

100% DESIGN/ISSUED FOR BID DRAWING SET

222 MASPETH AVENUE PARCEL

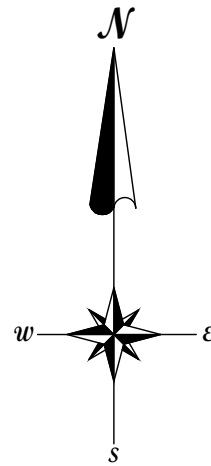
INTERIM REMEDIAL MEASURE

K - EQUITY WORKS MANUFACTURED GAS PLANT (MGP) SITE
BROOKLYN, KINGS COUNTY, NEW YORK
NYSDEC SITE NUMBER: 224050
ORDER ON CONSENT INDEX NUMBER: A2-0552-0606
AECOM PROJECT NUMBER: 60137362

DRAWING INDEX			
SHEET	SHEET TITLE	REV	DATE
T-101	TITLE SHEET	D	03-18-2022
G-101	GENERAL NOTES AND LEGEND	D	03-18-2022
V-101	SITE LAYOUT	D	03-18-2022
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V-103	EXISTING CONDITIONS PLAN IRM CONTRACTOR LAYDOWN AREA	D	03-18-2022
V-104	EXISTING CONDITIONS PLAN COOPER TANK RELOCATION SPACE	D	03-18-2022
CIVIL DRAWINGS			
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C-201	PRE-ISS EXCAVATION PLAN	D	03-18-2022
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C-401	HOLDER EXCAVATION PLAN	D	03-18-2022
C-501	RESTORATION PLAN 222 MASPETH AVENUE PARCEL	D	03-18-2022
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C-503	RESTORATION PLAN COOPER TANK RELOCATION SPACE	D	03-18-2022
X-101	PRE-ISS EXCAVATION CROSS SECTIONS	D	03-18-2022
X-102	ISS CROSS SECTIONS	D	03-18-2022
X-103	HOLDER EXCAVATION CROSS SECTIONS	D	03-18-2022
X-104	RESTORATION CROSS SECTIONS	D	03-18-2022
D-101	SITE PREPARATION AND SEDIMENT CONTROL DETAILS	D	03-18-2022

DRAWING INDEX			
SHEET	SHEET TITLE	REV	DATE
D-102	SITE PREPARATION AND SEDIMENT CONTROL DETAILS	D	03-18-2022
D-201	RESTORATION DETAILS	D	03-18-2022
PLUMBING DRAWINGS			
P-101	WATER TREATMENT PROCESS FLOW DIAGRAM	D	03-18-2022
STRUCTURAL DRAWINGS			
S-101	STRUCTURAL GENERAL NOTES	D	03-18-2022
S-102	UNDERPINNING STRUCTURE	D	03-18-2022
S-103	UNDERPINNING STRUCTURE	D	03-18-2022
GEOTECHNICAL DRAWINGS			
GT-101	MICROPILE DETAILS	D	03-18-2022



REGISTRATION

ISSUE/REVISION

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D	03-18-2022	100% DESIGN/IFB
C	03-02-2022	95% DESIGN
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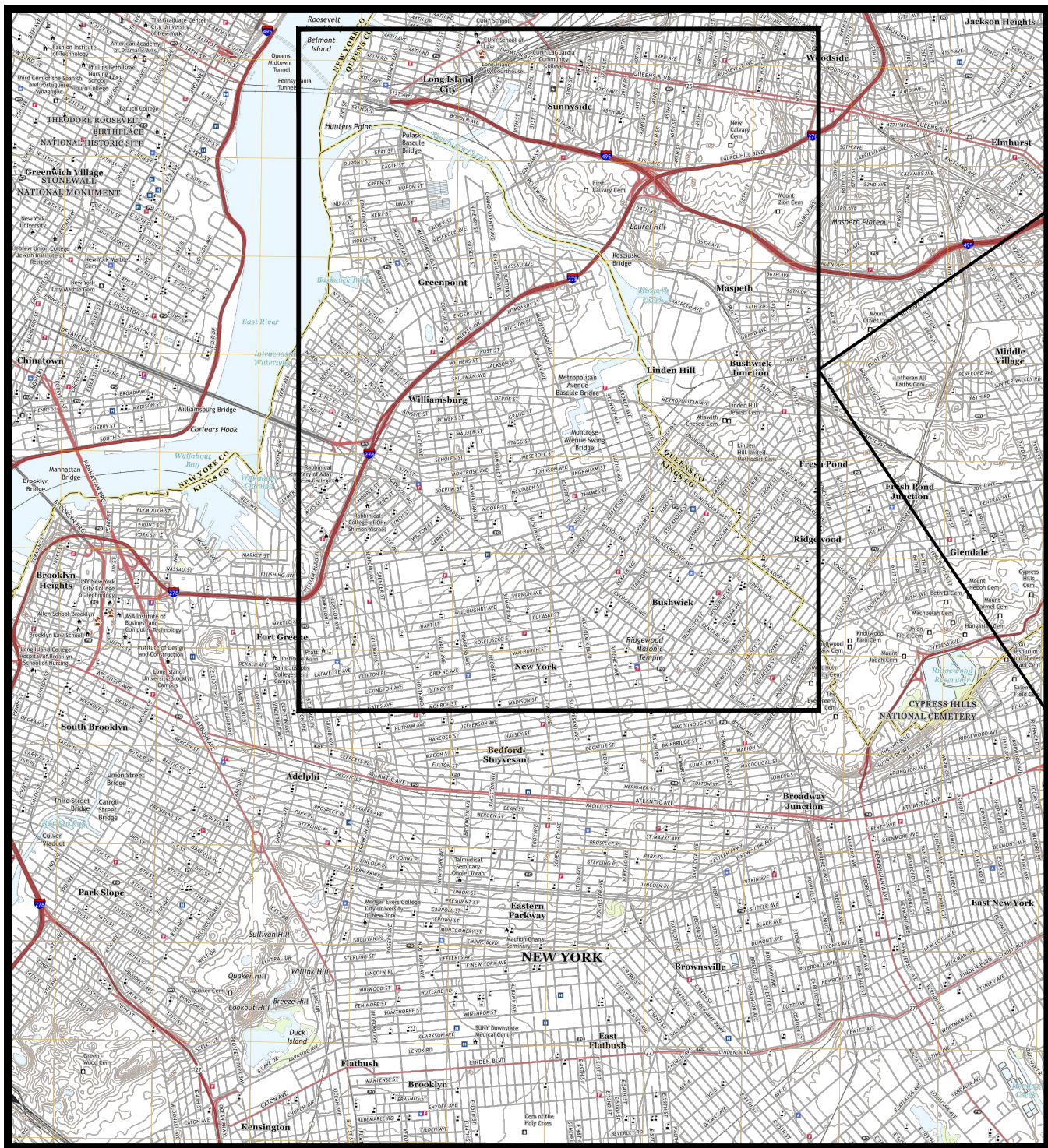
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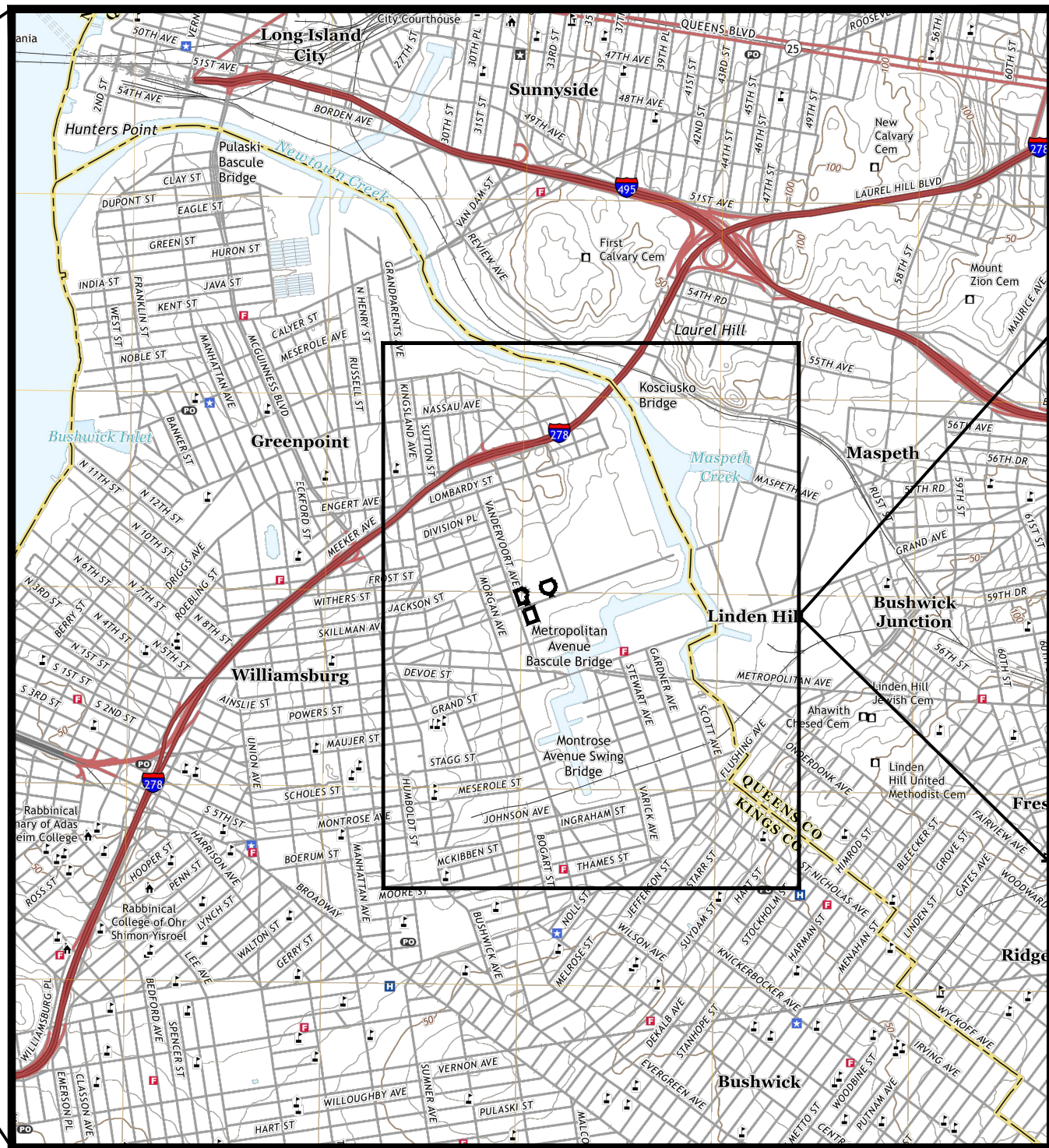
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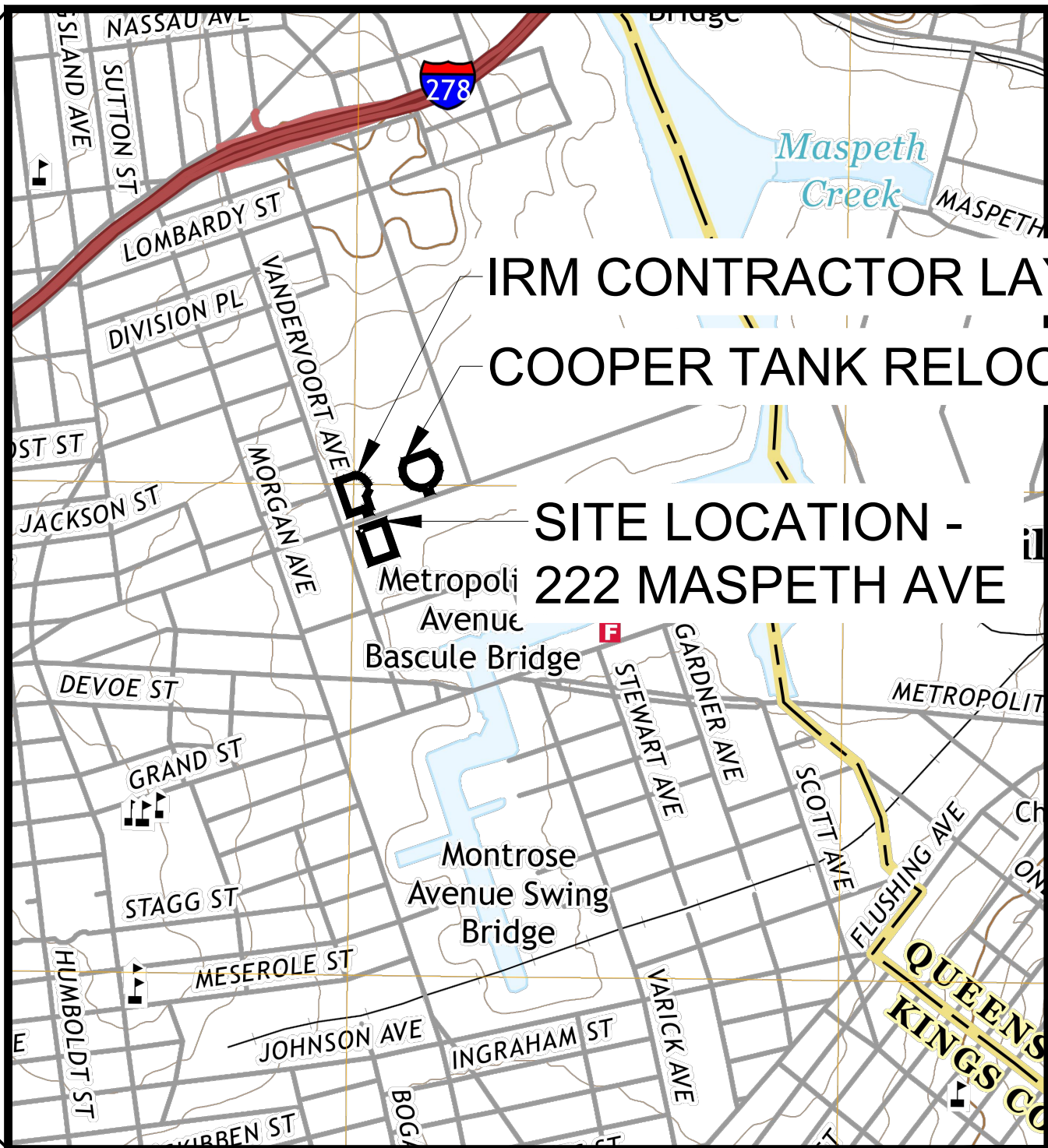
T-101



BROOKLYN QUADRANGLE
NEW YORK
7.5-MINUTE SERIES
SOURCE: USGS TOPOGRAPHIC MAP, 2019



BROOKLYN QUADRANGLE
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7.5-MINUTE SERIES
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BROOKLYN QUADRANGLE
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IRM CONTRACTOR LAYDOWN AREA
COOPER TANK RELOCATION SPACE

SITE LOCATION -
222 MASPETH AVE

EXISTING FEATURES AND UTILITIES

—————	EXISTING CONCRETE DOWN RAMP
----- 1260' -----	EXISTING GRADE 1' CONTOUR
----- 1265' -----	EXISTING GRADE 5' CONTOUR
- - - - -	EXISTING HISTORIC FEATURES
- - - - -	EXISTING HOLDER METAL TANK
- - - - -	EXISTING TWO STORY STRUCTURE
——— PL ———	PROPERTY LINE
——— EHV ———	EXISTING 480V UNDERGROUND ELECTRIC
——— EOH ———	EXISTING ELECTRIC OVERHEAD LINE
—○—○—○—○—○—○—	EXISTING GAS LINE
—○—○—○—○—○—○—	EXISTING WATER LINE (APPROX. LOCATION)
——— SS ———	EXISTING SANITARY SEWER
——— ST ———	EXISTING STORM SEWER
——— EUG ———	EXISTING UNDERGROUND ELECTRIC

	EXISTING BUILDING
	EXISTING CONCRETE BLOCKS
	EXISTING CONCRETE SIDEWALK OR STREET
	EXISTING HOLDER BRICK WALLS

——— — — — — —	LIMITS OF INTERMEDIATE CLAY
	EXISTING BOLLARD
	EXISTING COMBINED SEWER MANHOLE
	EXISTING CROSSWALK LIGHT
	EXISTING ELECTRIC MANHOLE
	HYD
	EXISTING FIRE HYDRANT
	EXISTING GAS VALVE
	EXISTING LIGHT POLE
	EXISTING SINGLE POLE SIGN
	EXISTING SITE VEGETATION
	EXISTING STORM INLET
	EXISTING STORM SEWER MANHOLE
	EXISTING UNKNOWN MANHOLE
	EXISTING UTILITY POLE
	W
	EXISTING WATER VALVE
DESCRIPTION	GPS TRAVERSE POINT
NORTHING →	
EASTING	

PROPOSED DESIGN FEATURES
(PLAN VIEW)

———	LIMITS OF WORK
----- 13' -----	PROPOSED 1' CONTOUR
----- 15' -----	PROPOSED 5' CONTOUR
- - - - -	PROPOSED ALIGNMENT
- - - - -	PROPOSED SURFACE BOUNDARY
—x—x—	CONSTRUCTION FENCE
—○—○—	COMPOST FILTER SOCK
	EQUIPMENT AND MATERIAL STOCKPILE AREA
	PROPOSED ISS AREA
	PROPOSED PRE CLEARING AREA
	CONSTRUCTION ENTRANCE
	NO. 2 STONE
	HOLDER PAVEMENT
	IRM LAYDOWN AREA

