDING CODE AND ALL APPLICABLE LAWS.
- 3. THE EXCAVATION / UNDERPINNING / SHEETING CONTRACTOR SHALL EXERCISE CAUTION IN THE PROCESS OF THE WORK. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ALL ADJACENT STRUCTURES. IF DAMAGE OCCURS TO THE ADJACENT BUILDING ELEMENTS OR CONTENTS. DUE TO THE NEGLIGENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL BE HELD RESPONSIBLE TO RECTIFY ALL DAMAGE AND/OR REIMBURSE PROPERTY OWNERS FOR ANY AND ALL DAMAGES, TO THE SATISFACTION OF ALL CONCERNED PARTIES.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONDITIONS OF PUBLIC AND WORKER SAFETY DURING EXECUTION OF THE WORK. THIS SHALL INCLUDE COMPLIANCE WITH CHAPTER 33 OF THE NEW YORK CITY BUILDING CODE: SAFEGUARDS DURING CONSTRUCTION, OSHA, AND OTHER STATE AND LOCAL LABOR LAWS WHICH MAY GOVERN THIS TYPE OF WORK.
- 5. THE CONTRACTOR SHALL PROVIDE REGULAR PERIODIC INSPECTION OF CONSTRUCTION OPERATIONS AS REQUIRED TO ENSURE ONGOING MAINTENANCE OF ALL SAFETY OPERATIONS AND EQUIPMENT. SUCH INSPECTIONS SHALL BE UNDERTAKEN BY AN AGENT OF THE CONTRACTOR WHO IS QUALIFIED TO EVALUATE SUCH OPERATIONS AND EQUIPMENT. THIS INSPECTOR SHALL PREPARE WRITTEN SAFETY REPORTS WHICH SHALL BE MAINTAINED AT THE JOB SITE FOR REVIEW BY THE AUTHORITIES HAVING JURISDICTION.

REFERENCES:

- 1. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- 2. SOE PLANS AND SECTIONS ARE BASED ON:
- ARCHITECTURAL SURVEY BY ERLANDSEN-CROWELL & SHAW DATED AUGUST 1, 2018.
- ARCHITECTURAL DRAWINGS BY COSTA ARCHITECTURE & ENGINEERING RECEIVED ON MAY 28, 2019. STRUCTURAL DRAWINGS BY STRUCTURAL ENGINEERING TECHNOLOGIES DATED JULY 12, 2019.
- 3. SUB-SURFACE INFORMATION OBTAINED FROM:
- BORING LOGS BY GTA ENGINEERING SERVICES OF NEW YORK DATED NOVEMBER 26, 2018. 3.1
- TEST PIT LOGS NOT RECEIVED. 3.2
- GEOTECHNICAL REPORT BY GTA ENGINEERING SERVICES OF NEW YORK DATED NOVEMBER 26, 2018.
- 4. LOCATIONS AND ELEVATIONS OF ALL PROPOSED STRUCTURAL BUILDING ELEMENTS SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND SHALL BE SUPERSEDED BY FINAL STRUCTURAL AND ARCHITECTURAL DRAWINGS.

EXCAVATION NOTES:

- 1. CONTRACTOR SHALL CALL 811 BEFORE ANY EXCAVATION BEGINS, FOR UTILITY COMPANIES TO MARK OUT ALL EXISTING UTILITY LINES.
- 2. PRIOR TO COMMENCEMENT OF MASS EXCAVATION, THE ADJOINING PROPERTIES AND STREETS SHALL BE VISUALLY SURVEYED BY THE CONTRACTOR, SUITABLY MARKED WITH PERMANENT MONITORING POINTS TO BE MEASURED DURING CONSTRUCTION FOR THE PURPOSES OF DETERMINING CONSTRUCTION-RELATED EFFECTS. REPORT WITH PHOTOGRAPHS SHALL BE PROVIDED TO ARCHITECT AND ENGINEER IN TRIPLICATE COPIES. A PRE-CONSTRUCTION DAMAGE CONDITION SURVEY OF THE ADJOINING PROPERTIES SHALL BE MADE IN WRITTEN AND PICTORIAL FORM, AND TWO COPIES SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE.
- 3. A COMPETENT REPRESENTATIVE OF THE CONTRACTOR SHALL INSPECT THE SUBGRADE OF THE EXCAVATION, ANY AND ALL BRACING AND BLOCKING, AT THE COMMENCEMENT OF EACH SHIFT, TO ASSURE INTEGRITY, PRIOR TO PERMITTING WORKMEN TO WORK WITHIN ANY EXCAVATED AREA. ALL SIDES OR SLOPES OF EXCAVATIONS SHALL BE INSPECTED FOR STABILITY AFTER RAINSTORMS.
- 4. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SUBGRADE CONDITIONS PRIOR TO START OF WORK. THESE DRAWINGS DISCOUNT UNDERGROUND WATER CONDITIONS.
- 5. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY EXCAVATION RESTRAINT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT. IF A SHEETING OR BRACING SYSTEM IS TO BE UTILIZED, THE DETAILS ARE TO BE SHOWN ON SHOP DRAWINGS TO BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ARCHITECT AND ENGINEER OF RECORD BEFORE COMMENCEMENT OF WORK.
- 6. ALL EXCAVATION GREATER THAN 5-FT IN DEPTH SHALL BE SHEETED, OR LAGGED AND BRACED.
- 7. IF BRACING IS USED TO SUPPORT THE EXCAVATION, PROVIDE THE REACTION TO THE BRACING BY PRE-LOADING OR BY THE USE OF SUITABLE WEDGES PROPERLY DRIVEN INTO THE JOINTS UNTIL THE NECESSARY REACTION IS PRODUCED AGAINST THE BANKS.
- 8. IF MATERIAL BEHIND LAGGING IS LOST OR DISTURBED, LEAVE A 1- TO 1.5-IN SPACE BETWEEN LAGGING BOARDS AND IMMEDIATELY BACKFILL
- 9. NO MATERIAL STORAGE SHALL BE PLACED WITHIN 10-FT OF EXCAVATION PERIMETER.
- 10. BOTTOM OF EXCAVATION ELEVATION AS SHOWN ON THESE DRAWINGS SHALL BE VERIFIED AND COORDINATED IN FIELD WITH CONTRACT DOCUMENTS.
- 11. EXCAVATION ELEVATIONS SHOWN ON THESE DRAWINGS ARE BASED ON ELEVATIONS SHOWN ON DESIGN STRUCTURAL / ARCHITECTURAL DRAWINGS. ADDITIONAL EXCAVATION MAY BE REQUIRED AS PER STRUCTURAL DESIGN AND CONSTRUCTION REQUIREMENTS.
- 12. USE HAND TOOLS TO EXCAVATE WITHIN 5-FT OF UNDERGROUND UTILITIES.
- 13. PROVIDE BLOCK OUTS USING HIGH DENSITY FOAM IN CONCRETE STRUCTURE WHERE SHORING STRUCTURE ELEMENTS PENETRATE NEW FOUNDATION WALL.
- 14. THOUGH USUALLY SMALL, SETTLEMENT NEARLY ALWAYS ACCOMPANIES EXCAVATION / UNDERPINNING / SHEETING WORK. THE AMOUNT OF SETTLEMENT, IF ANY, WILL VARY BASED ON THE TYPE OF BUILDING, THE CLASS OF SOILS UPON WHICH IT RESTS, THE PRESENCE OR ABSENCE OF GROUNDWATER, THE RESERVE FOUNDATION LOAD CAPACITY OF THE ORIGINAL FOUNDATION AND THE EXCELLENCE AND CARE OF THE WORKMANSHIP OF THE CONTRACTOR INSTALLING THE EXCAVATION / UNDERPINNING / SHEETING. BY USING THESE DRAWINGS TO COMPLETE THE EXCAVATION / UNDERPINNING / SHEETING WORK, THE CONTRACTOR AND THE OWNER UNDERSTAND THE INHERENT RISK AND ASSUME ALL RESPONSIBILITY FOR THE EFFECTS OF ANY SETTLEMENT THAT MIGHT OCCUR. ALL EXCAVATION / UNDERPINNING / SHEETING WORK SHALL BE STOPPED IMMEDIATELY AND THE ENGINEER OF RECORD SHALL BE NOTIFIED IF SETTLEMENTS SHOULD EXCEED
- 15. HAY OR FILTER FABRIC SHALL BE USED TO MINIMIZE MIGRATION OF FINES INTO THE EXCAVATION AREA.