PROPOSED DESIGN FEATURES
(CROSS SECTION VIEW)

-----	EXISTING GRADE
——— ———	PROPOSED DEMARCATION BARRIER
-----	PROPOSED EXCAVATION GRADE
-----	PROPOSED FINAL AND SUB BASE GRADE
	EXISTING HOLDER BRICK WALLS
	EXISTING MATERIAL WITHIN HOLDER
	PROPOSED CONTROLLED LOW STRENGTH MATERIAL
	PROPOSED CONCRETE SLAB
	PROPOSED COMMON FILL
	PROPOSED DGA
	PROPOSED ISS AREA

SURVEY BENCHMARK AND TRAVERSE POINTS TABLE				
DESCRIPTION	EASTING	NORTHING	ELEVATION	SURVEY EVENT
HCP31 MAG SW	648842.0480'	686734.0190'	13.812'	JULY 2020
HCP32 MAG SW	649212.6400'	686854.2990'	10.387'	JULY 2020
HCP33 MAG SW	648867.2576'	686664.1418'	13.290'	JULY 2020
HCP34 MAG SW	648989.4867'	686697.0342'	13.421'	JULY 2020
HCP35 MAG SW	649013.1934'	686635.1451'	13.754'	JULY 2020
HCP36 MAG SW	649059.7294'	686631.3588'	12.957'	JULY 2020
MAG NAIL IN CONC	649537.1300'	687214.7800'	11.360'	NOVEMBER 2021
MAG NAIL IN CONC	649340.5400'	687026.9700'	13.590'	NOVEMBER 2021

SURVEY NOTES:

- HORIZONTAL DATUM: NEW YORK STATE PLANE, EAST ZONE, NAD 83, U.S. FEET (NY83-EF).
- VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM (NAVD 88).
- 222 MASPETH AVENUE PROPERTY:
 - TOPOGRAPHIC AND BASEMAP SURVEY WAS CONDUCTED BY KENNON SURVEYING SERVICES (KSS) ON JULY 13, 2020.
 - UTILITY LOCATIONS WERE OBTAINED THROUGH GEOPHYSICAL SURVEY METHODS PERFORMED BY KSS ON JULY 13, 2020. LOCATIONS ARE CONSIDERED APPROXIMATE.
- GREENPOINT ENERGY CENTER:
 - TO PREPARE GRADING PLANS FOR THE SITE PREPARATION OF THE COOPER TANK RELATION SPACE, TOPOGRAPHIC AND BASMEAP SURVEY OF THE COOPER TANK RELOCATION SPACE WAS CONDUCTED BY KSS ON NOVEMBER 9 AND 10, 2021.
 - UTILITY LOCATIONS WERE OBTAINED IN THE VEGETATED AREA BETWEEN THE HOLDER AND ALONG THE SIDEWALK PERTAINING TO THE COOPER TANK RELOCATION SPACE THROUGH GEOPHYSICAL METHODS PERFORMED BY KSS ON NOVEMBER 8, 2021.
 - ALL LINework AND INFORMATION OUTSIDE OF THE KSS SURVEY AREA OBTAINED AND REFERENCED FROM DRAWING 8065 GREENPOINT BASEMAPPING DWG FROM THE BOUNDARY SURVEY OF GREENPOINT LNG DRAWING, REV-3 DATED 03/06/2020. LINETYPES AND SYMBOLS MAY VARY FROM KSS SURVEY LEGEND.
 - EXISTING CONDITION CONTOURS SHOWN OUTSIDE OF THE KSS SURVEY AREA WERE DEVELOPED FROM GROUND AND PAVEMENT ELEVATIONS SHOWN.
- BOUNDARY LINES SHOWN ARE FOR EASEMENT LOCATIONS ONLY AND ARE BASED ON A COMBINATION OF FIELD OBSERVATIONS, DEEDS, AND MAPS OF RECORD. NO BOUNDARY DETERMINATIONS WERE MADE BY AECOM AND BOUNDARY LINES SHOULD BE CONSIDERED APPROXIMATE.

UTILITY NOTES:

- THE LOCATION OF THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL DIG SAFELY NEW YORK AT 1-800-962-7962 (OR 811) FOR UTILITY LOCATIONS AND ALLOW THE REQUIRED TIME FOR MARKING BEFORE THE SCHEDULED DATE FOR EXCAVATION OR EARTHWORK THAT MAY IMPACT EXISTING UTILITIES. CONTRACTOR SHALL PERFORM A LEVEL A SUBSURFACE UTILITY ENGINEERING (SUE) INVESTIGATION IN ACCORDANCE WITH SPECIFICATIONS SECTION 01 11 00 SUMMARY OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE CONDITION OF ALL ABANDONED UTILITIES THAT INTERFERE WITH THE WORK PRIOR TO DISTURBANCE OR MODIFICATION. THE CONTRACTOR SHALL WORK WITH THE UTILITY OWNER TO CONFIRM THAT UTILITIES HAVE BEEN ABANDONED AND TO DETERMINE WHAT ACTION SHOULD BE TAKEN.
- THE SIZE AND TYPE OF BURIED UTILITIES EXPOSED OR MODIFIED BY THE CONTRACTOR SHALL BE ACCURATELY NOTED AND SHOWN ON THE CONTRACTOR'S FIELD DOCUMENTATION AND RECORD DRAWINGS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROMPTLY NOTIFY THE CM OF ANY CONFLICT WITH EXISTING UTILITIES.
- ALL EXISTING FACILITIES AND UTILITIES NOT SPECIFICALLY IDENTIFIED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT CONSTRUCTION OR RESTORED AT COMPLETION OF THE WORK.

CONSTRUCTION ACCESS/ TRAFFIC CONTROL NOTES:

- THE CONTRACTOR SHALL PROVIDE A TRAFFIC PLAN TO THE CM FOR REVIEW. CONSTRUCTION SHALL NOT COMMENCE UNTIL THE CM HAS APPROVED THE TRAFFIC PLAN. UPON APPROVAL THE CONTRACTOR IS SOLELY RESPONSIBLE FOR IMPLEMENTING REQUIRED TRAFFIC CONTROL AS REVIEWED AND APPROVED BY THE CM.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ANY REQUIRED TRAFFIC CONTROL INCLUDING, BUT NOT LIMITED TO, SIGNAGE AND FLAGGERS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING PUBLIC RIGHT-OF-WAYS OF ALL MUD AND DEBRIS TRACKED FROM THE SITE.
- ALL EQUIPMENT, MATERIALS, AND PERSONNEL SHALL REMAIN WITHIN THE PROJECT LIMITS.
- ALL AFFECTED AREAS INCLUDING ROADS AND ACCESS ROUTES SHALL BE RESTORED TO ORIGINAL CONDITION. ALL DISTURBED AREAS OUTSIDE THE LIMITS OF DISTURBANCE SHALL BE RESTORED TO ORIGINAL CONDITION AT NO COST TO THE OWNER.

ACRONYMS:

CERP - COMMUNITY ENVIRONMENTAL RESPONSE PLAN
BSM - BUCKET SOIL MIXING
CM - CONSTRUCTION MANAGER
CT - COOPER TANK
DGA - DENSE GRADED AGGREGATE
IRM - INTERIM REMEDIAL MEASURE
ISS - IN SITU STABILIZATION
MAX - MAXIMUM
MIN - MINIMUM
PDI - PRELIMINARY DESIGN INVESTIGATION
QA - QUALITY ASSURANCE
QC - QUALITY CONTROL
TEP - TECHNICAL EXECUTION PLAN
TFS - TEMPORARY FABRIC STRUCTURE
TYP - TYPICAL
V - ELECTRICAL VOLTAGE

GENERAL NOTES:

- ALL WORK SHALL BE IN CONFORMANCE WITH EXISTING LABOR LAWS, SAFETY REQUIREMENTS, PERMIT CONDITIONS, AND OTHER REGULATIONS, AS REQUIRED BY THE CITY OF NEW YORK, KINGS COUNTY, THE STATE OF NEW YORK, AND THE FEDERAL GOVERNMENT. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL PROVIDE ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER PRACTICES NEEDED TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF THE WORK COVERED BY THE CONTRACT.
- EXCEPT AS OTHERWISE NOTED HEREIN, ALL MATERIAL AND WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, CITY OF NEW YORK STANDARDS, THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) DESIGN MANUALS AND SPECIFICATIONS (LATEST EDITION), OTHER APPLICABLE STANDARDS, AND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL HAVE COPIES OF THE APPROVED CONTRACT DOCUMENTS AND PERMITS ON THE JOB AT ALL TIMES. PERMITS SHALL BE POSTED ON PERMIT BOARD INSIDE CONTRACTOR'S TRAILER.
- THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR VERIFYING FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THESE DRAWINGS. ANY DISCREPANCIES BETWEEN EXISTING FIELD CONDITIONS AND DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS AND THOSE OBSERVED BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE CM AND ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION AND IMMEDIATELY WHEN OBSERVED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK INCLUDED IN THE CONTRACT DOCUMENTS.
- A PRE-CONSTRUCTION MEETING BETWEEN THE CONTRACTOR, CM, ENGINEER, OWNER, AND NYSDEC WILL BE REQUIRED PRIOR TO ANY ON-SITE WORK.
- THE CONTRACTOR SHALL MAKE ALL NECESSARY PROVISIONS TO PROTECT EXISTING STRUCTURES, IMPROVEMENTS, ROADWAYS, DRAINAGE WAYS, AND UTILITIES UNTIL SUCH ITEMS ARE TO BE DISTURBED OR REMOVED AS INDICATED ON THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF PROPERTY IN AND AROUND THE PROJECT AREA. ITEMS AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED FOLLOWING CONSTRUCTION OR AS DIRECTED BY THE CM.
- THE CONTRACTOR SHALL RECEIVE, IN WRITING FROM OWNER, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- THE NOTES, DETAILS, AND SPECIFICATIONS ON THE CONTRACT DOCUMENT WILL TAKE PRECEDENCE OVER THESE GENERAL NOTES.
- DIMENSION CALL-OUTS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL MAINTAIN HAND DRAWN RED LINES, FIELD NOTES, AND PHOTOGRAPHS ("FIELD DOCUMENTATION") OF ALL IMPROVEMENTS OR VARIATIONS AS THE WORK PROGRESSES. THE CONTRACTOR'S FIELD DOCUMENTATION SHALL BE MAINTAINED ON-SITE AND SHALL BE AVAILABLE FOR REVIEW BY THE CM AT ALL TIMES.
- THE PROJECT WORK SHALL BE CONSTRUCTED TO MEET ALL PROVISIONS OF APPLICABLE PERMITS.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY CUT SLOPES AND TEMPORARY SHORING AS NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS. THE STABILITY OF ALL TEMPORARY SLOPE AND SHORING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL KEEP THE WORK AREAS IN A CLEAN AND NEAT CONDITION AND FREE OF DEBRIS AND CLUTTER FOR THE DURATION OF THE PROJECT.

NYC DOB INSPECTION NOTES:

- SPECIAL AND PROGRESS INSPECTIONS WILL BE PERFORMED BY AECOM AND/OR AECOM SUBCONTRACTED PERSONNEL IN ACCORDANCE WITH NYC BUILDING CODE AND COORDINATED WITH THE PROJECT SPECIFICATIONS REQUIREMENTS.
 - EARTHWORK:
 - SUBSURFACE CONDITIONS-FILL PLACEMENT AND IN-PLACE DENSITY
 - FLOOD ZONE COMPLIANCE
 - FINAL
 - FOUNDATION:
 - SUBSURFACE INVESTIGATIONS (BORINGS/TEST PIT)
 - UNDERPINNING
 - DEEP FOUNDATION ELEMENTS
 - FOOTING AND FOLDATION
 - SUBGRADE INSPECTIONS
 - FLOOD ZONE COMPLIANCE
 - FINAL
 - STRUCTURAL:
 - POST INSTALLED ANCHORS
 - CONCRETE DESIGN MIX
 - CONCRETE TEST REPORT
 - CONCRETE CAST IN PLACE
 - FLOOD ZONE COMPLIANCE
 - FINAL

PROJECT

222 MASPETH AVENUE PARCEL
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NYSDEC SITE NO. 224050
ORDER ON CONSENT INDEX NO. A2-0552-0606

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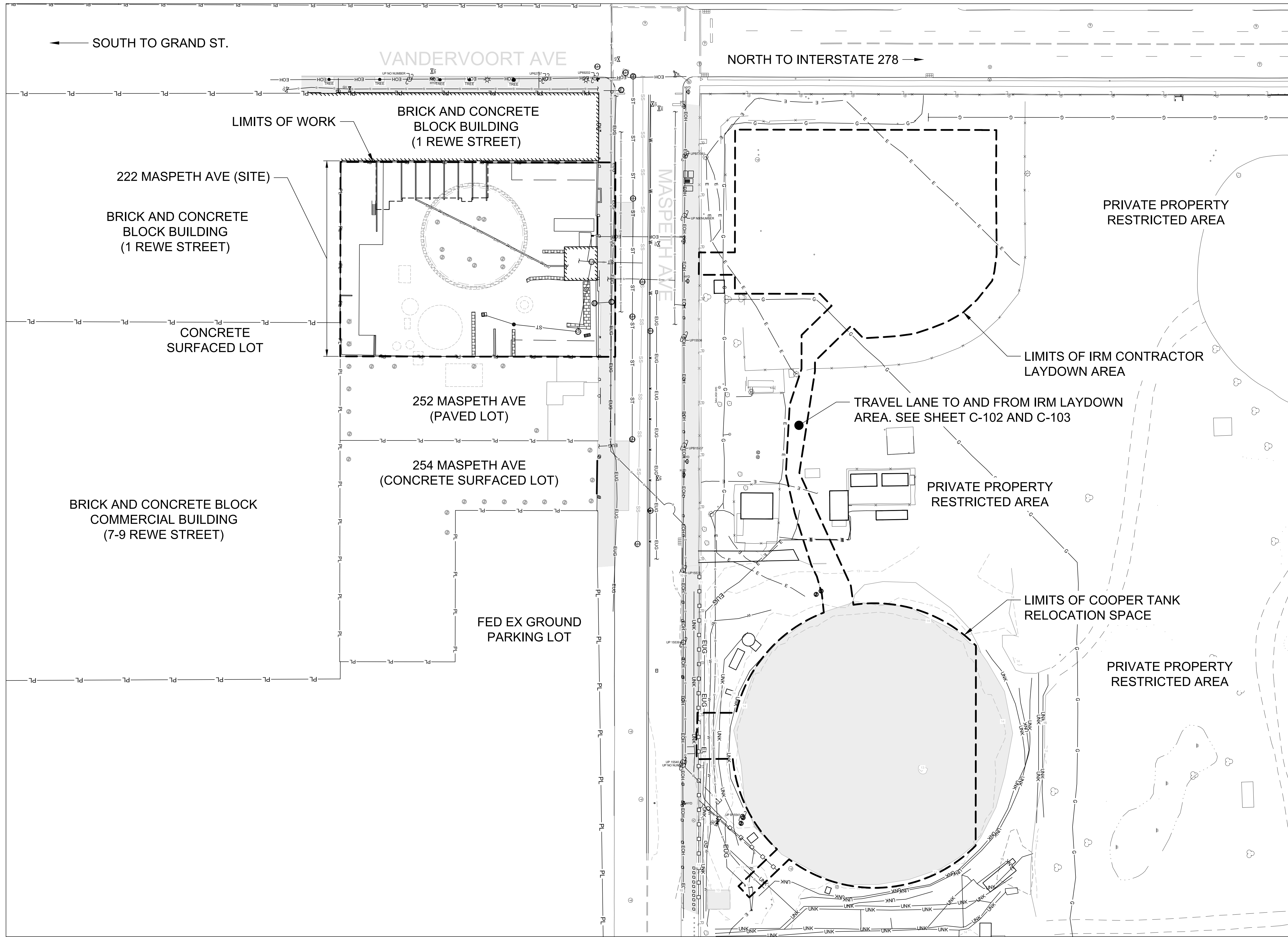
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SHEET TITLE

GENERAL NOTES AND LEGEND

SHEET NUMBER

G-101



PROJECT

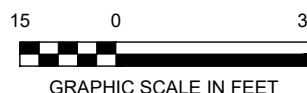
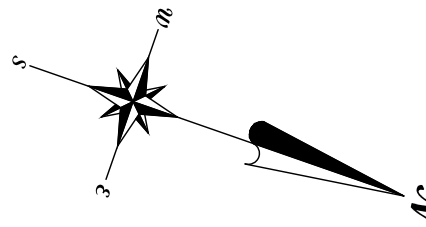
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SITE LAYOUT

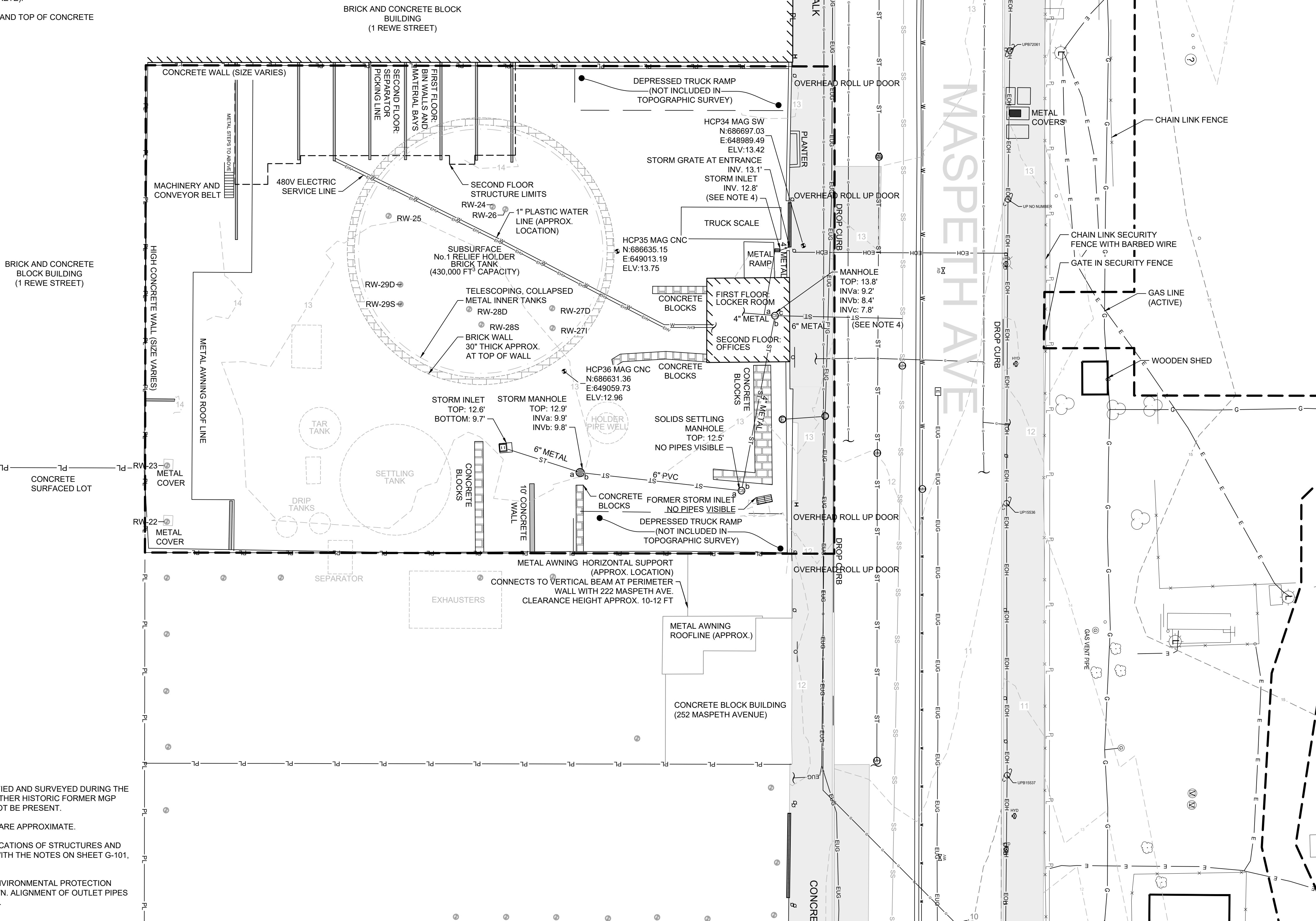
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V-101

EXISTING RECOVERY WELLS IN HOLDER DATA TABLE												
SAMPLE ID	DATE INSTALLED	ADJ. BORING LOCATION	EASTING	NORTHING	TOP OF CONCRETE ELEVATION	TOTAL DEPTH	WELL BOTTOM ELEVATION	SCREEN INTERVAL DEPTHS	SCREEN INTERVAL ELEVATIONS	SUMP INTERVAL DEPTHS	SUMP INTERVAL ELEVATIONS	WELL DIAMETER (INCHES)
RW-24	AUG. 2018	SB-101	649012.8	686588.0	13.4	26.75	-13.4	6.8 TO 26.8	6.6 TO -13.4	NA	NA	6
RW-25	AUG. 2018	SB-102	649028.0	686554.1	13.0	26.5	-13.5	6.5 TO 26.5	6.5 TO -13.5	NA	NA	6
RW-26	SEP. 2021	SB-215	649012.1	686592.6	13.3	93	-79.7	73 TO 83	-59.7 TO -69.7	83 TO 93	-69.7 TO -79.7	6
RW-27D	NOV. 2021	SB-216	649039.9	686619.9	13.1	94	-80.9	64 TO 84	-50.9 TO -70.9	84 TO 94	-70.9 TO -80.9	6
RW-27I	NOV. 2021	SB-216	649046.6	686622.4	13.0	74	-61.0	49 TO 64	-36.0 TO -51.0	64 TO 74	-51.0 TO -61.0	6
RW-28D	DEC. 2021	SB-217	649050.0	686592.1	12.6	105	-92.4	80 TO 95	-67.4 TO -82.4	95 TO 105	-82.4 TO -92.4	6
RW-28S	SEP. 2021	SB-217	649053.7	686598.1	12.6	47.5	-34.9	27.5 TO 37.5	-14.9 TO -24.9	37.5 TO 47.5	-24.9 TO -34.9	6
RW-29D	DEC. 2021	SB-218	649049.7	686566.1	12.9	105	-92.1	80 TO 95	-67.1 TO -82.1	95 TO 105	-82.1 TO -92.1	6
RW-29S	NOV. 2021	SB-218	649056.3	686568.5	12.8	48	-35.2	28 TO 38	-15.2 TO -25.2	38 TO 48	-25.2 TO -35.2	6

EXISTING RECOVERY WELLS IN HOLDER DATA TABLE NOTES:

1. RECOVERY WELL LOCATIONS WERE NOT SURVEYED AND ARE APPROXIMATE BASED ON FIELD OBSERVATIONS AT TIME OF INSTALLATION. HORIZONTAL DATUM IS NY83-EF.
2. DEPTHS ARE IN FEET BELOW GROUND SURFACE (I.E. TOP OF CONCRETE).
3. SCREEN AND SUMP ELEVATIONS ARE INTERPOLATED FROM DEPTH AND TOP OF CONCRETE ELEVATION. VERTICAL DATUM IS NAVD88.



EXISTING CONDITIONS NOTES:

1. SUBSURFACE RELIEF HOLDER BRICK TANK LOCATION WAS VERIFIED AND SURVEYED DURING THE PRELIMINARY DESIGN INVESTIGATION (PDI) (AECOM, 2019). ALL OTHER HISTORIC FORMER MGP STRUCTURE LOCATIONS SHOWN ARE APPROXIMATE AND MAY NOT BE PRESENT.
2. DEPRESSED TRUCK RAMP LOCATIONS ARE NOT SURVEYED AND ARE APPROXIMATE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING LOCATIONS OF STRUCTURES AND UTILITIES SHOWN AND EXISTING CONDITIONS IN ACCORDANCE WITH THE NOTES ON SHEET G-101, THE SPECIFICATIONS, AND THE CONTRACT DOCUMENTS.
4. DYE TESTS CONDUCTED BY NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NYCDEP) ON JULY 30, 2021 CONFIRMED CONNECTIONS AS SHOWN. ALIGNMENT OF OUTLET PIPES COULD NOT BE DETERMINED AND ARE SHOWN AS APPROXIMATE.



PROJECT

222 MASPETH AVENUE PARCEL INTERIM REMEDIAL MEASURE

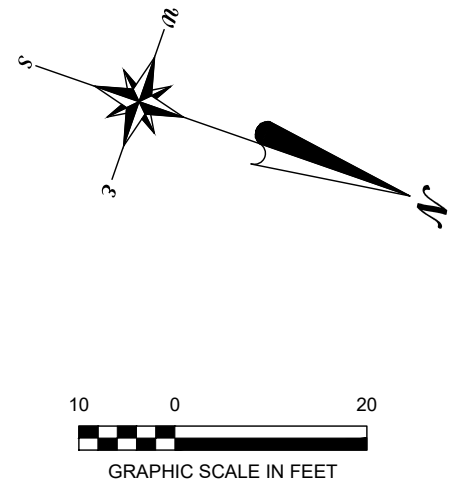
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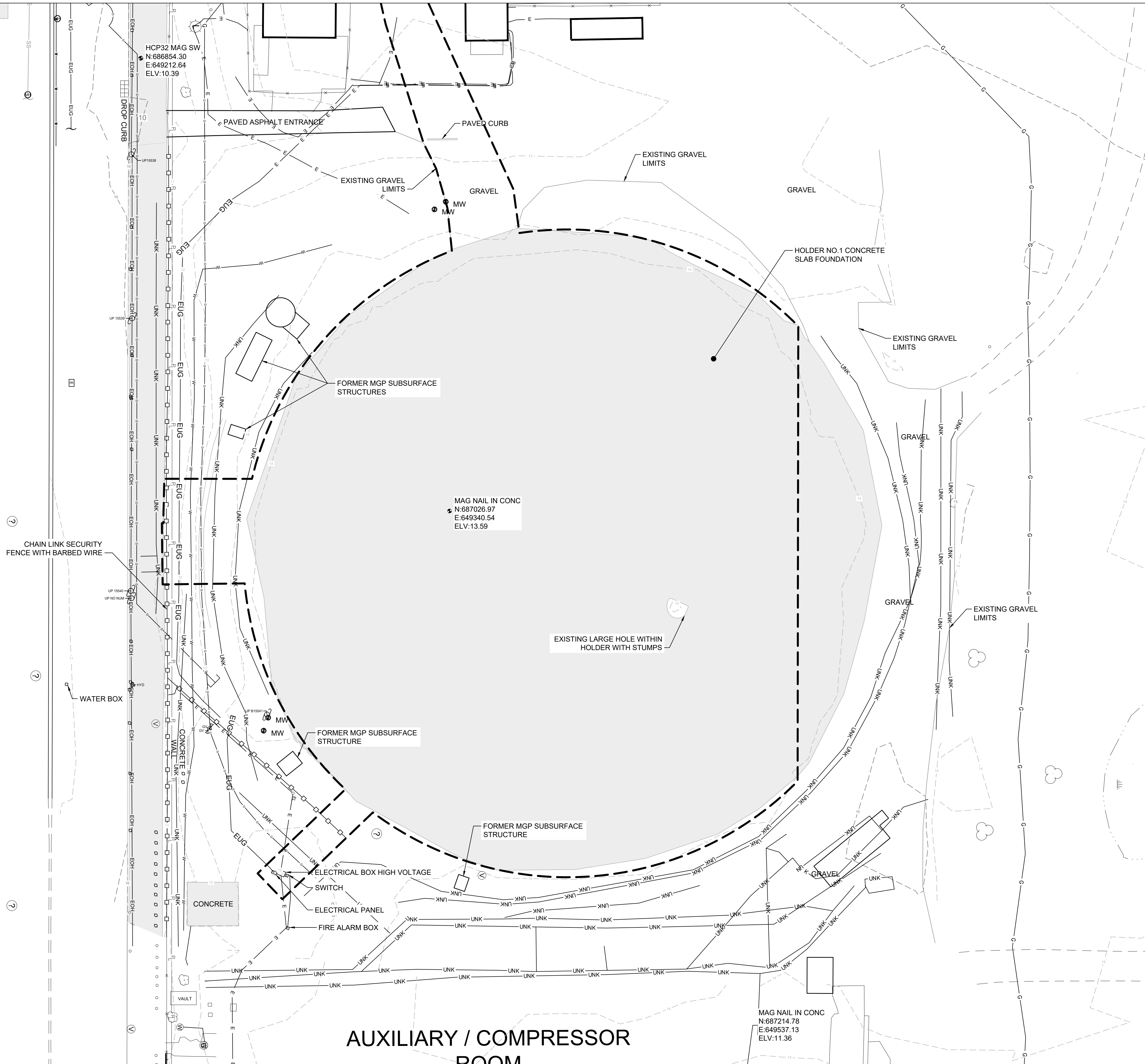
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SHEET TITLE

EXISTING CONDITIONS PLAN
222 MASPETH AVENUE

SHEET NUMBER

V-102



PROJECT

222 MASPETH
AVENUE PARCEL

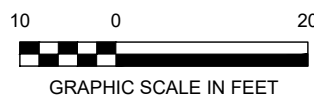
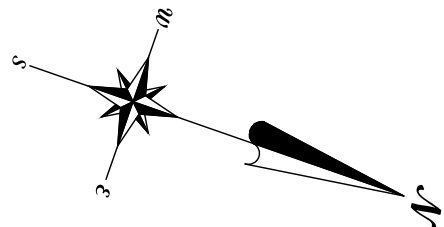
INTERIM REMEDIAL MEASURE
K - EQUITY WORKS MANUFACTURED
GAS PLANT (MGP) SITE
BROOKLYN, KINGS COUNTY, NY
NYSDEC SITE NO. 224050
ORDER ON CONSENT INDEX NO. A2-0552-0606

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

60137362

SHEET TITLE

EXISTING CONDITIONS PLAN

COOPER TANK RELOCATION SPACE

SHEET NUMBER

V-104

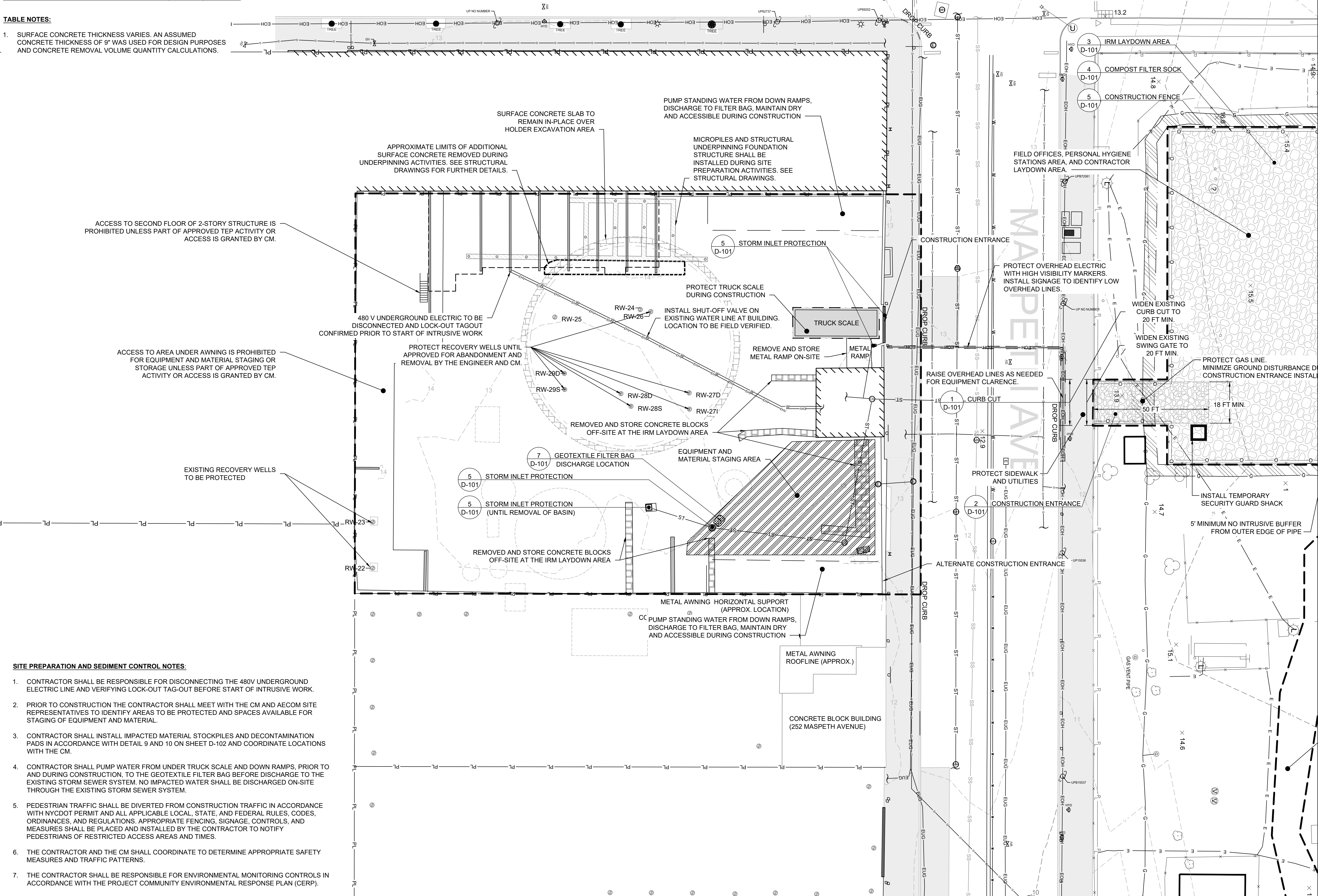
EXISTING CONDITIONS NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING LOCATIONS OF STRUCTURES AND UTILITIES SHOWN AND EXISTING CONDITIONS IN ACCORDANCE WITH THE NOTES ON SHEET G-101, THE SPECIFICATIONS, AND THE CONTRACT DOCUMENTS.