UNDERPINNING NOTES:

- 1. A PRE-CONSTRUCTION SURVEY SHALL BE PERFORMED ON THE BUILDING TO BE UNDERPINNED BY AN INDEPENDENT PROFESSIONAL IN ORDER TO DOCUMENT EXISTING CONDITIONS OF THE BUILDING. PAY PARTICULAR ATTENTION TO AND DOCUMENT SIGNS OF EXISTING STRESS INCLUDING CRACKS, SAGGING, TIGHT DOORS, ETC. THE SURVEY SHALL INCLUDE EACH FLOOR, BOTH INSIDE AND OUT, AND SHALL INCLUDE PICTURES, MEASUREMENTS, ETC.
- 2. THE CONTRACTOR SHALL OBTAIN AN AGREEMENT WITH NEIGHBOR TO UNDERPIN THEIR BUILDING. NO UNDERPINNING IS TO BE PERFORMED UNTIL SUCH AGREEMENT IS EXECUTED.
- 3. THE CONTRACTOR SHALL VERIFY THE BOTTOM OF EXISTING FOOTING ELEVATIONS AND LOCATE ALL ADJACENT UTILITIES IN THE FIELD.
- 4. ALL UNDERPINNING OPERATIONS SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER PROVIDING SPECIAL INSPECTION SERVICES.
- INSPECTOR FOR SPECIAL INSPECTION SHALL BE NOTIFIED A MINIMUM OF 72 HOURS IN ADVANCE OF ANY UNDERPINNING WORK.
- 6. ALL EXCAVATION FOR UNDERPINNING SHALL BE COMPLETED BY HAND, WITHIN SHEETED PITS, AS SHOWN ON THE DETAILS AND
- 7. EXCAVATION FOR UNDERPINNING PIERS MUST BE PERFORMED IN THE DRY. DEWATERING MAY BE NECESSARY PRIOR TO EXCAVATION TO MAINTAIN GROUNDWATER LEVEL A MINIMUM OF 1-FT BELOW THE PROPOSED UNDERPINNING PIER SUBGRADE LEVEL. HAY OR FILTER FABRIC SHALL BE USED TO MINIMIZE MIGRATION OF FINES INTO THE EXCAVATION AREA.
- 8. DEPTH OF EXCAVATION BELOW FOOTING AND PREVIOUSLY INSTALLED LAGGING BOARDS SHALL NOT EXCEED 18-IN. MAINTAIN TIGHT CONTACT BETWEEN SOIL AND LAGGING BOARDS. IF MATERIAL IS CAVING INTO THE EXCAVATION AREA, DECREASE THE UNBRACED EXCAVATION DEPTH AND/OR GROUT THE MATERIAL TO MINIMIZE LOSS.
- 9. IF MATERIAL BEHIND LAGGING IS LOST OR DISTURBED, LEAVE A 1- TO 1.5-IN SPACE BETWEEN LAGGING BOARDS TO IMMEDIATELY BACKFILL OR GROUT.
- 10. IF THE SOILS TO BE SHEETED AND EXCAVATED FOR UNDERPINNING PIERS ARE FOUND TO BE LOOSE, LACKING COHERENCE, AND HAVING A TENDENCY TO "RUN", MAKING THE INSTALLATION OF THE HORIZONTAL TIMBER SHEETING DIFFICULT OR IMPOSSIBLE, THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A GROUTING SUBCONTRACTOR TO STABILIZE THE SOIL PRIOR TO EXCAVATING. CONTRACTOR TO IMMEDIATELY INFORM ENGINEER OF RECORD IF THIS CONDITION OCCURS, AND MAY ALSO PROPOSE ANOTHER REMEDIAL METHOD FOR SOIL STABILIZATION TO S.E.T., P.C. FOR REVIEW.
- 11. GROUTING TO STABILIZE SOIL AT UNDERPINNING PITS SHALL BE PERFORMED USING SODIUM SILICATE OR MICRO-FINE CEMENT. GROUT MIX DESIGN, EQUIPMENT, DRILLING PROCEDURES, AND SEQUENCE SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO S.E.T., P.C. FOR REVIEW.
- 12. UNDERPINNING PIER SUBGRADE BEARING MATERIAL SHALL BE OF EQUAL OR BETTER CLASS THAN THE ORIGINAL BEARING MATERIAL.
- 13. MAXIMUM UNDERPINNING PIT WIDTH IS 4-FT FOR CONCRETE FOOTINGS OR 3-FT FOR RUBBLE FOOTINGS UNLESS OTHERWISE NOTED ON THESE DRAWINGS. UNDERPINNING WIDTH MAY BE REDUCED BASED ON S.E.T., P.C. FIELD OBSERVATIONS.
- 14. NO TWO UNDERPINNING PITS CLOSER THAN 12-FT CENTER TO CENTER, NOR TWO ADJACENT COLUMN FOOTINGS MAY BE UNDERPINNED CONCURRENTLY.
- 15. EXISTING STONE RUBBLE WALLS TO BE UNDERPINNED SHALL BE TREATED BY PRESSURE INJECTED GROUT OR CEMENT PARGING AT THE
- 16. ANY LOSS OF STONES FROM EXISTING STONE FOOTINGS OR SIGNS OF INSTABILITY IN THE STONE FOOTING SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. STEEL PLATES WITH TIMBER POSTS SHALL BE REQUIRED TO SUPPORT ANY LOOSE STONES OR UNSTABLE AREAS DURING EXCAVATION AND CONCRETING.
- 17. APPROACH PITS FOR UNDERPINNING SHOULD CAUSE MINIMAL DISTURBANCE TO SOIL SUBGRADE BELOW THE FOOTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN THE APPROACH PITS AND EXCAVATE PITS FOLLOWING OSHA AND LOCAL LAWS.

18. EXCAVATE PITS SUCH THAT A MINIMUM OF 12-FT OF UNDISTURBED SOIL OR CURED UNDERPINNING PIER IS MAINTAINED BETWEEN OPEN

- PITS UNTIL ALL UNDERPINNING IS COMPLETE UNLESS APPROVED BY S.E.T., P.C.
- 20. UNDERPINNING SHALL BE INSTALLED IN A MANNER SUCH THAT THE EXPOSED FACE OF THE CONCRETE IS VERTICAL (OR AS OTHERWISE SPECIFIED), CLEAN, AND NEAT.
- 21. UNDERPINNING SHALL BE CONSTRUCTED IN ONE VERTICAL LIFT. THE LIFT SHALL BE WITHOUT INTERMEDIATE HORIZONTAL CONSTRUCTION JOINTS (COLD JOINTS).
- 22. DEEPER UNDERPINNING PIERS SHALL BE CONSTRUCTED PRIOR TO INSTALLING IMMEDIATELY ADJACENT SHALLOWER PIERS

19. DO NOT LEAVE PITS OPEN OVERNIGHT OR DURING WEEKENDS OR HOLIDAYS UNLESS OTHERWISE PERMITTED BY S.E.T., P.C.

- 23. UNDERPINNING PIERS SHALL BE CARRIED DOWN TO THE ELEVATIONS SHOWN OR TO DRY COMPETENT SOIL. WHICHEVER IS DEEPER. COMPETENT SOIL SHALL BE VERIFIED BY THE ENGINEER. IF COMPETENT SOIL IS NOT FOUND AT THE ELEVATIONS SHOWN ON THE DRAWINGS, THE SPECIAL INSPECTOR SHALL REVIEW THE FIELD CONDITIONS AND MAKE NECESSARY RECOMMENDATIONS TO S.E.T., P.C.
- 24. LINE DRILL BEDROCK ADJACENT TO ALL FOUNDATION WALLS PRIOR TO ROCK REMOVAL

DRAWINGS AS DETERMINED BY THE ENGINEER.

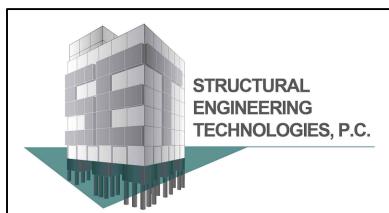
- 25. BOTTOM OF UNDERPINNING CAN BEAR ON CLASS 1B BEDROCK OR BETTER ABOVE UNDERPINNING SUBGRADE LEVEL SHOWN ON THESE
- 26. UNDERPINNING PIERS CAN BE ELIMINATED IF THE EXISTING FOOTING IS BEARING ON CLASS 1B BEDROCK OR BETTER AS DETERMINED BY THE ENGINEER.

DRILLED IN SOLDIER PILE AND LAGGING NOTES:

- 1. ALL SOLDIER PILES SHALL BE INSTALLED IN THE LOCATION SHOWN ON THESE DRAWINGS
- 2. THE CONTRACTOR SHALL PERFORM UTILITY IDENTIFICATION AND EXPLORATION AS NECESSARY PRIOR TO THE DRILLING OPERATIONS.
- 3. SOLDIER PILE CASING SHALL BE INSTALLED USING INTERNAL FLUSH DUPLEX DRILLING METHOD.
- 4. NO LOSS OF MATERIAL FROM THE OUTSIDE OF THE SOLDIER PILE IS PERMITTED. THE CONTRACTOR SHALL ADOPT THE NECESSARY DRILLING PROCEDURES TO PREVENT LOSS OF MATERIAL BETWEEN THE ANNULUS AND THE SOLDIER PILE.
- THE CONTRACTOR SHALL ADJUST DRILLING PROCEDURES AS REQUIRED TO PREVENT SETTLEMENT AND LATERAL MOVEMENT OF BUILDINGS, UTILITIES, AND OTHER STRUCTURES.
- 6. STEEL CASING SHALL HAVE A MINIMUM WALL THICKNESS OF 0.5-IN. SPLICES IN CASINGS SHALL BE THREADED AND FULLY TIGHTENED.
- THE BOTTOM CASING OF EACH SOLDIER PILE SHALL BE PROTECTED BY A HIGH-STRENGTH CUTTING SHOE WITH HARDENED CUTTING
- NO CONCRETE OR GROUT SHALL BE PLACED AT ANY SOLDIER PILE LOCATION UNTIL TIP ELEVATION HAS BEEN CONFIRMED, CLEANED OF MUD AND ANY EXTRANEOUS MATERIAL, AND INSPECTED AND APPROVED BY THE SPECIAL INSPECTOR.
- 9. CONCRETE OR GROUT SHALL BE PLACED CONTINUOUSLY FOR THE FULL DEPTH OF THE SOLDIER PILE STARTING AT THE BOTTOM OF THE SOCKET AND UP TO THE DESIGNED CUTOFF ELEVATION. NO COLD JOINT IS ALLOWED.
- 10. THE ENGINEER MAY DIRECT AN INCREASE IN SOLDIER PILE LENGTH FROM THAT SPECIFIED ON THESE DRAWINGS IF INFERIOR SOIL OR ROCK IS ENCOUNTERED ABOVE THE ORIGINAL MINIMUM TIP ELEVATION.
- 11. NO SOLDIER PILE SHALL BE OUT OF PLUMB MORE THAN ONE PERCENT (1%) OF ITS EMBEDDED LENGTH.
- CORRECTIVE MEASURES, INCLUDING COSTS OF ENGINEERING AND REDESIGN, SHALL BE PAID FOR BY THE CONTRACTOR. 13. BEFORE LATERAL BRACING (ANCHORS AND/OR RAKERS) IS INSTALLED, MAXIMUM EXCAVATION BELOW BRACING LEVEL IS 1.5-FT UNLESS

12. IF ANY OF THE ABOVE TOLERANCES ARE EXCEEDED, AND IN THE OPINION OF THE ENGINEER REQUIRES CORRECTIVE MEASURES, SUCH

- NOTED ON THESE DRAWINGS. 14. LATERAL BRACING AND SHEETING/SHORING SHALL NOT BE REMOVED UNTIL THE NEW GROUND FLOOR SLAB IS INSTALLED AND THE NEW
- CONCRETE HAS REACHED THE DESIGN COMPRESSIVE STRENGTH. 15. AT COMPLETION OF THE NEW STRUCTURE, BURN OFF SOLDIER PILES 1-FT BELOW PROPOSED FINISH GRADE.
- 16. INSTALL CONTROLLED BACKFILL IN ACCORDANCE WITH DESIGN DOCUMENTS, AS REQUIRED.



CONSULTING STRUCTURAL, GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

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	NO.	DATE	DESCRIPTION
		05/30/19	PRELIMINARY
		07/02/19	UPDATED
		09/12/19	UPDATED FOR FILING
		06/04/20	UPDATED
		09/11/20	UPDATED

REVISIONS: DOB #: NB-420666014

PROJECT

37-28 30TH STREET QUEENS, NY 11101

SUPPORT OF EXCAVATION

DRAWING TITLE:

NOTES

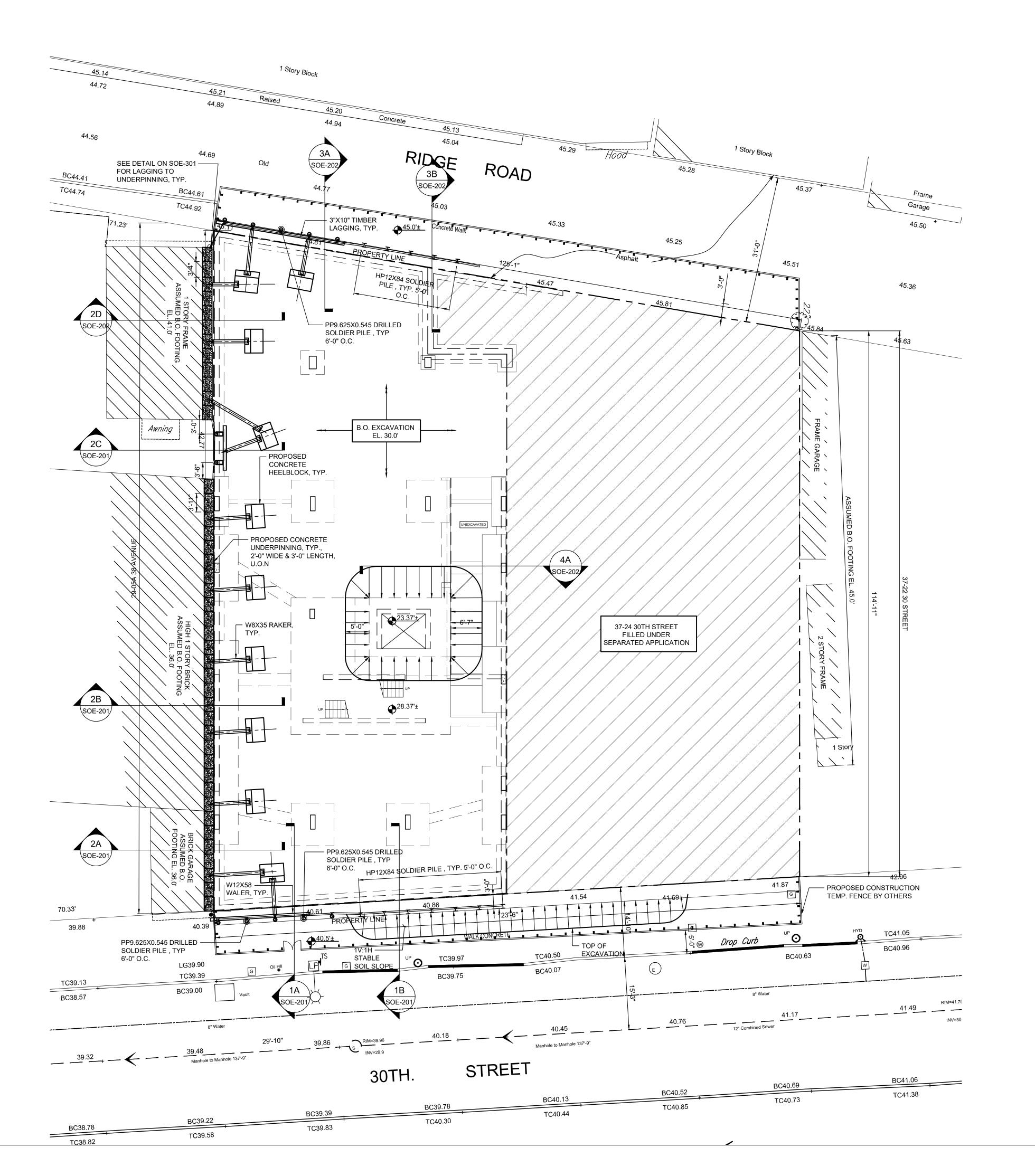
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SHEET NO: 2 OF 11