SITE PREPARATION DATA TABLE		
PARAMETER	2D AREA (SF)	VOLUME (CY)
CONCRETE DEMOLITION AND REMOVAL	850	24

TABLE NOTES:

1. SURFACE CONCRETE THICKNESS VARIES. AN ASSUMED CONCRETE THICKNESS OF 9" WAS USED FOR DESIGN PURPOSES AND CONCRETE REMOVAL VOLUME QUANTITY CALCULATIONS.



SITE PREPARATION AND SEDIMENT CONTROL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING THE 480V UNDERGROUND ELECTRIC LINE AND VERIFYING LOCK-OUT TAG-OUT BEFORE START OF INTRUSIVE WORK.
2. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL MEET WITH THE CM AND AECOM SITE REPRESENTATIVES TO IDENTIFY AREAS TO BE PROTECTED AND SPACES AVAILABLE FOR STAGING OF EQUIPMENT AND MATERIAL.
3. CONTRACTOR SHALL INSTALL IMPACTED MATERIAL STOCKPILES AND DECONTAMINATION PADS IN ACCORDANCE WITH DETAIL 9 AND 10 ON SHEET D-102 AND COORDINATE LOCATIONS WITH THE CM.
4. CONTRACTOR SHALL PUMP WATER FROM UNDER TRUCK SCALE AND DOWN RAMPS, PRIOR TO AND DURING CONSTRUCTION, TO THE GEOTEXTILE FILTER BAG BEFORE DISCHARGE TO THE EXISTING STORM SEWER SYSTEM. NO IMPACTED WATER SHALL BE DISCHARGED ON-SITE THROUGH THE EXISTING STORM SEWER SYSTEM.
5. PEDESTRIAN TRAFFIC SHALL BE DIVERTED FROM CONSTRUCTION TRAFFIC IN ACCORDANCE WITH NYCDOT PERMIT AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL RULES, CODES, ORDINANCES, AND REGULATIONS. APPROPRIATE FENCING, SIGNAGE, CONTROLS, AND MEASURES SHALL BE PLACED AND INSTALLED BY THE CONTRACTOR TO NOTIFY PEDESTRIANS OF RESTRICTED ACCESS AREAS AND TIMES.
6. THE CONTRACTOR AND THE CM SHALL COORDINATE TO DETERMINE APPROPRIATE SAFETY MEASURES AND TRAFFIC PATTERNS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENVIRONMENTAL MONITORING CONTROLS IN ACCORDANCE WITH THE PROJECT COMMUNITY ENVIRONMENTAL RESPONSE PLAN (CERP).



PROJECT

222 MASPETH AVENUE PARCEL INTERIM REMEDIAL MEASURE

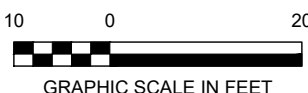
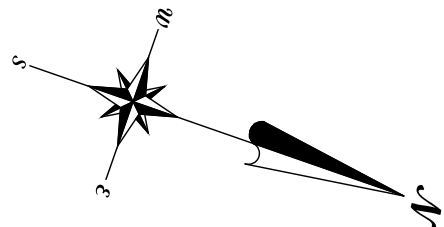
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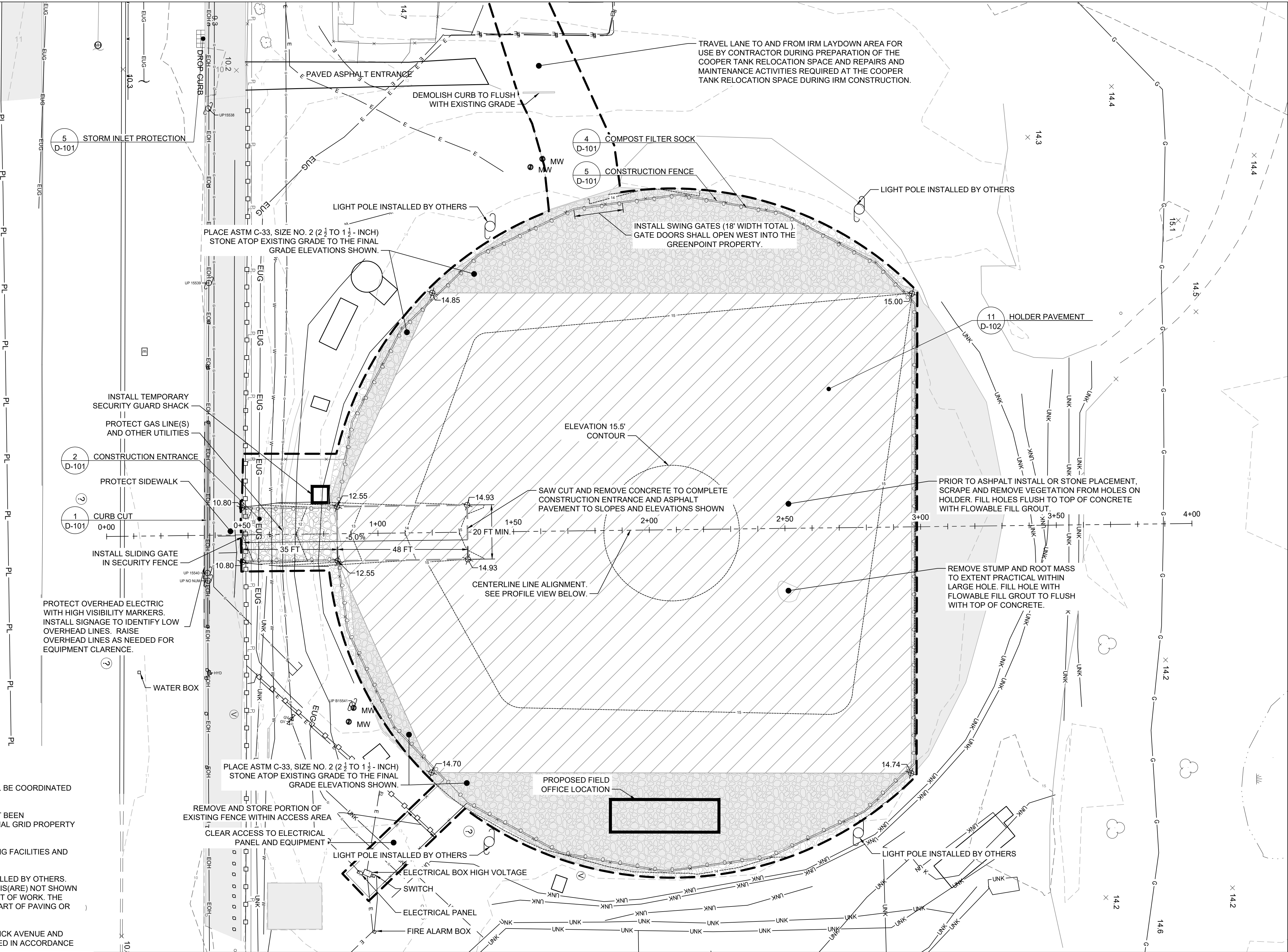
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SITE PREPARATION AND SEDIMENT CONTROL PLAN 222 MASPETH AVENUE PARCEL

SHEET NUMBER

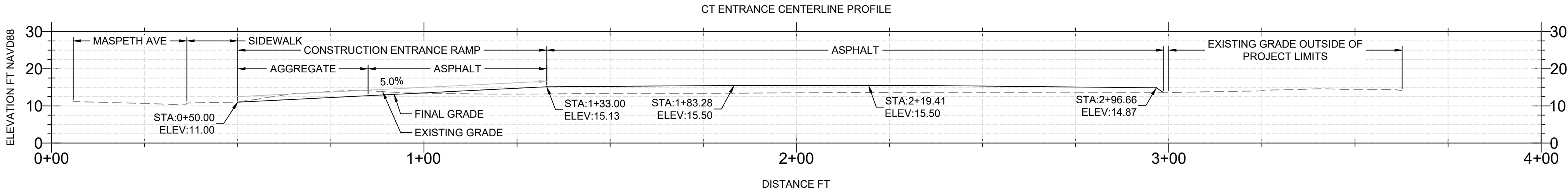
C-101

SITE PREPARATION DATA TABLE	
PARAMETER	2D AREA (SF)
CONSTRUCTION ENTRANCE NO.2 STONE	700
NO.2 STONE ATOP CONCRETE HOLDER	11,420
HOLDER PAVEMENT	34,700



SITE PREPARATION AND SEDIMENT CONTROL NOTES:

- SEE NOTES ON C-101.
- ALL SITE ACTIVITY ON GREENPOINT ENERGY PROPERTY SHALL BE COORDINATED THROUGH THE CM AND NATIONAL GRID'S REPRESENTATIVE.
- NO IMPACTED MATERIAL(S) AND/OR EQUIPMENT THAT HAS NOT BEEN DECONTAMINATED SHALL BE PERMITTED TO ENTER NATIONAL GRID PROPERTY FOR ANY REASON.
- THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING FACILITIES AND UTILITIES.
- LIGHTPOLE LOCATIONS ARE APPROXIMATE AND WILL BE INSTALLED BY OTHERS. LOCATION(S) OF SUPPORTING POLE(S) FOR OVERHEAD WIRES IS(ARE) NOT SHOWN AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO START OF WORK. THE LIGHT AND UTILITY POLES SHALL BE PROTECTED PRIOR TO START OF PAVING OR FENCE INSTALLATION WORK.
- THE TWO STORM DRAIN INLETS AT THE INTERSECTION OF VARICK AVENUE AND MASPETH AVENUE THAT ARE NOT SHOWN SHALL BE PROTECTED IN ACCORDANCE WITH DETAIL 6 OF SHEET D-101.
- FOLLOWING COMPLETION OF SITE PREPARATION WORK, THE CONTRACTOR SHALL ONLY ENTER THE COOPER TANK RELOCATION AREA FOR MAINTENANCE WORK AND AS APPROVED BY THE CM IN WRITING PRIOR TO ENTERING THE RELOCATION AREA.
- INTERIOR SWING GATE SHALL BE USED FOR SITE PREPARATION, MAINTENANCE, REPAIRS, AND EMERGENCY ACTIVITIES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING THE SWING GATE UPON INSTALLATION AND AFTER EACH USE. WHEN SEPARATE LOCKS ARE USE, LOCKS SHALL BE DAISY CHAINED AND TWO COPIES OF THE KEYS TO THE LOCKS SHALL BE PROVIDED TO NATIONAL GRID, THE CM, AND THE ENGINEER. COOPER TANK SHALL NOT BE PERMITTED ACCESS INTO NATIONAL GRID GREENPOINT PROPERTY OUTSIDE OF THE INTERIOR FENCELINE SHOWN.
- NO OBJECTS, MATERIALS, OR EQUIPMENT SHALL BE PERMITTED TO BE STORED WITHIN 10-FEET FROM THE EXISTING SECURITY FENCE OR PROPOSED CONSTRUCTION FENCE AT THE GREENPOINT PROPERTY.



PROJECT

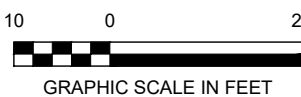
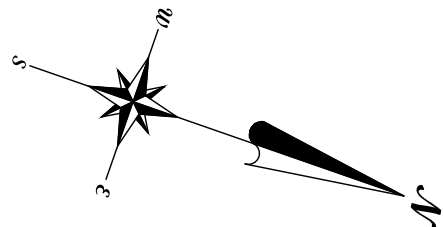
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PROJECT NUMBER

60137362

SHEET TITLE

SITE PREPARATION AND SEDIMENT CONTROL PLAN
COOPER TANK OPERATING SPACE

SHEET NUMBER

C-103

PRE ISS EXCAVATION CONTROL POINTS TABLE							
SAMPLE ID	EASTING	NORTHING	TOP OF CONCRETE ELEVATION (FT NAVD 88)	APPROXIMATE CONCRETE THICKNESS (FT)	PRE ISS EXCAVATION ELEVATION AT TOP OF SLOPE (FT NAVD88)	PRE ISS EXCAVATION ELEVATION AT BOTTOM OF SLOPE (FT NAVD 88)	CUT (FT)
EX1	649076.1	686507.7	14.2	0.75	13.5	8.0	5.5
EX2	649070.9	686522.7	13.6	0.75	12.9	8.0	4.9
EX3	649041.3	686512.4	13.5	0.75	12.8	8.0	4.8
EX4	649037.7	686522.6	13.4	0.75	12.6	8.0	4.6
EX5	649021.3	686516.9	13.6	0.75	12.9	8.0	4.9
EX6	648992.2	686601.3	13.5	0.75	12.8	8.0	4.8
EX7	648983.4	686598.2	13.5	0.75	12.7	8.0	4.7
EX8	648968.5	686641.3	13.3	0.75	12.6	8.0	4.6
EX9	649045.5	686667.8	13.3	0.75	12.6	8.0	4.6
EX10	649117.3	686631.2	13.1	0.75	12.3	8.0	4.3
EX11	649145.8	686547.5	13.0	0.75	12.3	8.0	4.3
EX12	649128.9	686541.7	12.8	0.75	12.0	8.0	4.0
EX13	649133.7	686527.4	12.6	0.75	11.9	8.0	3.9

PRE-ISS EXCAVATION DATA TABLE		
PARAMETER	3D AREA (SF)	VOLUME (CY)
PRE-ISS CONCRETE DEMOLITION AND REMOVAL	18,220	510
PRE-ISS SOIL EXCAVATION	19,780	3,140

TABLE NOTES:

1. SURFACE CONCRETE THICKNESS VARIES. AN ASSUMED CONCRETE THICKNESS OF 9" WAS USED FOR DESIGN PURPOSES AND CONCRETE REMOVAL VOLUME QUANTITY CALCULATIONS.

PRE-ISS EXCAVATION NOTES:

1. NO INTRUSIVE WORK SHALL BEGIN UNTIL 480V ELECTRICAL UTILITY LINE IS DISCONNECTED.
2. LIMITS OF CONCRETE SURFACE SLAB SHALL BE MARKED OUT AND SAW CUT PRIOR TO START OF REMOVAL.
3. CONCRETE CONTAINING NO VISIBLE IMPACTS SHALL BE SEGREGATED FROM IMPACTED MATERIALS TO ALLOW TESTING FOR POSSIBLE REUSE. CONTRACTOR SHALL STOCKPILE SUCH MATERIALS AS DIRECTED BY THE CM. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CM FOR REUSE OF MATERIALS AS APPLICABLE.
4. EXCAVATION AND DEMOLITION WORK MAY BE DONE IN SMALLER PHASES AS DETERMINED BY THE CONTRACTOR.
5. REMOVE PIPES TO THE LIMITS OF ISS, EVACUATE REMAINING PIPING OF ACCESSIBLE CONTENTS AND CONTAINERIZE FOR OFF-SITE DISPOSAL, AND CAP PIPES REMAINING OUTSIDE THE LIMITS OF ISS.
6. NOTIFY THE CM IF UNKNOWN SUBSURFACE STRUCTURES, UTILITIES, OR OBSTRUCTIONS ARE ENCOUNTERED WITHIN 15 MINUTES OF IDENTIFICATION.
7. DIRECT LOAD MATERIAL TO EXTENT PRACTICAL. IMPACTED MATERIAL STOCKPILES WILL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL 9 ON SHEET D-102 AND LOCATED IN COORDINATION WITH THE CM.
8. LIMIT SOIL DISPOSAL VOLUME GENERATED FROM PRE CLEARING ACTIVITIES TO THE EXTENT PRACTICAL.
9. DO NOT PRE CLEAR FOR HISTORIC STRUCTURES BELOW ELEVATION 3' NAVD88 WITHOUT WRITTEN APPROVAL FROM THE CM. PRE CLEAR AROUND HOLDER ADJACENT TO PIPE WELL TO A MAXIMUM DEPTH OF 2 FEET BELOW HOLDER BOTTOM TO LOCATE AND REMOVE PIPES IF PRESENT.
10. THE CONTRACTOR SHALL CONFIRM THAT THE SAW CUT AND EXCAVATION LIMITS ARE BEYOND THE ISS LIMITS DETERMINED BY CONTRACTOR ISS COLUMN LAYOUT AND OVERLAP. THE EXCAVATION LIMITS SHOWN ALONG LINES EX5,6 AND 7 AND EX10, 11 SHALL NOT BE MOVED. THE REMAINING LINES MAY BE ADJUSTED AS NEEDED TO ENCOMPASS THE ISS LIMITS.
11. PRE-ISS EXCAVATION SLOPE ANGLES OR ISS LIMITS MAY BE REDUCED BASED ON SIDE SLOPE STABILITY IN AREAS OF STRUCTURAL CONCERN. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE CM PRIOR TO MAKING SUCH ADJUSTMENTS EXCEPT IN CASE OF EMERGENCY TO MAINTAIN SIDE SLOPE STABILITY
12. RECOVERY WELLS WITHIN THE HOLDER SHALL BE ABANDONED (RW-26 TO -29 ONLY) AND REMOVED (ALL RECOVERY WELLS) IN ACCORDANCE WITH SPECIFICATIONS SECTION 01 11 00 SUMMARY OF WORK.