DATE: **ISEAL & SIGNATURE PROJECT NO:** SCALE: AS NOTED DRAWING BY: A.M.C CHECKED BY: G.J.C DWG NO: SOE-002.00

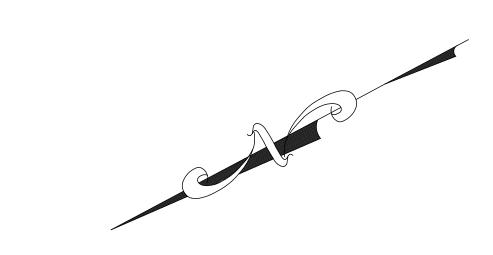
BSCAN STICKER

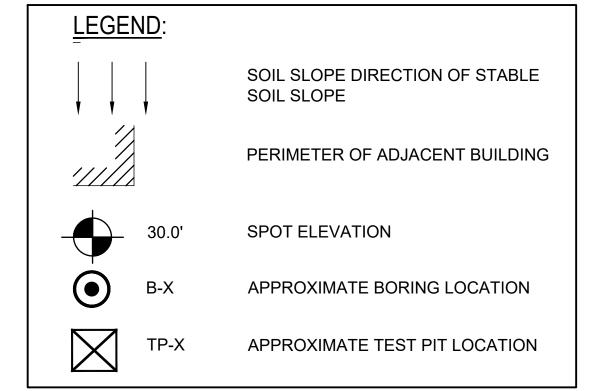
DOB APPROVAL STAMP



SUPPORT OF EXCAVATION PLAN

SCALE: 3/32" = 1' - 0"





UNDERPINNING SEQUENCE:

- 1. INSTALL VIBRATION AND OPTICAL MONITORING POINTS.
- 2. EXCAVATE SITE GRADE TO 1-FT ABOVE B.O. EXISTING FOOTING ELEVATION.
- 3. CONSTRUCT "A" PIERS AND WAIT AT LEAST 24-HOUR TO
- 4. WEDGE "A" PIERS AND BACKFILL TO 1-FT BELOW T.O.
- UNDERPINNING ELEVATION.
- 5. CONSTRUCT "B" PIERS AND WAIT AT LEAST 24-HOUR TO
- 6. WEDGE AND DRYPACK "B" PIERS, AND BACKFILL TO 1-FT BELOW T.O. UNDERPINNING ELEVATION.
- 7. CONSTRUCT "C" PIERS AND WAIT AT LEAST 24-HOUR TO
- 8. WEDGE AND DRYPACK "C" PIERS, AND BACKFILL TO 1-FT
- 9. CONSTRUCT "D" PIERS AND WAIT AT LEAST 24-HOUR TO

BELOW T.O. UNDERPINNING ELEVATION.

- CURE.
- 10. WEDGE AND DRYPACK "D" PIERS, AND BACKFILL TO 1-FT BELOW T.O. UNDERPINNING ELEVATION.
- 11. CONSTRUCT "E" PIERS AND WAIT AT LEAST 24-HOUR TO
- CURE.
- 12. WEDGE AND DRYPACK "E" PIERS, AND BACKFILL TO 1-FT BELOW T.O. UNDERPINNING ELEVATION.
- 13. RE-DRIVE WEDGES AND DRYPACK "A" PIERS.
- 14. EXCAVATE TO SUBGRADE.



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REVISIONS:

DOB #: NB-420666014

PROJECT

37-28 30TH STREET, **QUEENS, NY 11101**

SUPPORT OF EXCAVATION

DRAWING TITLE:

SUPPORT OF **EXCAVATION PLAN**

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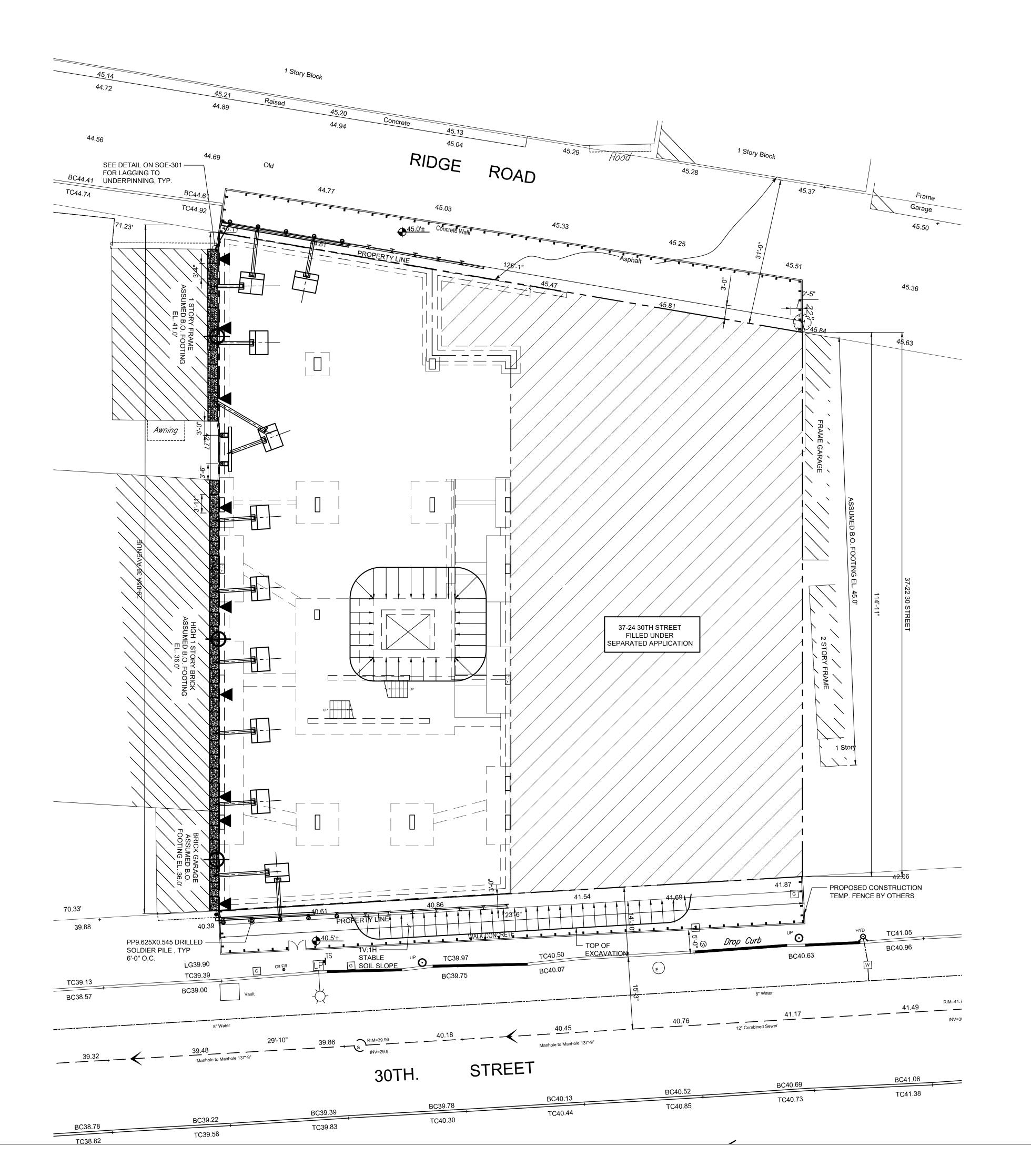
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SOE-101.00