ISS CONTROL POINTS TABLE		
DESCRIPTION	EASTING	NORTHING
ISS1	649079.4	686514.5
ISS2	649073.8	686528.9
ISS3	649044.1	686518.3
ISS4	649040.5	686528.3
ISS5	649024.3	686523.0
ISS6	649019.3	686537.4
ISS7	648982.7	686614.8
ISS8	648974.4	686638.4
ISS9	649045.3	686662.9
ISS10	649113.7	686628.1
ISS11	649140.4	686550.2
ISS12	649124.0	686544.2
ISS13	649128.0	686530.3

PROJECT

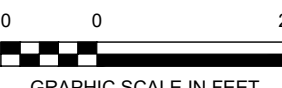
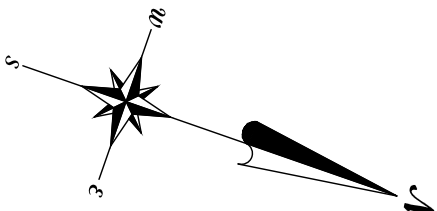
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A	10-28-2020	60% DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60137362

SHEET TITLE

PRE-ISS EXCAVATION PLAN

SHEET NUMBER

C-201

ISS CONTROL POINTS TABLE					
DESCRIPTION	EASTING	NORTHING	TOP OF ISS ELEVATION (FT NAVD88)	BOTTOM OF ISS ELEVATION (FT NAVD88)	ISS DEPTH (FT)
ISS1	649079.4	686514.4	8.0	-23.3	31.3
ISS2	649073.8	686528.9	8.0	-23.1	31.1
ISS3	649044.1	686518.3	8.0	-24.0	32.0
ISS4	649040.5	686528.3	8.0	-24.0	32.0
ISS5	649024.3	686523.0	8.0	-24.0	32.0
ISS6	649019.3	686537.7	8.0	-24.0	32.0
ISS7	648982.9	686614.2	8.0	-23.0	31.0
ISS8	648974.4	686638.4	8.0	-23.0	31.0
ISS9	649045.3	686662.9	8.0	-27.4	35.4
ISS10	649113.7	686628.1	8.0	-32.4	40.4
ISS11	649140.4	686550.2	8.0	-30.2	38.2
ISS12	649124.0	686544.2	8.0	-28.0	36.0
ISS13	649128.0	686530.3	8.0	-27.4	35.4

ISS DATA TABLE		
PARAMETER	2D AREA (SF)	VOLUME (CY)
ISS	8,610	12,430
BSM	1,120	1,020

ISS CONTROL POINT AND DATA TABLE NOTES:

- ISS AREA CALCULATION ASSUMES 5' OFFSET FROM TOP OF HOLDER, AND IS A GRAY HATCHED AREA ON THIS PLAN.
- ISS VOLUME CALCULATION ASSUMES 1' EMBEDMENT DEPTH AND INTO THE APPROXIMATE CLAY SURFACE ELEVATIONS SHOWN AND 10% FOR STEPPED BOTTOM ELEVATIONS.
- BSM AREA CALCULATION ASSUMES VERTICAL SIDEWALLS ALONG EXTERIOR OF BRICK HOLDER WALL.
- BSM VOLUME CALCULATION INCLUDES SOLIDIFICATION OF MATERIAL TO 2' BELOW THE BOTTOM OF THE OUTSIDE OF THE HOLDER.
- THE MAXIMUM ALLOWABLE VERTICAL DEVIATION SHALL BE 1:100, MONITORED AND MAINTAINED IN TWO PERPENDICULAR DIRECTIONS OF VERTICALITY.
- THE MAXIMUM ALLOWABLE HORIZONTAL TOLERANCE SHALL BE PLUS OR MINUS 3 INCHES.

ISS NOTES:

- MINIMUM ISS AREA SHOWN. COLUMNS SHALL OVERLAP AND EXTEND BEYOND THESE LIMITS SUCH THAT ALL OF THE ISS AREA IS REMEDIATED AND THERE ARE NO GAPS OR AREAS WHERE ISS WAS NOT INSTALLED.
- PROVIDE WITHIN THE TEP DRAWINGS AND DETAILS INCLUDING, BUT NOT LIMITED TO, PROPOSED SUBCONTRACTORS, COLUMN SPACING PLAN, VERIFICATION AND SAMPLING PROCEDURES, EQUIPMENT LIST, UTILITY REQUIREMENTS, HOLDER PROTECTION PLAN, SPOILS MANAGEMENT PLAN, CONCRETE WASHOUT AND DECONTAMINATION PROCEDURES.
- INSTALL AND VERIFY SOIL, CEMENT (AND/OR SLAG), AND BENTONITE COLUMNS IN ACCORDANCE WITH THE SPECIFICATIONS.
- PROVIDE ENGINEER WITH ISS SAMPLES FOR QA AND VERIFICATION PURPOSES AS REQUIRED IN THE SPECIFICATIONS.
- A MINIMUM OF TWO CORE BOREHOLE LOCATIONS SHALL BE REQUIRED TO DOCUMENT THE INSTALLED ISS MONOLITH AND SHALL BE ADVANCED AT LEAST ONE-FOOT BELOW THE BASE OF THE ISS MONOLITH. ADDITIONAL DETAILS ARE PRESENTED IN THE SPECIFICATIONS, IRM WORK PLAN (AECOM, 2020) AND CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH PERFORMING AND DOCUMENTING THIS QA WORK IN ACCORDANCE WITH THE SPECIFICATIONS WITHIN THE REQUIRED TIME PERIOD AND IN COORDINATION WITH THE CM, ENGINEER, AND NYSDEC.
- NO WATER GENERATED FROM OR RELATED TO THE ISS WORK SHALL BE PERMITTED TO BE DISCHARGED TO THE STORM SEWER SYSTEM.
- NOTIFY THE CM IF UNKNOWN SUBSURFACE STRUCTURES, UTILITIES, OR OBSTRUCTIONS NATURAL OR MAN-MADE ARE ENCOUNTERED WITHIN 15 MINUTES OF IDENTIFICATION.

INSTALL SOIL, CEMENT (AND/OR SLAG), AND BENTONITE MIXTURE COLUMNS WITHIN THE ISS AREA. PERFORM WORK IN ACCORDANCE WITH THE SPECIFICATIONS.

APPROXIMATE INTERMEDIATE CLAY GEOLOGICAL SURFACE ELEVATION CONTOURS WITHIN ISS AREA. COLUMNS SHALL BE INSTALLED A MINIMUM OF ONE-FOOT DEEPER THAN THE ELEVATIONS SHOWN.

COLUMNS SHALL BE INSTALLED TO A BOTTOM ELEVATION OF -24' NAVD 88 WITHIN AREAS WHERE INTERMEDIATE CLAY IS NOT PRESENT.

BOTTOM OF EXTERIOR BRICK HOLDER WALL (LOCATION AND BATTER ANGLE ASSUMED)

SOLIDIFY SOIL ADJACENT TO EXTERIOR HOLDER WALL USING BUCKET SOIL MIXING, EXCAVATOR-MOUNTED AUGER ATTACHMENT, OR EQUIVALENT METHODS APPROVED BY THE ENGINEER. SOLIDIFY IN OVERLAPPING COLUMNS TO A DEPTH OF 2 FEET BELOW TOE OF HOLDER WALL TO THE EXTENT PRACTICABLE.

PROTECT HOLDER WALLS DURING ISS WORK.

APPROXIMATE LIMIT OF INTERMEDIATE CLAY

3.0' TO 5.0' BUFFER

PROJECT

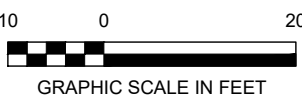
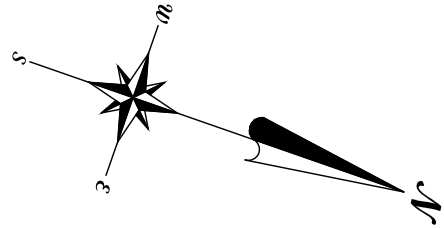
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SHEET TITLE

ISS PLAN

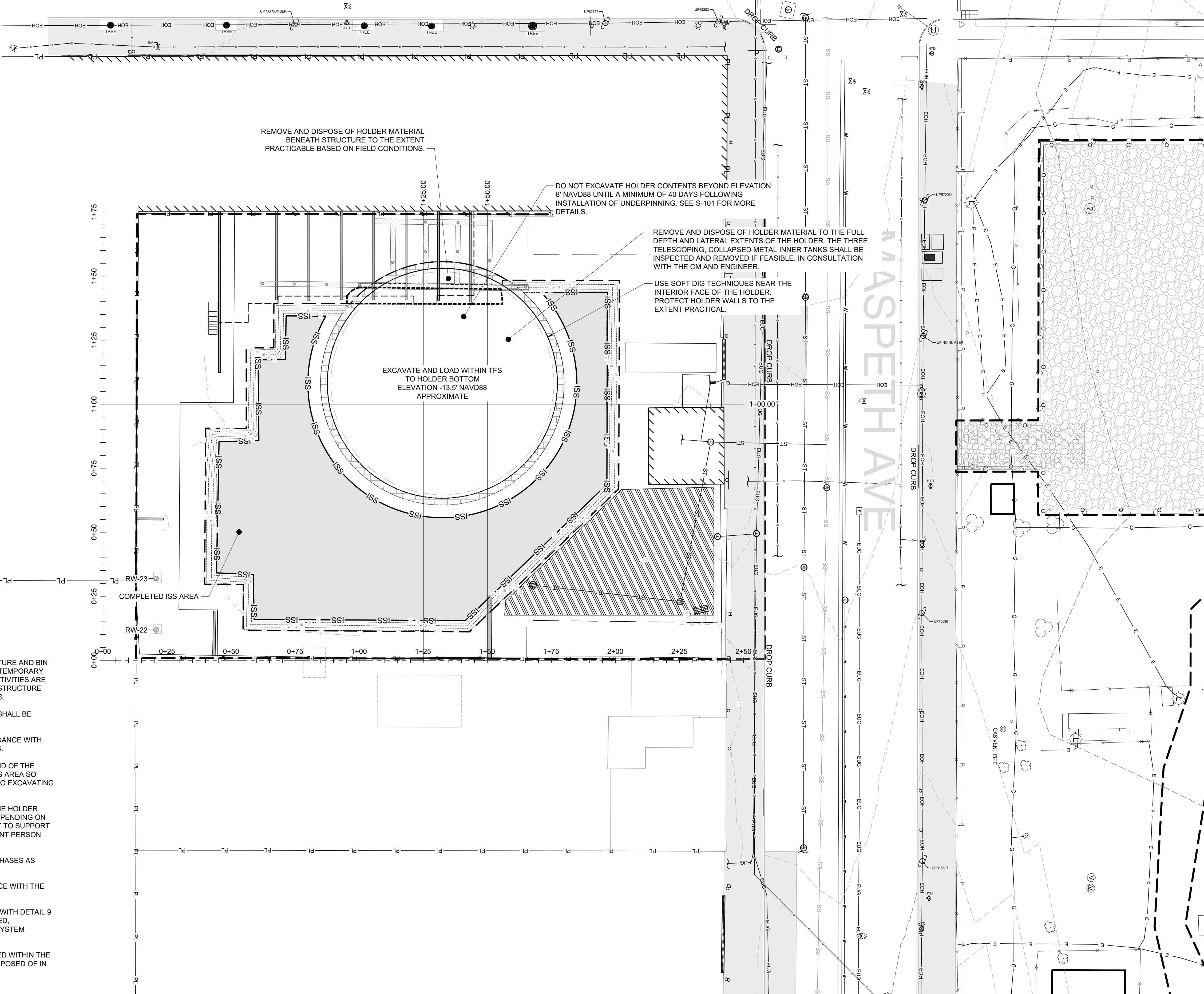
SHEET NUMBER

C-301

HOLDER EXCAVATION DATA TABLE		
PARAMETER	2D AREA (SF)	VOLUME (CY)
HOLDER SOIL EXCAVATION	6,365	5,070

TABLE NOTES:

1. HOLDER BOTTOM IS ASSUMED TO BE CONVEX APPROXIMATELY 1-FOOT HIGHER IN ELEVATION AT THE CENTER THAN ALONG THE EDGES OF THE HOLDER. FOR ESTIMATION PURPOSES, VOLUME CALCULATIONS ASSUME THE HOLDER IS UNIFORMLY FLAT ACROSS THE HOLDER AT ELEVATION -13.5 NAVD88.



HOLDER EXCAVATION NOTES:

3. NO INTRUSIVE WORK SHALL BEGIN UNTIL THE TWO STORY STRUCTURE AND BIN WALLS STRUCTURAL SUPPORT ACTIVITIES ARE COMPLETED, THE TEMPORARY FABRIC STRUCTURE IS ASSEMBLED AND INSTALLED, AND BOTH ACTIVITIES ARE APPROVED BY THE CM IN WRITING. LOCATION OF UNDERPINNING STRUCTURE SHOWN IS APPROXIMATE, SEE SHEET S-102 FOR FURTHER DETAILS.
2. LIMITS OF SURFACE CONCRETE SURFACE SLAB SHOWN ON S-102 SHALL BE MARKED OUT AND SAW CUT PRIOR TO START OF REMOVAL.
3. TEMPORARY FABRIC STRUCTURE SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS. PERFORM HOLDER EXCAVATION WITHIN TFS.
4. CONTRACTOR SHALL BEGIN EXCAVATION ALONG THE EASTERN END OF THE HOLDER. EXCAVATE THE HOLDER TO THE HOLDER BOTTOM IN THIS AREA SO THAT THE CONDITION OF THE HOLDER CAN BE ASSESSED PRIOR TO EXCAVATING ADJACENT TO THE BIN WALLS.
5. CONTRACTOR MAY BE DIRECTED TO BUCKET MIX PORTIONS OF THE HOLDER CONTENTS WITH PORTLAND CEMENT RATHER THAN EXCAVATE DEPENDING ON THE CONDITION AND IF THE HOLDER WALL APPEARS INSUFFICIENT TO SUPPORT THE EXCAVATION AS DETERMINED BY THE EXCAVATION COMPETENT PERSON AND THE ENGINEER.
6. EXCAVATION AND DEMOLITION WORK MAY BE DONE IN SMALLER PHASES AS DETERMINED BY THE CONTRACTOR.
7. BIN WALLS AND STRUCTURE SHALL BE MONITORED IN ACCORDANCE WITH THE CERP AND VIBRATION AND SETTLEMENT MONITORING PLAN.
8. ALL IMPACTED MATERIAL SHALL BE STOCKPILED IN ACCORDANCE WITH DETAIL 9 ON SHEET D-102. NO MATERIAL SHALL BE PERMITTED TO BE STAGED, STOCKPILED, OR MANAGED ON THE ISS MEDIA WITHOUT A LINER SYSTEM APPROVED BY THE CM.
9. ALL WALL GENERATED FROM IMPACTED MATERIAL OR CONTAINED WITHIN THE HOLDER SHALL BE COLLECTED, CONTAINED, AND TREATED OR DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.

AECOM

PROJECT

222 MASPETH
AVENUE PARCEL

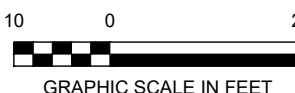
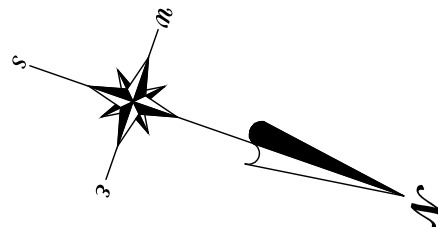
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ORDER ON CONSENT INDEX NO. A2-0552-0606

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A	10-28-2020	60% DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60137362

SHEET TITLE

HOLDER EXCAVATION
PLAN

SHEET NUMBER

C-401

RESTORATION CONTROL POINTS TABLE				
SAMPLE ID	EASTING	NORTHING	TOP OF SUB BASE ELEVATION	TOP OF CONCRETE ELEVATION
FG1	649076.1	686507.7	13.5	14.2
FG2	649070.9	686522.7	12.9	13.6
FG3	649041.3	686512.4	12.8	13.5
FG4	649021.3	686516.9	12.9	13.6
FG5	649012.0	686543.8	12.9	13.6
FG6	649009.2	686542.9	13.0	13.7
FG7	649006.4	686544.1	13.0	13.7
FG8	649004.3	686546.7	13.0	13.7
FG9	648986.7	686599.4	12.8	13.5
FG10	648983.4	686598.2	12.8	13.5
FG11	648968.5	686641.3	12.6	13.3
FG12	649045.5	686667.8	12.6	13.3
FG13	649117.3	686631.2	12.3	13.1
FG14	649145.8	686547.5	12.3	13.0
FG15	649128.9	686541.7	12.0	12.8
FG16	649133.7	686527.4	12.6	13.4

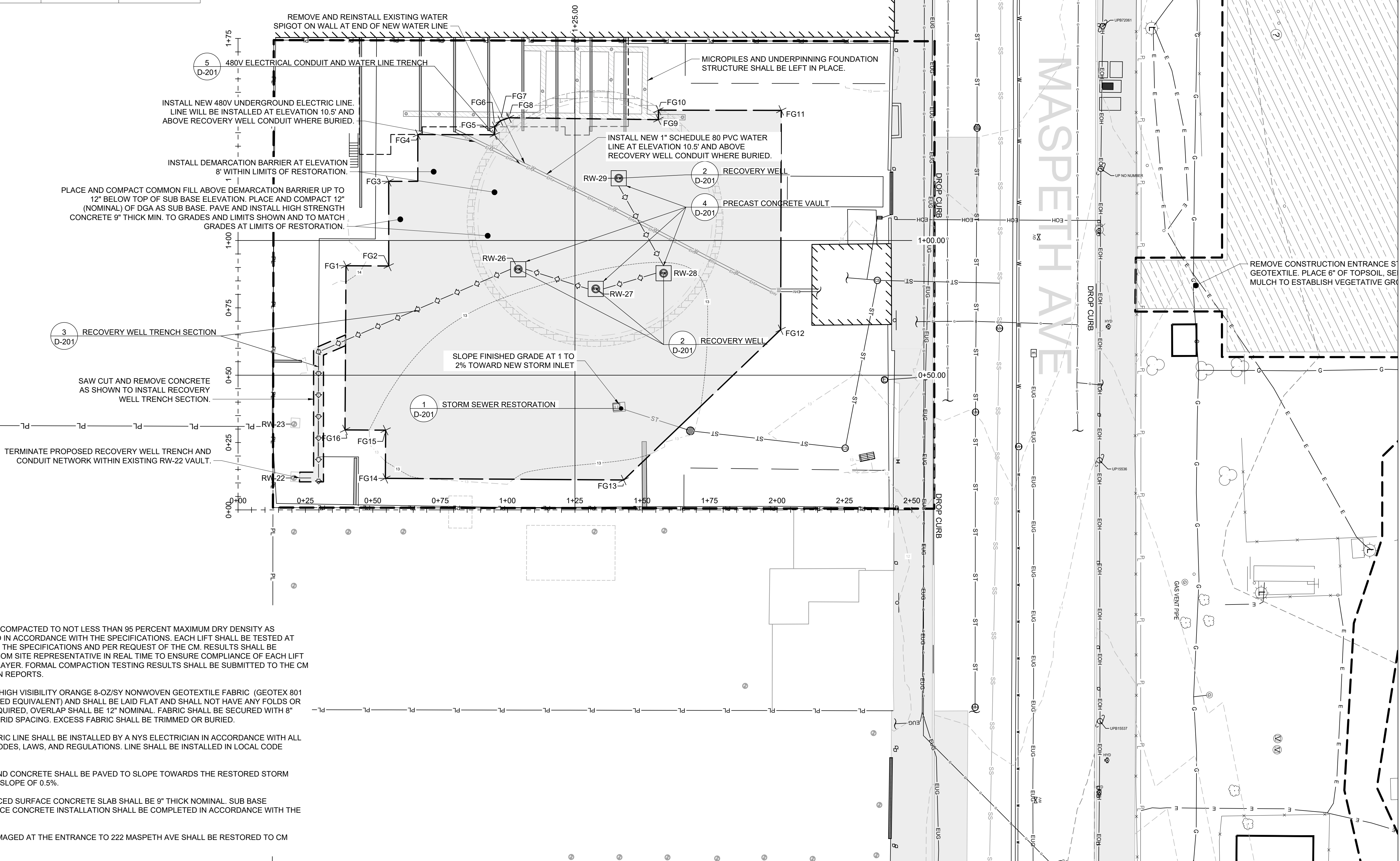
RECOVERY WELL DATA TABLE							
SAMPLE ID	EASTING	NORTHING	PROPOSED TOP OF SLAB ELEVATION	WELL TIP ELEVATION	WELL HEAD ELEVATION	SCREEN INTERVAL(S) ELEVATIONS	SUMP INTERVAL ELEVATIONS
RW-26	649056.3	686568.5	13.1	-82.5	10.0	-14.0 TO -24.5 -67.0 TO -72.5	-24.5 TO -34.5 -72.5 TO -82.5
RW-27	649053.7	686598.1	13.0	-92.5	10.0	-14.0 TO -24.5 -67.0 TO -72.5	-24.5 TO -34.5 -82.5 TO -92.5
RW-28	649039.9	686619.9	13.0	-81.0	10.0	-35.5 TO -51.0 -51.0 TO -71.0	-51.0 TO -61.0 -71.0 TO -81.0
RW-29	649012.1	686592.6	13.3	-80.0	10.0	-64.5 TO -70.0	-70.0 TO -80.0

CONDUIT DATA TABLE		
CONDUIT SEGMENT	NUMBER OF LINES	
	NAPL	SIGNAL
RW-29 TO RW-28	2	2
RW-28 TO RW-27	3	3
RW-27 TO RW-26	4	4
RW-26 TO RW-22	5	5

RESTORATION DATA TABLE		
PARAMETER	2D AREA (SF)	VOLUME (CY)
COMMON FILL PLACEMENT	18,990	6,850
DGA PLACEMENT (12" THICK LAYER, NOMINAL)	18,990	705
DEMARICATION BARRIER INSTALLATION	18,990	NA
HIGH STRENGTH CONCRETE PAVEMENT (9" THICK LAYER, NOMINAL)	18,830	525
CLEAN SAND PLACEMENT (RECOVERY CONDUIT TRENCH, 4' WIDE, NOMINAL)	530	20
CLEAN SAND PLACEMENT (ELECTRICAL AND WATER LINE TRENCH, 2' WIDE NOMINAL)	300	6
DGA PLACEMENT (RECOVERY CONDUIT TRENCH, 4' WIDE, NOMINAL)	530	35
DGA PLACEMENT (ELECTRICAL AND WATER LINE TRENCH, 2' WIDE NOMINAL)	300	15

RESTORATION DATA TABLE NOTES:

- COMMON FILL QUANTITY ASSUMES 80% OF SURFACE CONCRETE SLAB REMOVED WILL BE REUSED AND PLACED IN THE BOTTOM OF THE HOLDER BELOW THE COMMON FILL.



RESTORATION NOTES:

1. BACKFILL MATERIALS SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT MAXIMUM DRY DENSITY AS DETERMINED BY ASTM 1557 AND IN ACCORDANCE WITH THE SPECIFICATIONS. EACH LIFT SHALL BE TESTED AT THE FREQUENCIES DETAILED IN THE SPECIFICATIONS AND PER REQUEST OF THE CM. RESULTS SHALL BE REPORTED TO THE CM AND AECOM SITE REPRESENTATIVE IN REAL TIME TO ENSURE COMPLIANCE OF EACH LIFT BEFORE BEGINNING THE NEXT LAYER. FORMAL COMPACTION TESTING RESULTS SHALL BE SUBMITTED TO THE CM WITH THE DAILY CONSTRUCTION REPORTS.
2. DEMARCATION BARRIER SHALL HIGH VISIBILITY ORANGE 8-OZ/SY NONWOVEN GEOTEXTILE FABRIC (GEOTEX 801 OR DND, OR ENGINEER APPROVED EQUIVALENT) AND SHALL BE LAID FLAT AND SHALL NOT HAVE ANY FOLDS OR TEARS. WHERE OVERLAP IS REQUIRED, OVERLAP SHALL BE 12" NOMINAL. FABRIC SHALL BE SECURED WITH 8" GARDEN STAPLES ON 10' X 10' GRID SPACING. EXCESS FABRIC SHALL BE TRIMMED OR BURIED.
3. NEWLY INSTALLED 480 V ELECTRIC LINE SHALL BE INSTALLED BY A NYS ELECTRICIAN IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES, LAWS, AND REGULATIONS. LINE SHALL BE INSTALLED IN LOCAL CODE COMPLIANT CONDUIT.
4. SUB BASE SHALL BE GRADED AND CONCRETE SHALL BE PAVED TO SLOPE TOWARDS THE RESTORED STORM SEWER INLET. MINIMUM CROSS SLOPE OF 0.5%.
5. HIGH STRENGTH NON-REINFORCED SURFACE CONCRETE SLAB SHALL BE 9" THICK NOMINAL. SUB BASE PREPARATION AND CAST IN PLACE CONCRETE INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH THE SPECIFICATIONS.
6. ALL CONCRETE SIDEWALKS DAMAGED AT THE ENTRANCE TO 222 MASPEATH AVE SHALL BE RESTORED TO CM SATISFACTION.

AECOM

PROJECT

222 MASPETH AVENUE PARCEL INTERIM REMEDIAL MEASURE

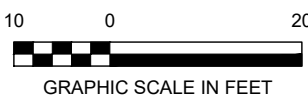
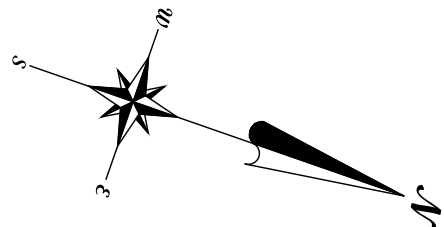
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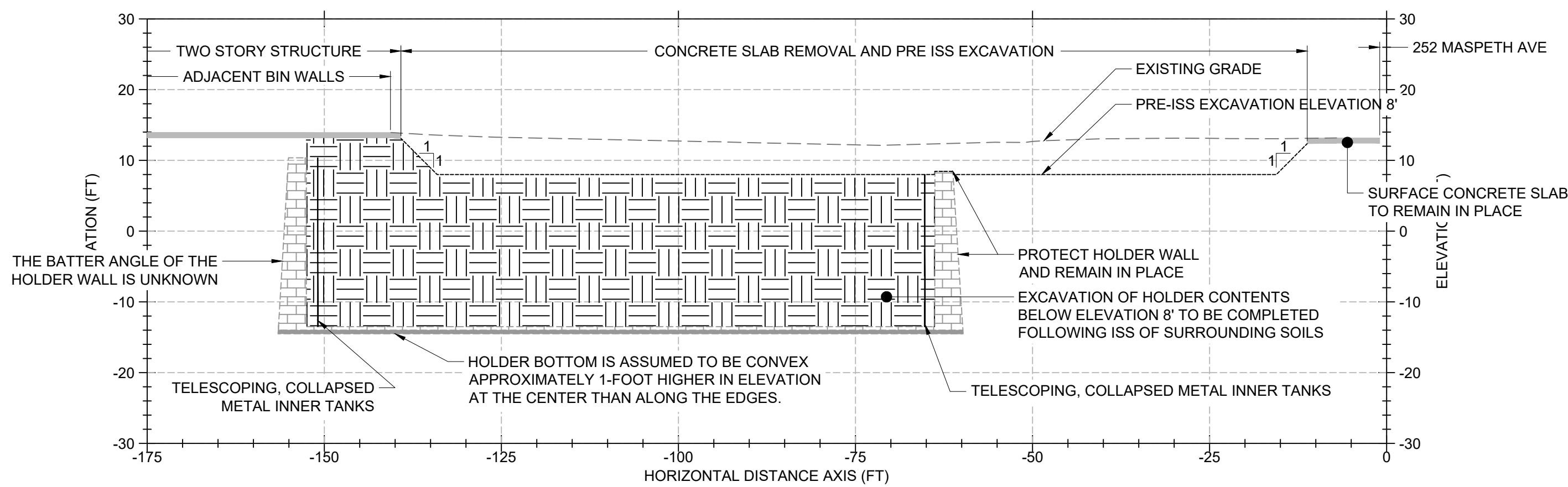
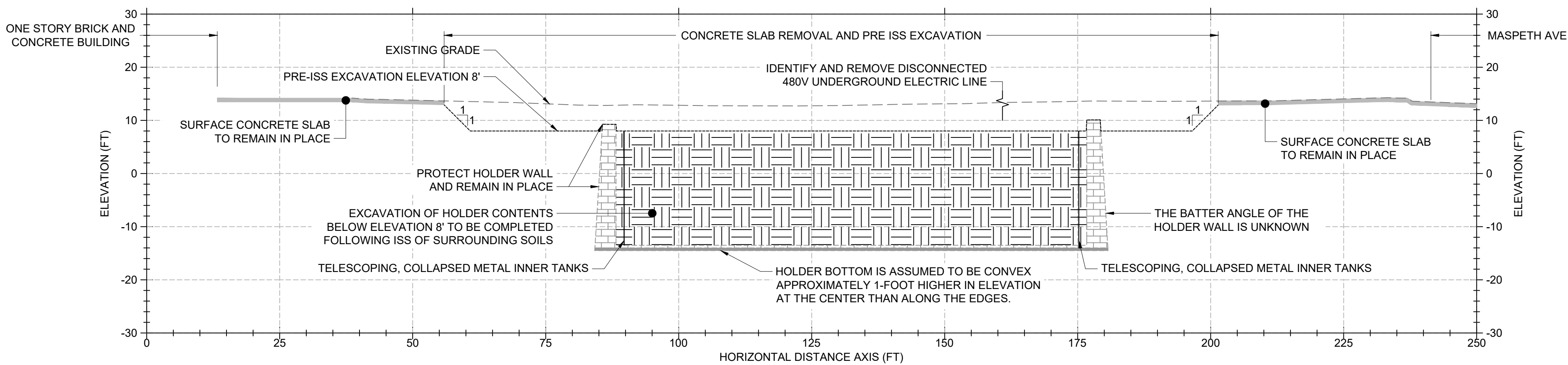
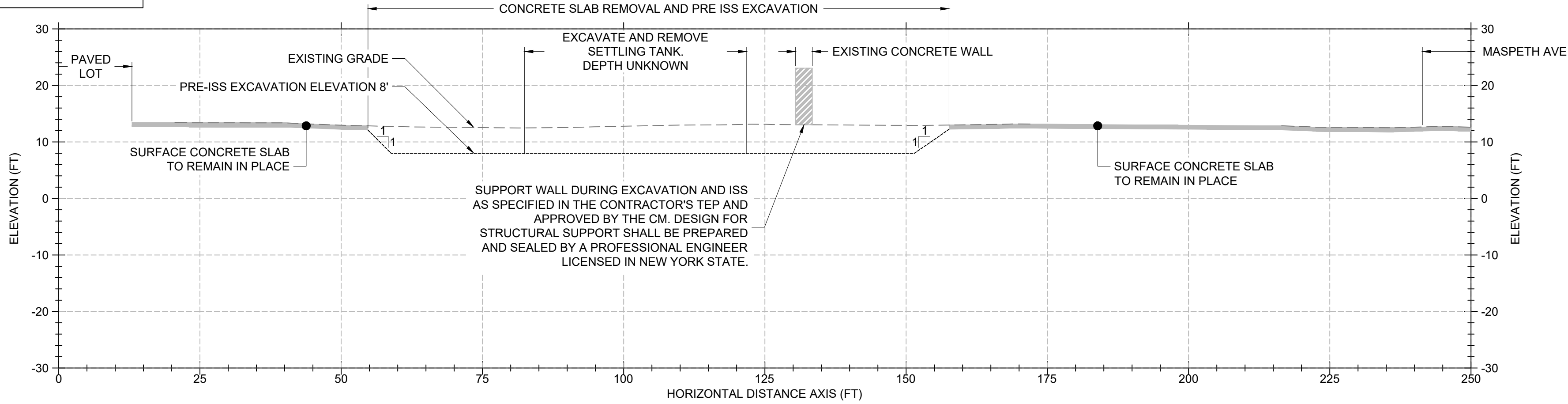
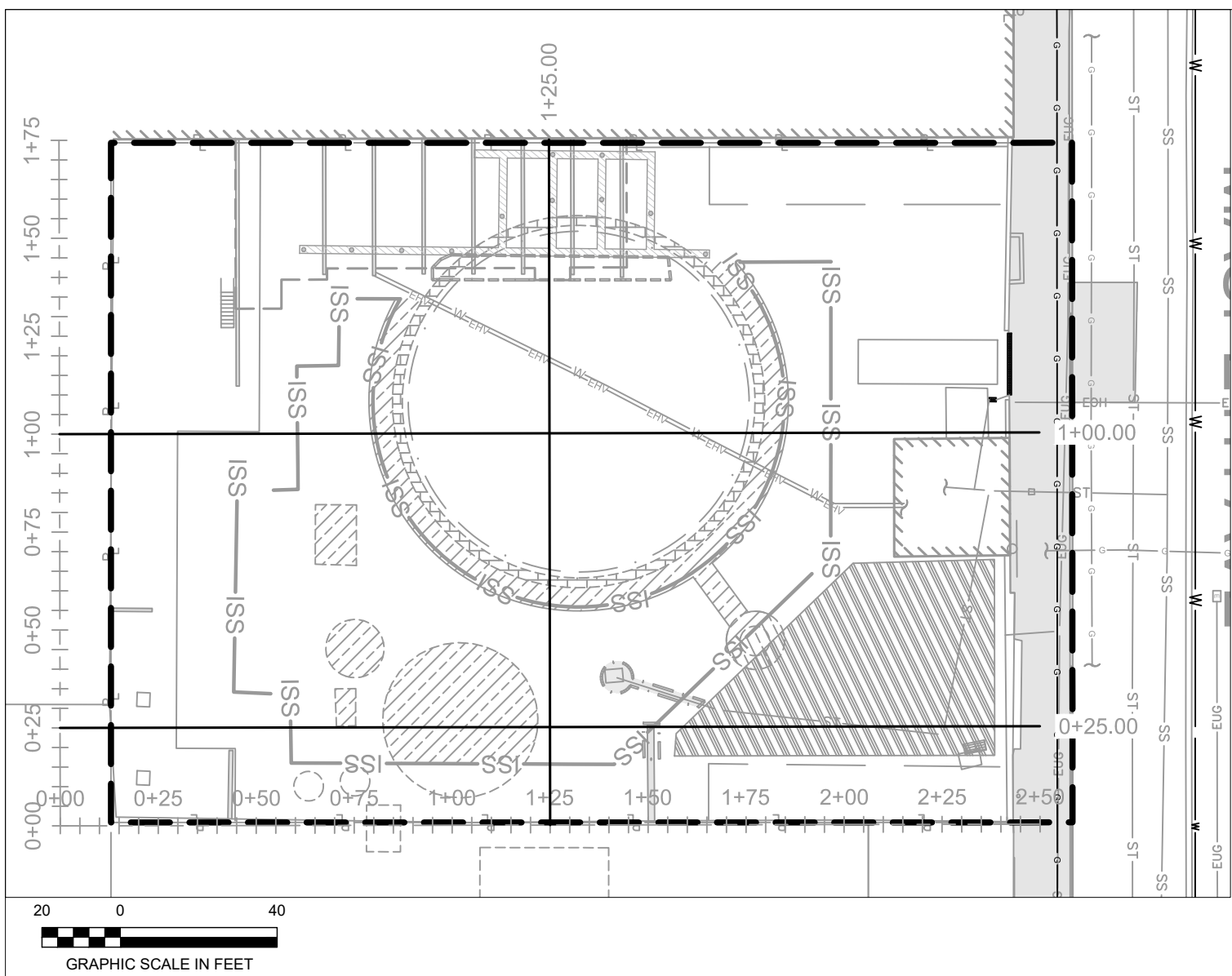
60137362

SHEET TITLE

RESTORATION PLAN 222 MASPTH AVENUE

SHEET NUMBER

C-501



PRE-ISS EXCAVATION CROSS SECTIONS NOTES:

1. EXISTING RECOVERY WELLS WITHIN HOLDER NOT SHOWN ON SECTIONS
SEE SHEET V-102 FOR HORIZONTAL AND VERTICAL LOCATION DATA.
2. WELLS SHALL BE ABANDONED PRIOR TO REMOVAL AND IN ACCORDANCE
WITH SPECIFICATIONS SECTION 01 11 00 SUMMARY OF WORK.