SHEET NO: 3 OF 11

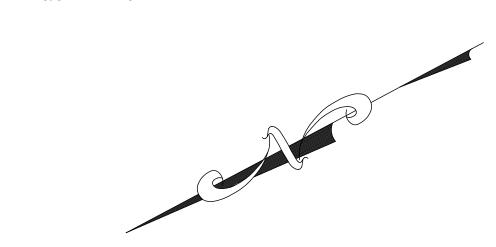
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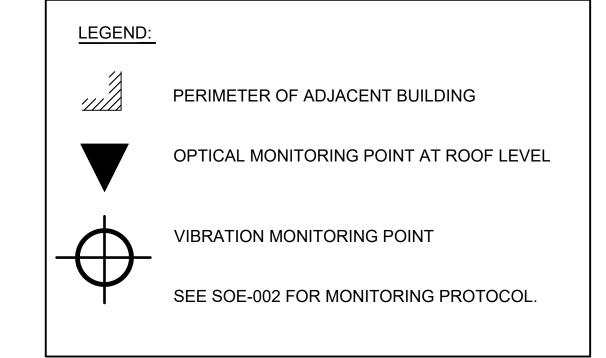
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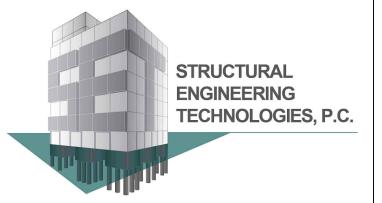
MONITORING PLAN

SCALE: 3/32" = 1' - 0"





MONITORING LOCATION	THRESHOLD TYPE	
MONITORING LOCATION	REVIEW LEVEL	ACTION LEVEL
OPTICAL		
ADJACENT BUILDINGS	1/4 INCH	1/2 INCH
STREET AND SIDEWALK PAVEMENT	1/2 INCH	1 INCH
VIBRATION		
ADJACENT BUILDINGS	1.0 INCH/SECOND	2.0 INCH/SECOND
CRACK GAUGES	3 MILLIMETERS	6 MILLIMETERS
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CONSULTING STRUCTURAL, GEOTECHNICAL, & ENVIRONMENTAL ENGINEERS

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NO.	DATE	DESCRIPTION
	05/30/19	PRELIMINARY
	07/02/19	UPDATED
	09/12/19	UPDATED FOR FILING
	06/04/20	UPDATED
	09/11/20	UPDATED

REVISIONS:

DOB #: NB-420666014

PROJECT

37-28 30TH STREET, QUEENS, NY 11101

SUPPORT OF EXCAVATION

DRAWING TITLE:

MONITORING PLAN

SEAL & SIGNATURE DATE:

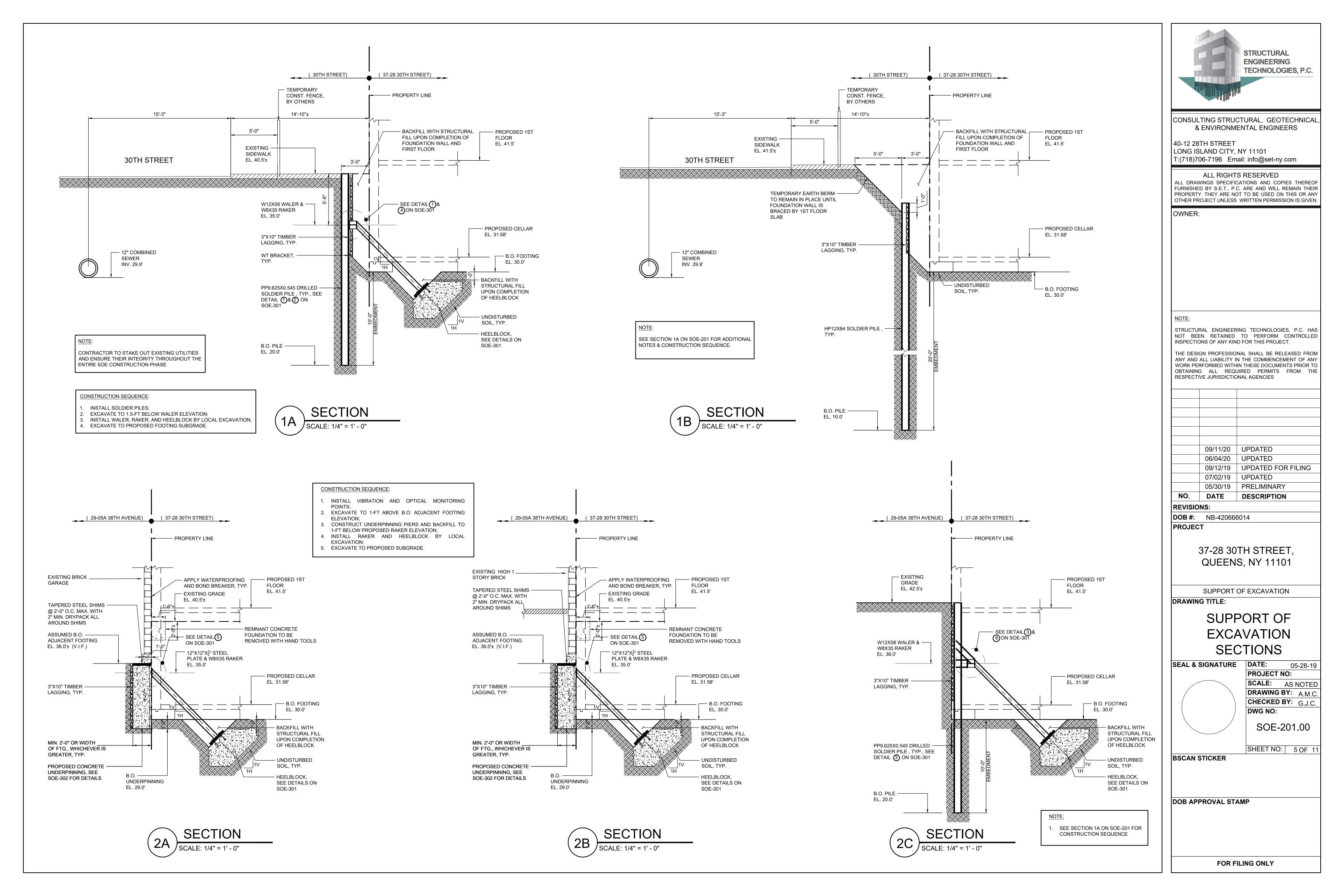
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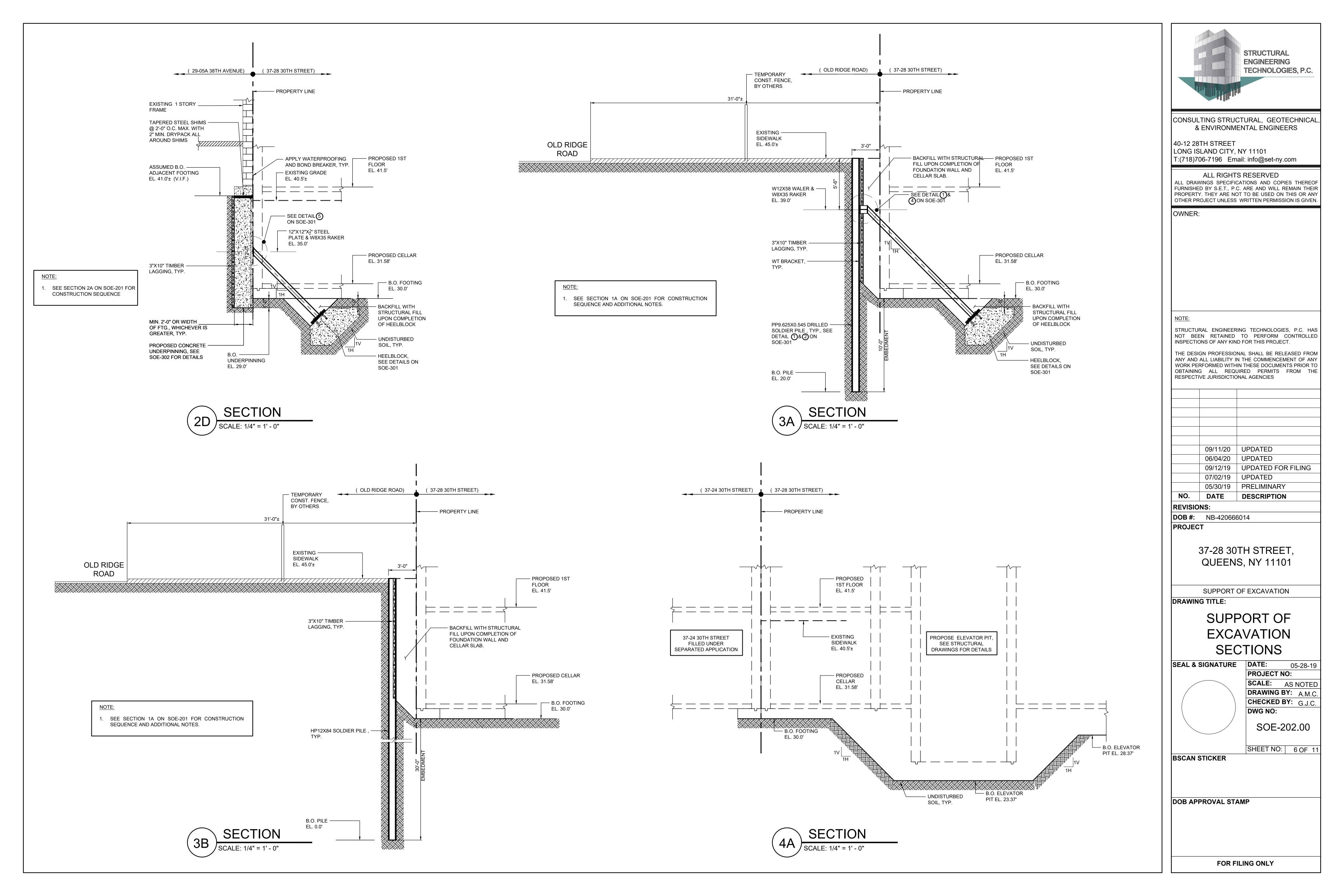
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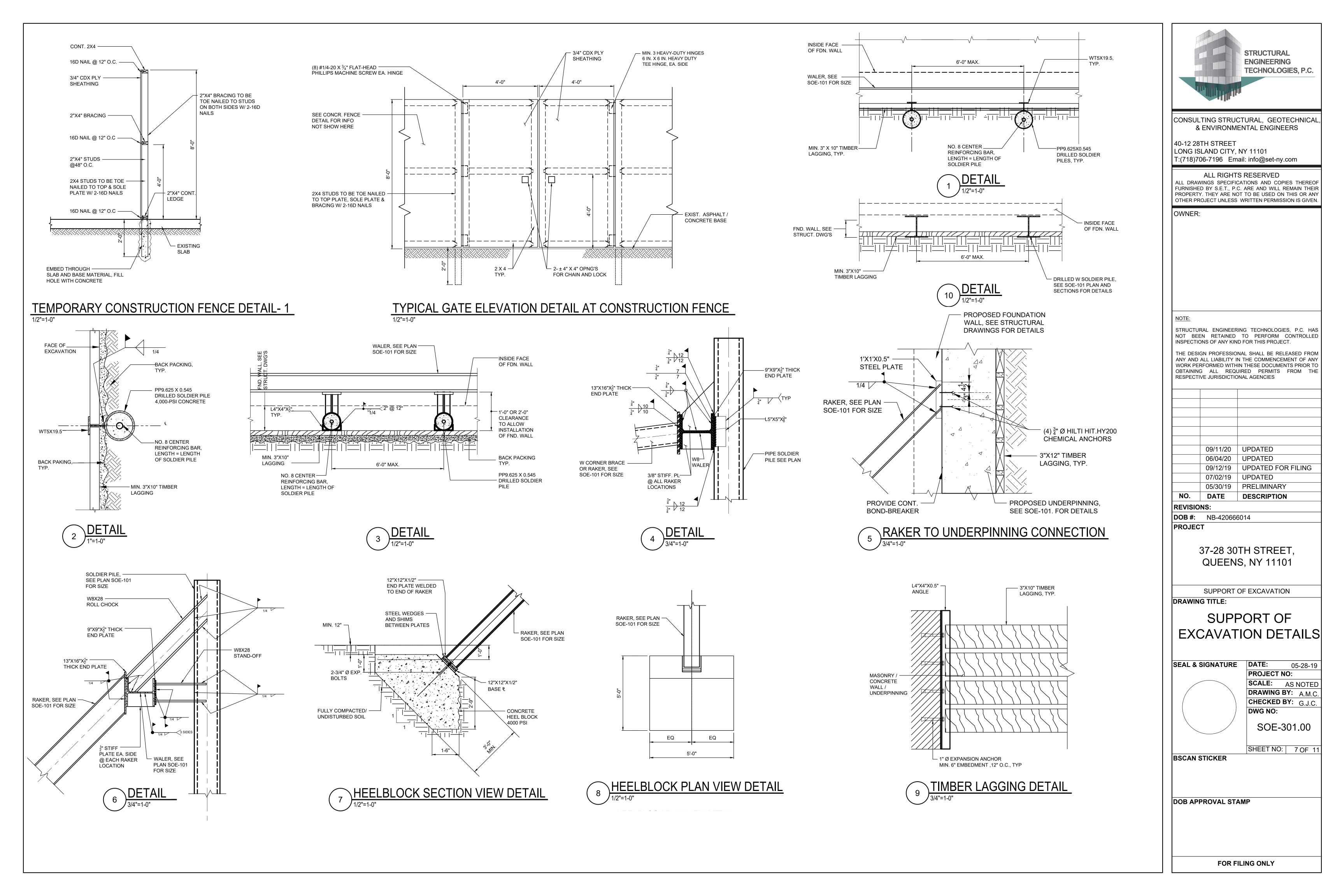
SHEET NO: 4 OF 11