PROJECT

222 MASPETH
AVENUE PARCEL

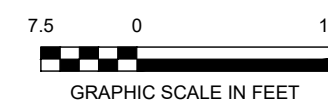
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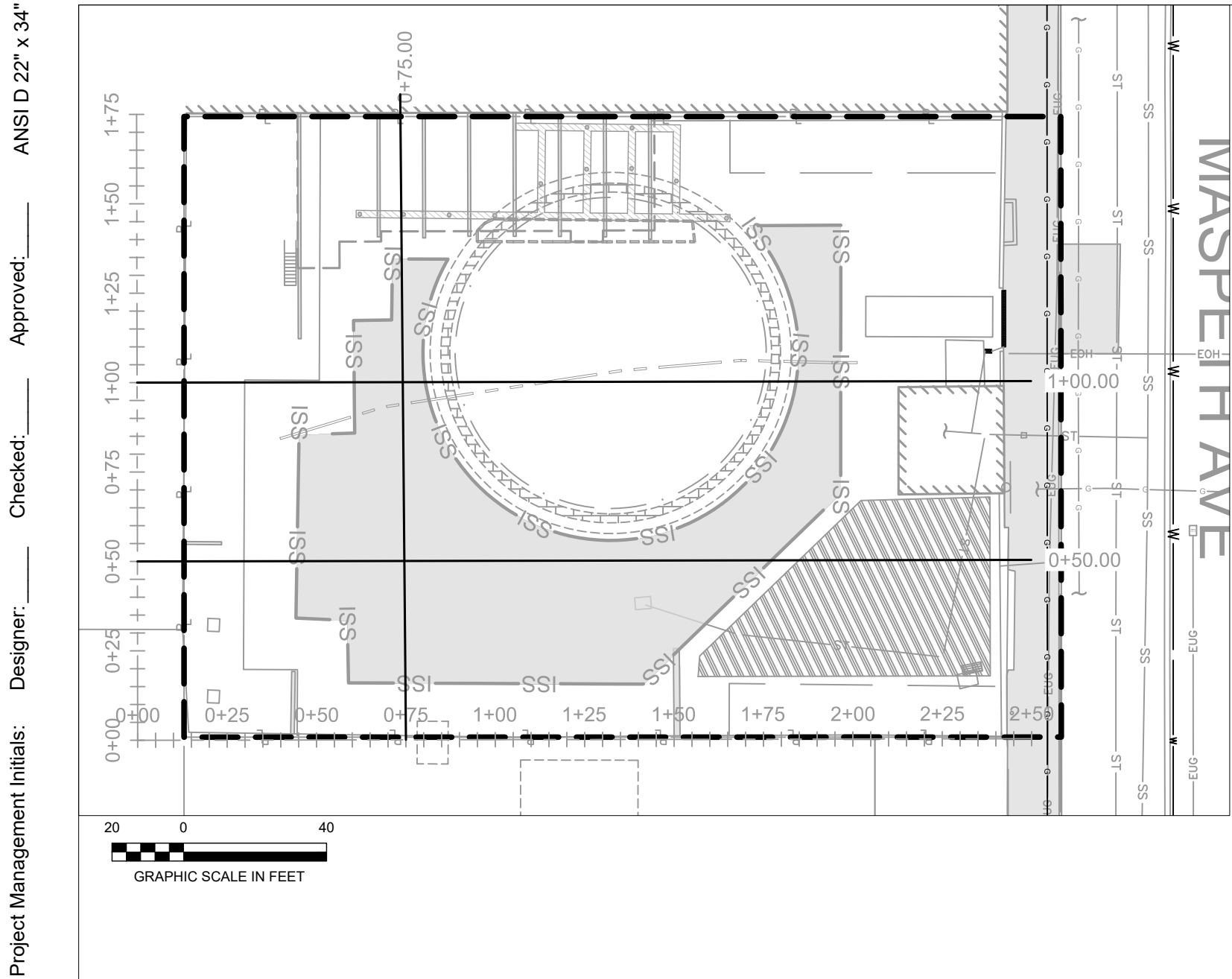
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SHEET TITLE

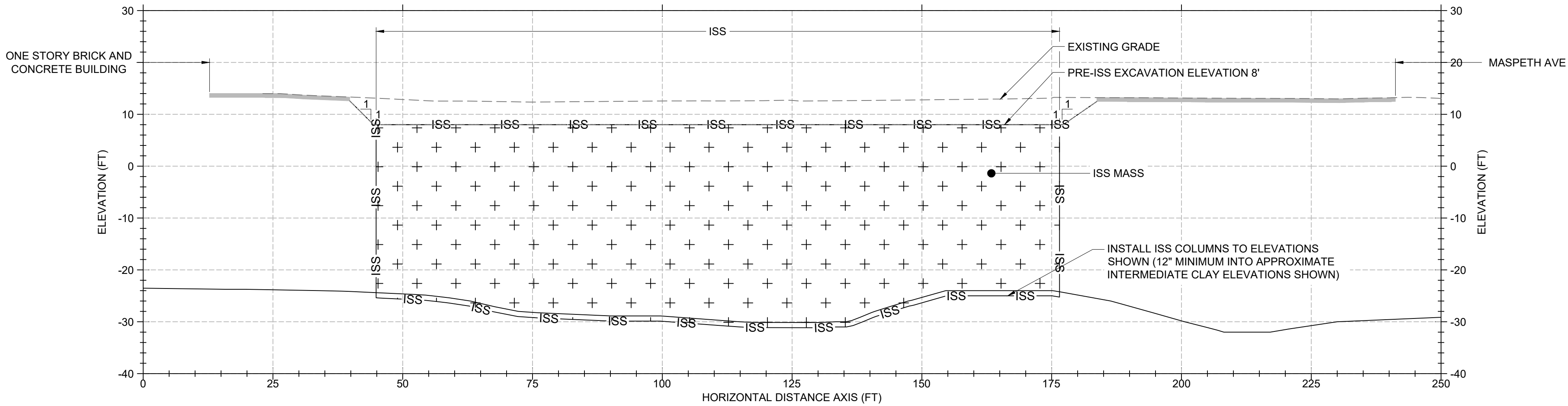
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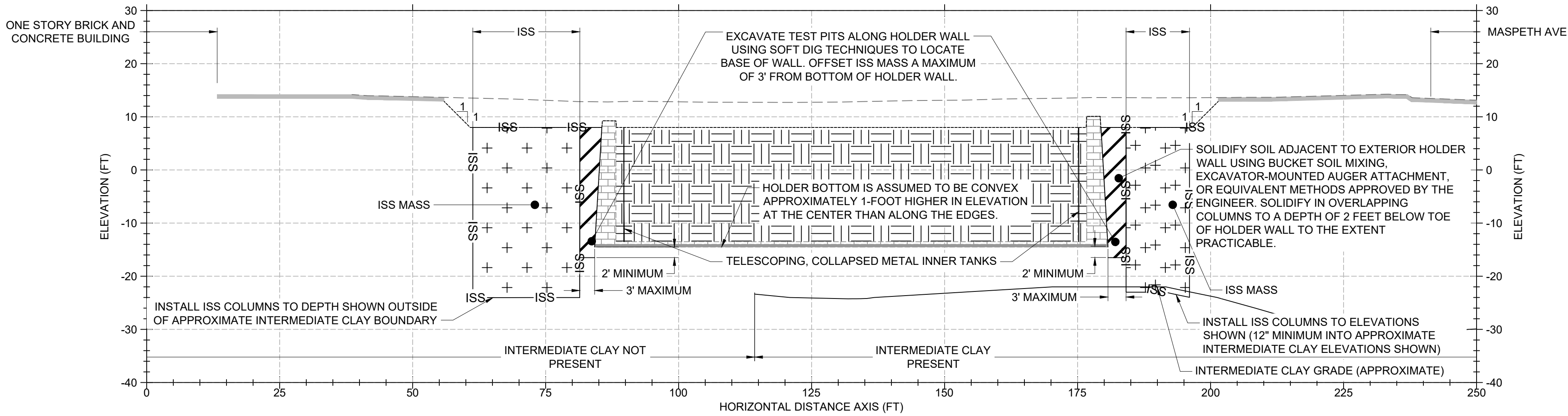
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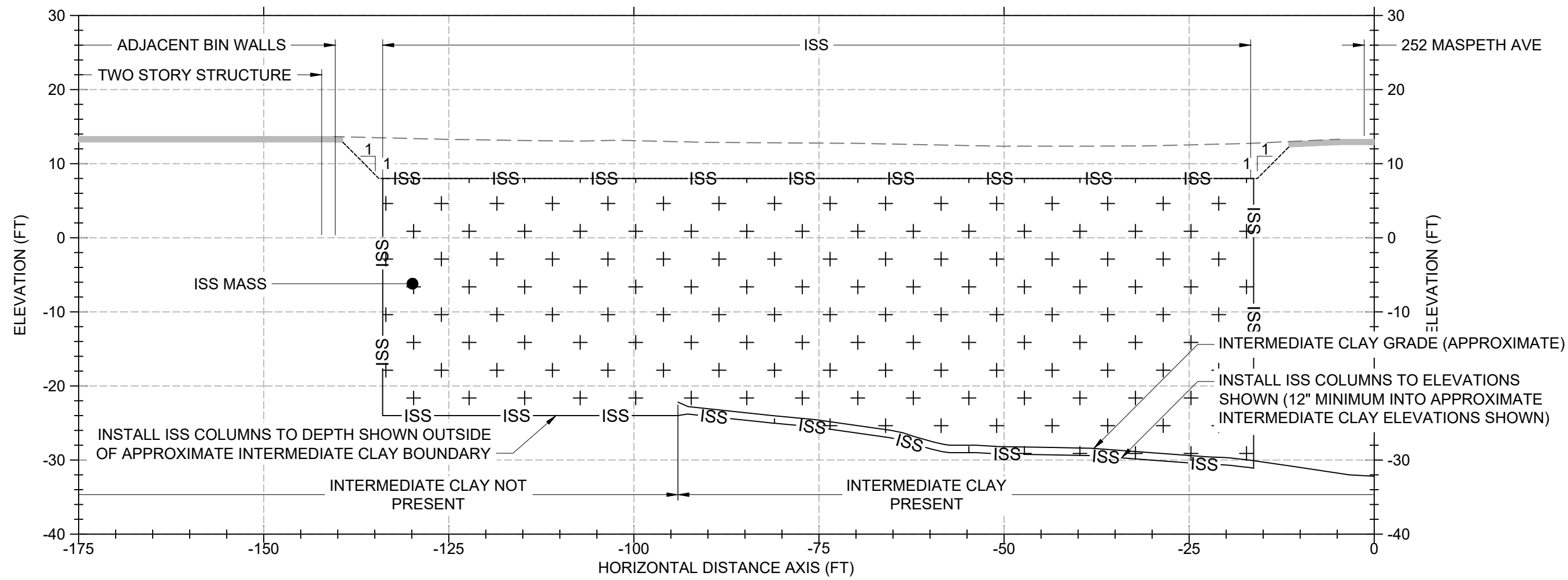
Y-AXIS 0+50



Y-AXIS 1+00



X-AXIS 0+75



ISS CROSS SECTIONS NOTES:

- EXISTING RECOVERY WELLS WITHIN HOLDER NOT SHOWN ON SECTIONS. SEE SHEET V-102 FOR HORIZONTAL AND VERTICAL LOCATION DATA.
- WELLS SHALL BE ABANDONED PRIOR TO REMOVAL AND IN ACCORDANCE WITH SPECIFICATIONS SECTION 01 11 00 SUMMARY OF WORK.