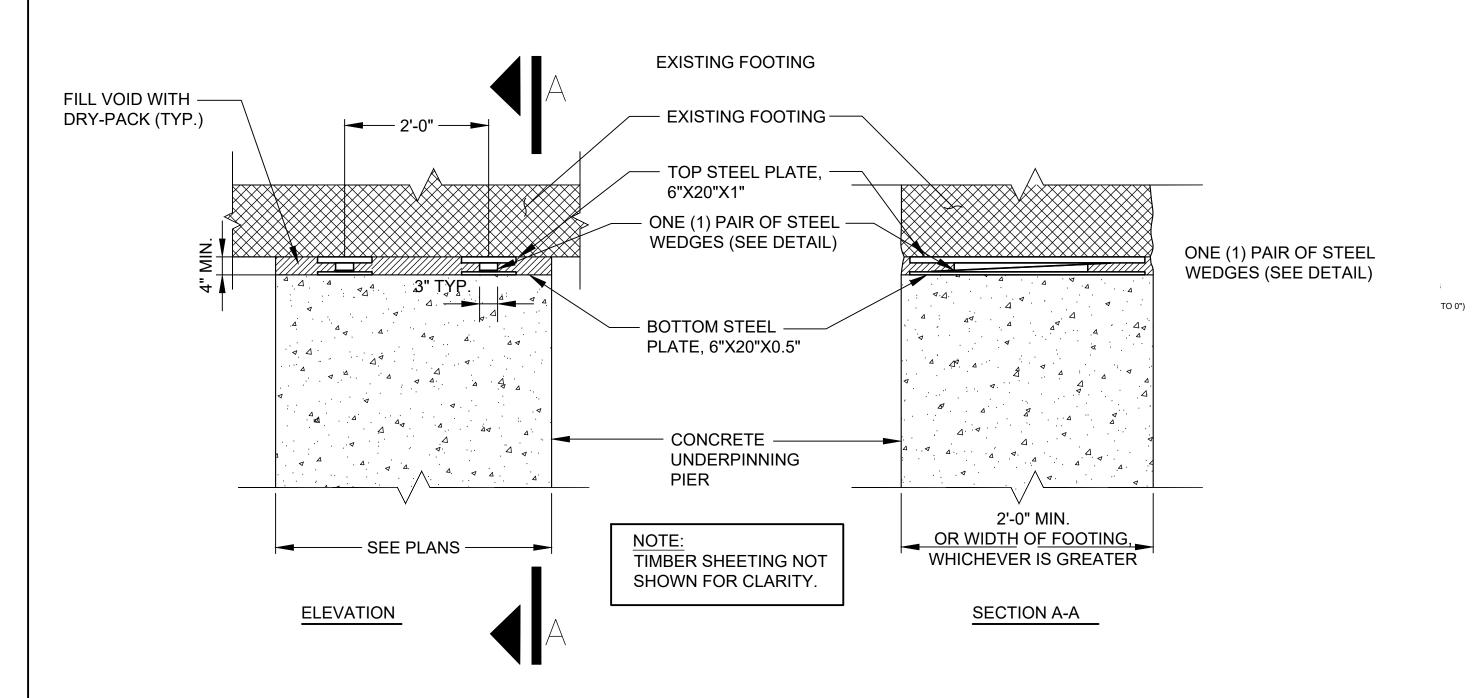
BSCAN STICKER

DOB APPROVAL STAMP





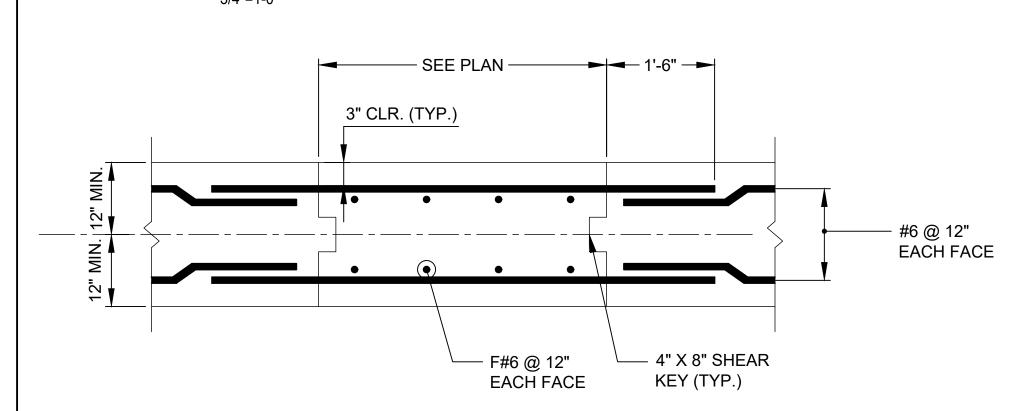




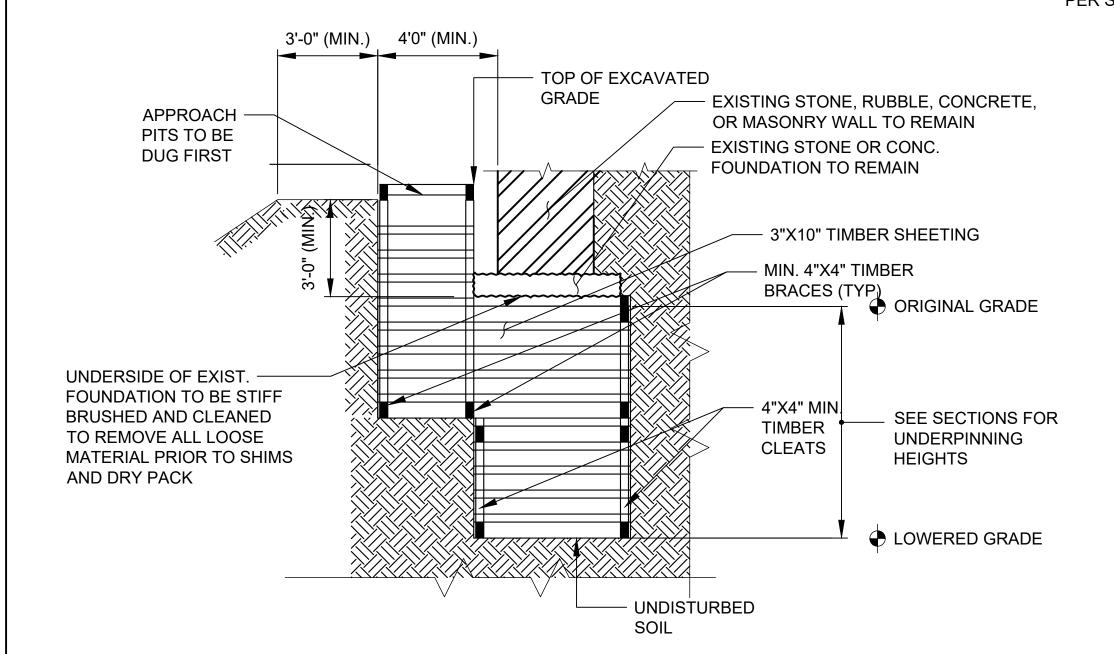
UNDERPINNING CONSTRUCTION PROCEDURE

- 1. EXCAVATE PIT AND SIMULTANEOUSLY PLACE REQUIRED SHEETING AND BRACING, ALL PITS TO BE SHEETED ON ALL FOUR SIDES. PACK VOIDS BEHIND SHEETING WITH SOIL CEMENT OR GROUT. LEAVE A MINIMUM OF 12'-0" BETWEEN OPEN PITS.
- CLEAN BOTTOM OF EXISTING FOOTING.
- 3. RECOMPACT DISTURBED SOIL AT BOTTOM OF PIT TO 95% OF THE MAXIMUM DENSITY OF THE SOIL.
- 4. AFTER UNDEPRINNING SUBGRADE IS INSPECTED AND APPROVED BY SPECIAL INSPECTOR, INSTALL REINFORCING STEEL AS SHOWN ON THE UNDERPINNING DETAILS IF APPLICABLE.
- 5. POUR NEW CONCRETE UNDERPINNING PIER. TOP OF UNDERPINNING PIER SHALL BE SMOOTH AND LEVEL.
- 6. NO SOONER THAN 24 HOURS AFTER THIS CONCRETE IS CAST, PLACE STEEL PLATE (0.5"X32"X24") ON TOP OF UNDERPINNING PIER. ADD STEEL PLATES AS NECESSARY TO MAKE UP HEIGHT. THEN PLACE TAPERED STEEL WEDGES AT 2'-0" ON CENTER BETWEEN STEEL PLATE AND BOTTOM OF THE FOOTING. CENTER THE WEDGES UNDER THE BOTTOM OF THE FOOTING AND DRIVE THE WEDGES.
- 7. PACK SOLID WITH DRYPACK INTO SPACE BETWEEN TOP OF THE UNDERPINNING AND BOTTOM OF EXISTING FOOTING. ENSURE THE BACK OF VOID IS FORMED SO THAT THE DRYPACK IS NOT LOST WHEN RAMMED INTO GAPS.
- 8. REPEAT UNDERPINNING CONSTRUCTION FOR ADJACENT SEGMENTS.

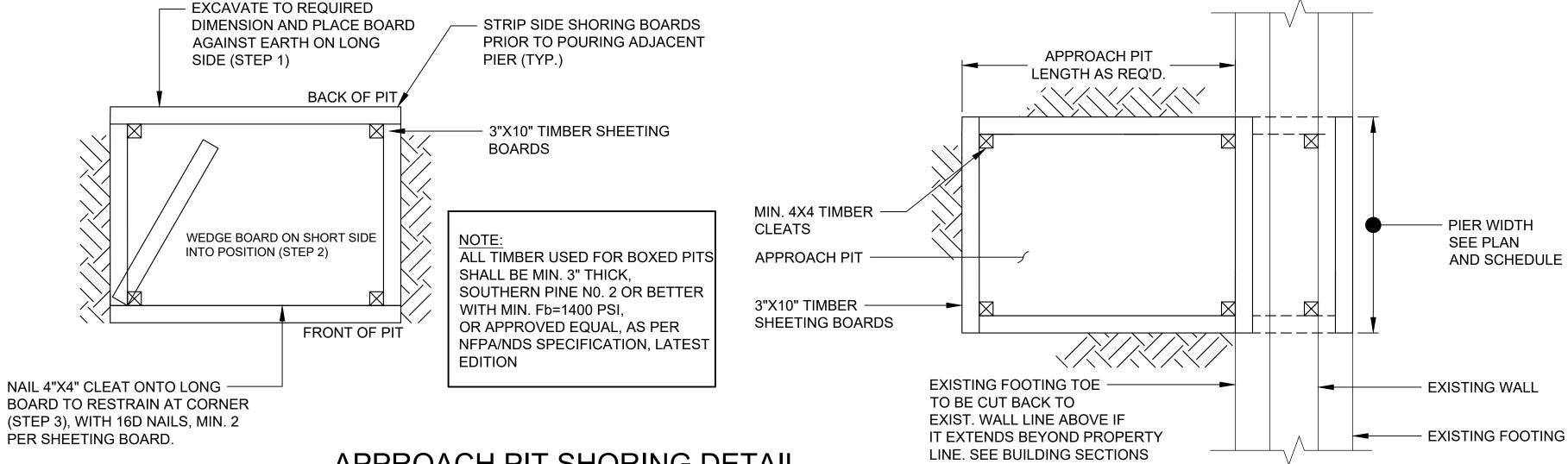
TYPICAL LOAD TRANSFER DETAIL AT UNDERPINNING PIERS



REINFORCEMENT AND SHEAR KEY UNDERPINNING DETAIL SCALE: 3/4"=1'-0"

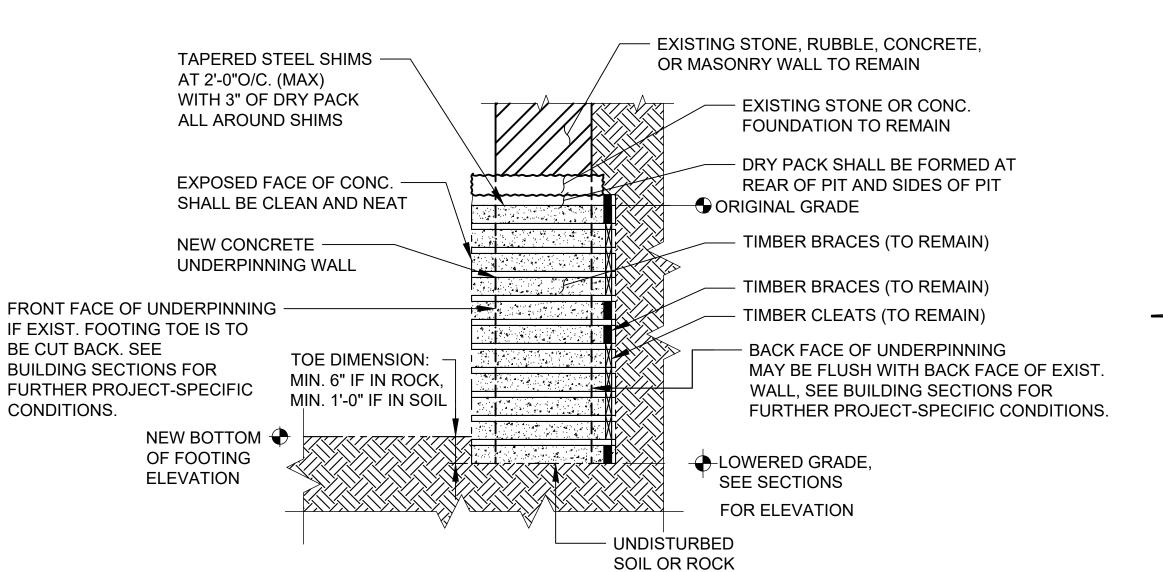


TYPICAL SECTION SHEETING / BRACING SCALE: 1/4"=1'-0"

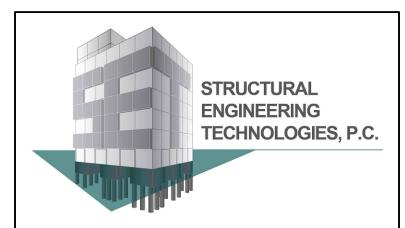


APPROACH PIT SHORING DETAIL

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



TYPICAL SECTION OF CONCRETE UNDERPINNING SCALE: 1/4"=1'-0"



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SUPPORT OF EXCAVATION

DRAWING TITLE:

12" TO 18"

USE THIN SHIM PLATES AS REQUIRED

TO FILL IN ANY VOIDS BETWEEN TOP

AND BOTTOM STEEL PLATES.

STEEL WEDGE DETAIL

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

(2) WEDGES

(TAPER 1"H TO 0")

2"W X 1"H

TYPICAL UNDERPINNING DETAILS

DATE: **SEAL & SIGNATURE**

PROJECT NO: SCALE: AS NOTED DRAWING BY: A.M.C. CHECKED BY: G.J.C. DWG NO:

05-28-19

SOE-302.00

SHEET NO: 8 OF 11

BSCAN STICKER

DOB APPROVAL STAMP