PROJECT

222 MASPETH AVENUE PARCEL
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K - EQUITY WORKS MANUFACTURED GAS PLANT (MGP) SITE
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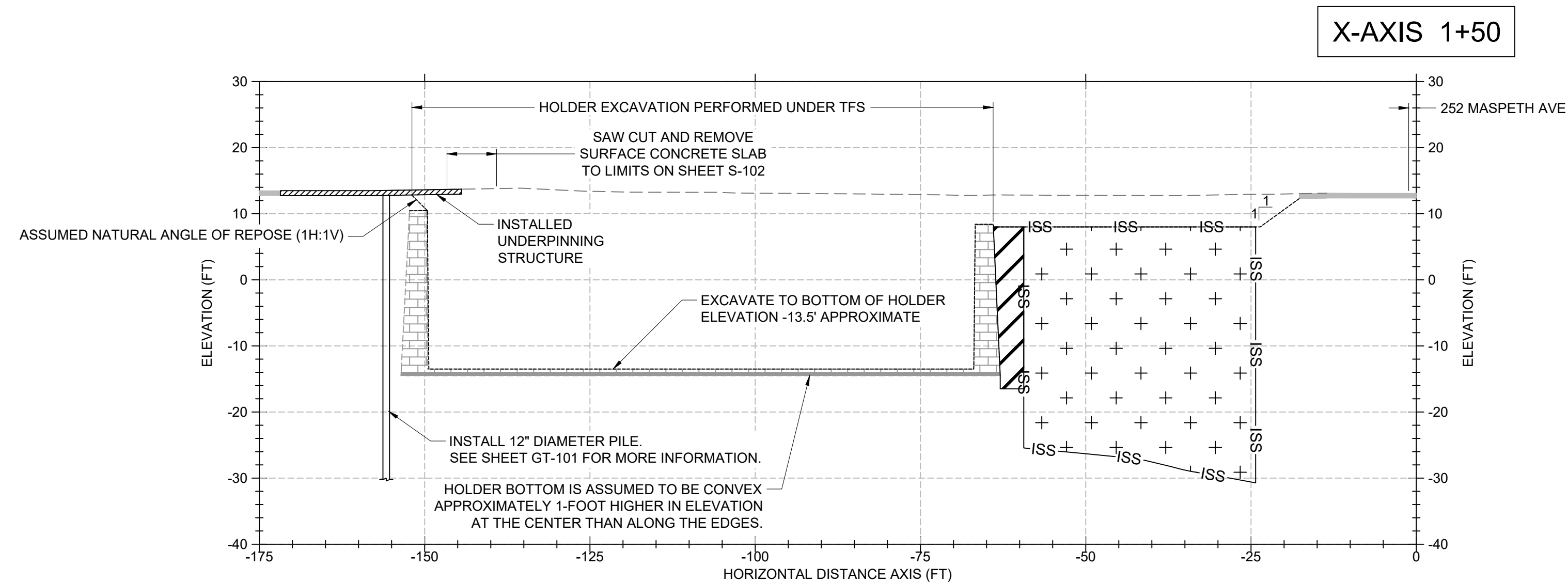
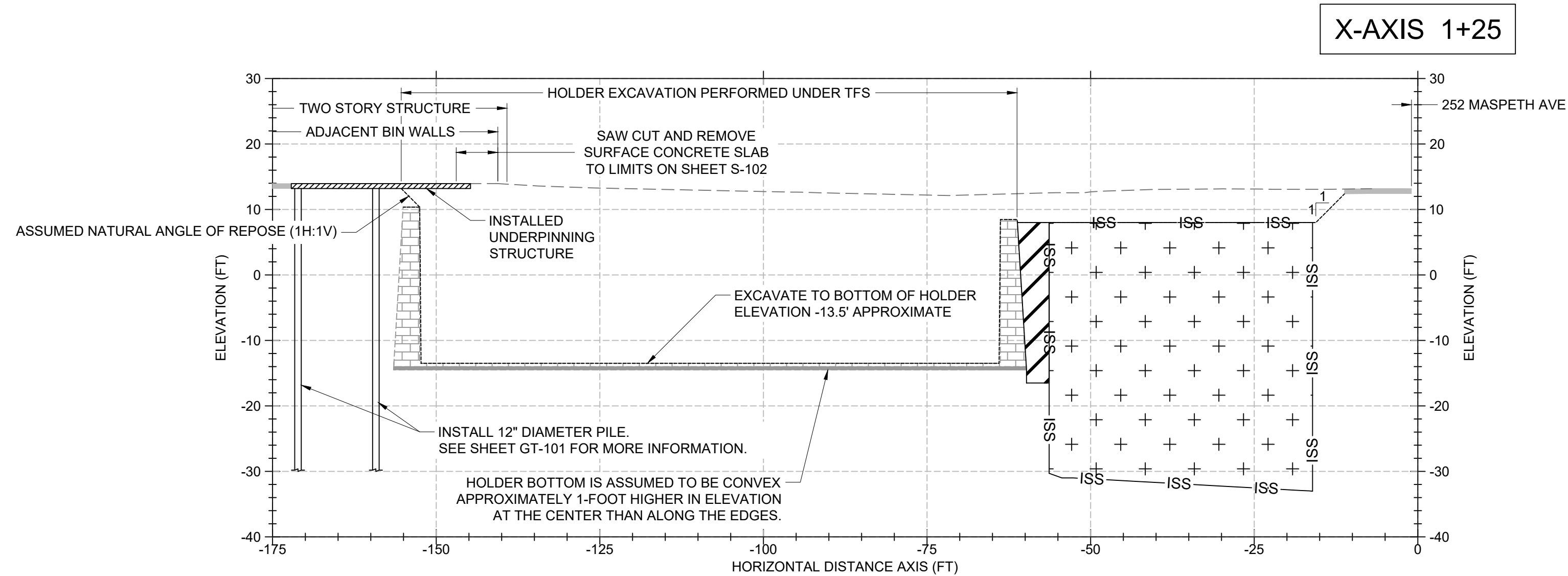
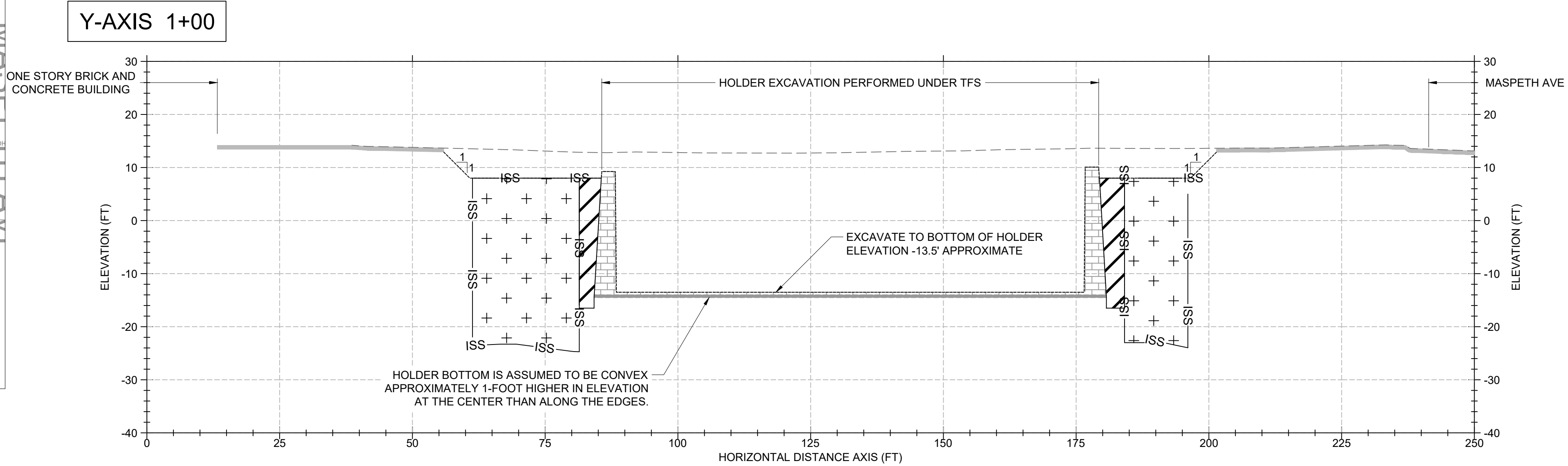
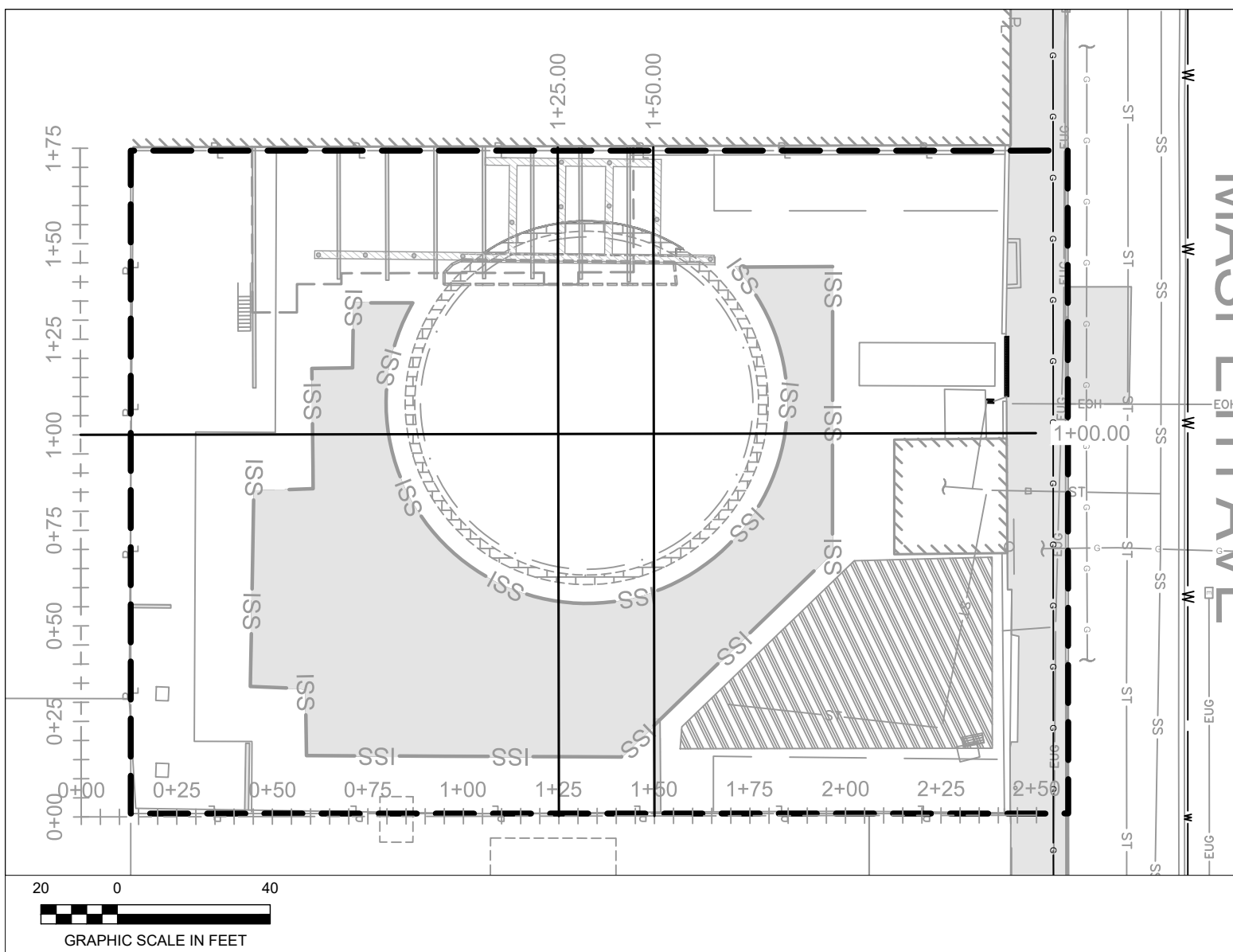
60137362

SHEET TITLE

ISS CROSS SECTION

SHEET NUMBER

X-102



HOLDER EXCAVATION CROSS SECTIONS NOTES:

1. EXISTING RECOVERY WELLS WITHIN HOLDER NOT SHOWN ON SECTIONS. SEE SHEET V-102 FOR HORIZONTAL AND VERTICAL LOCATION DATA.
2. WELLS SHALL BE ABANDONED PRIOR TO REMOVAL AND IN ACCORDANCE WITH SPECIFICATIONS SECTION 01 11 00 SUMMARY OF WORK.

PROJECT

222 MASPETH
AVENUE PARCEL

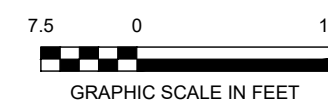
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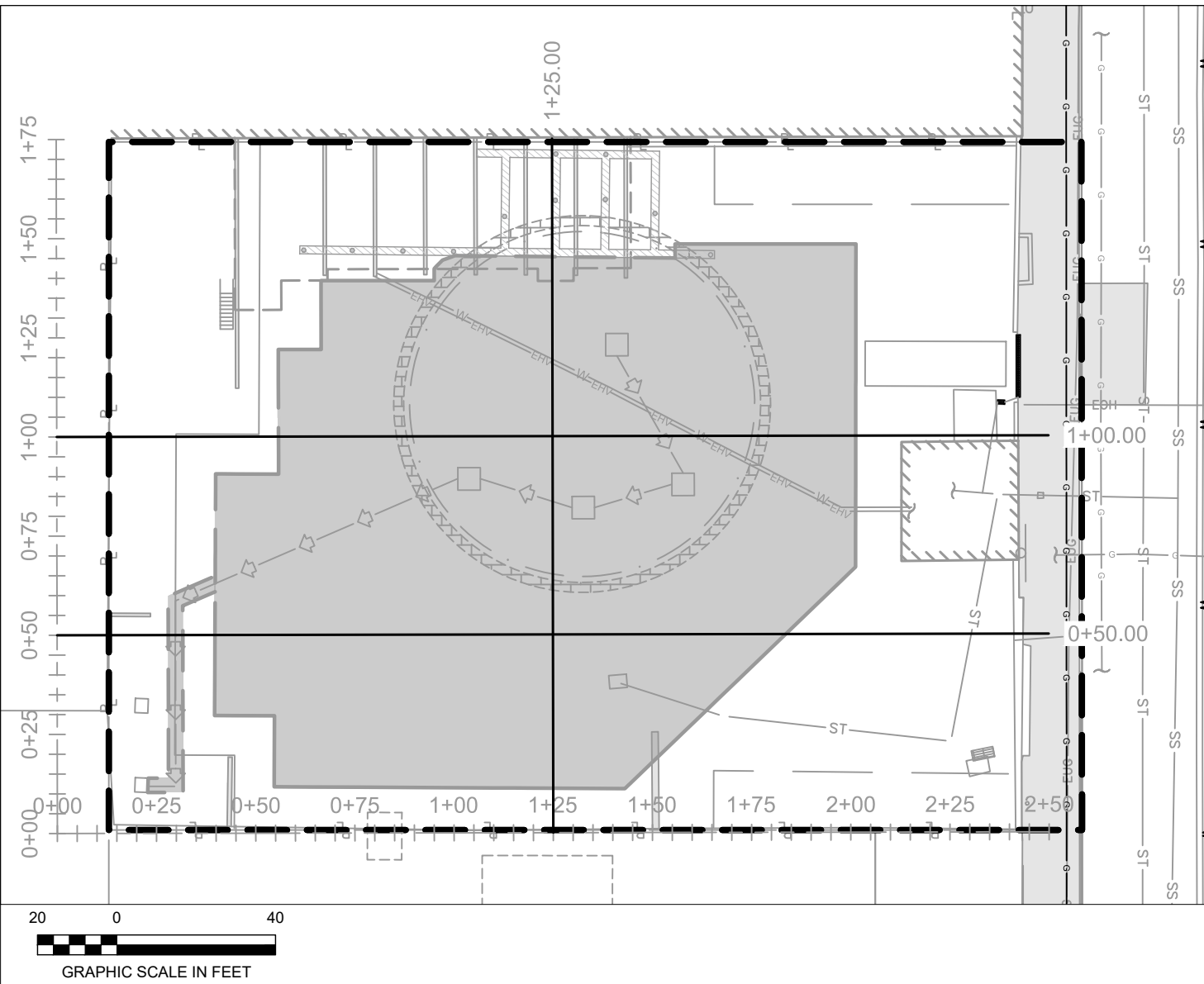
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SHEET TITLE

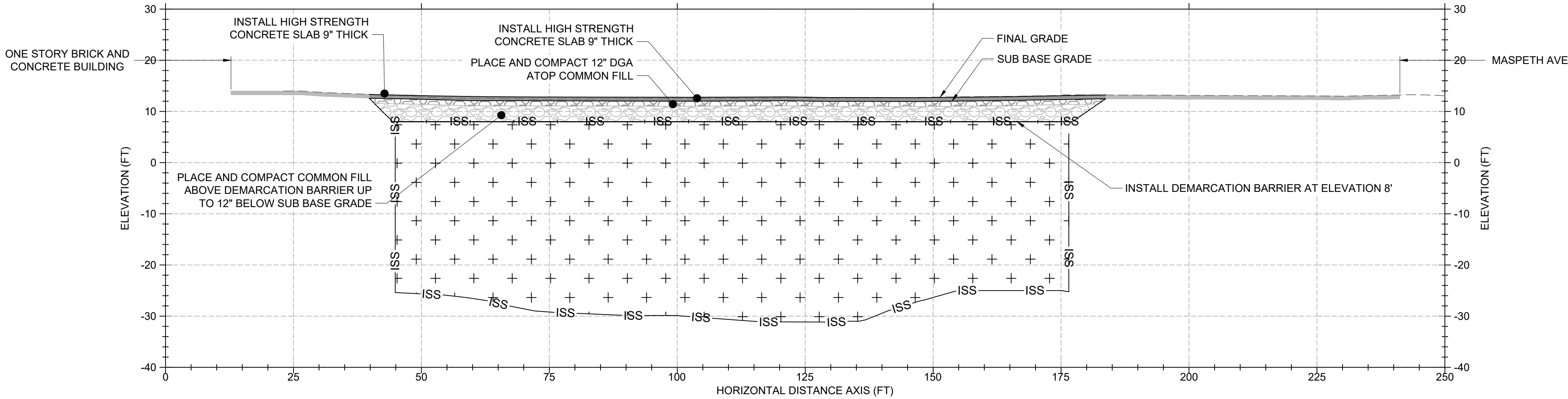
HOLDER EXCAVATION
CROSS SECTIONS

SHEET NUMBER

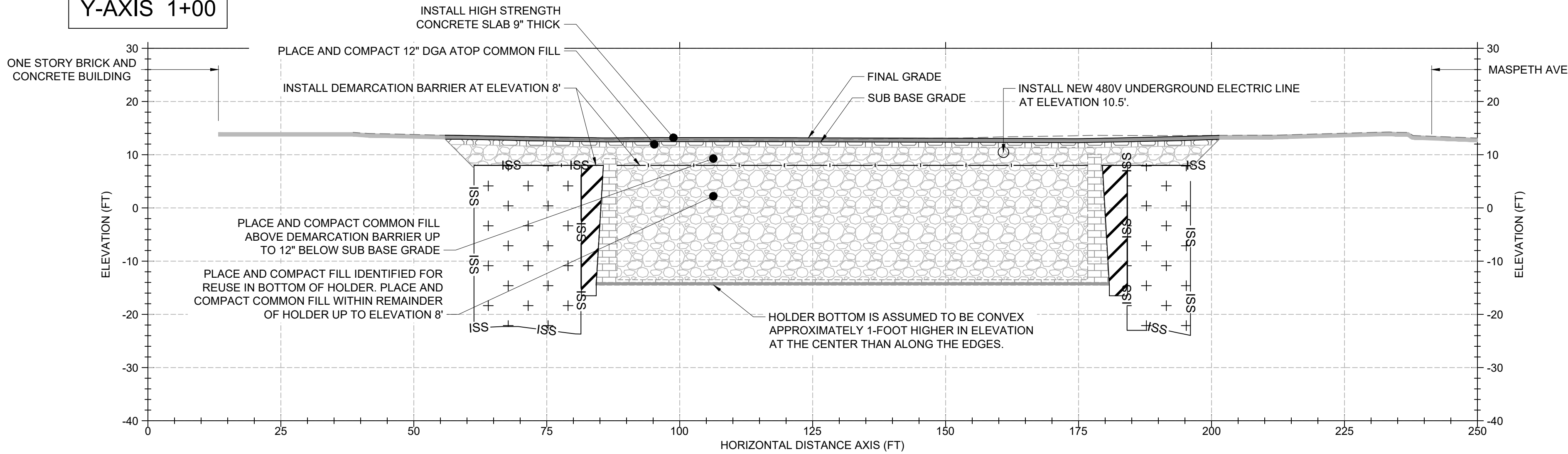
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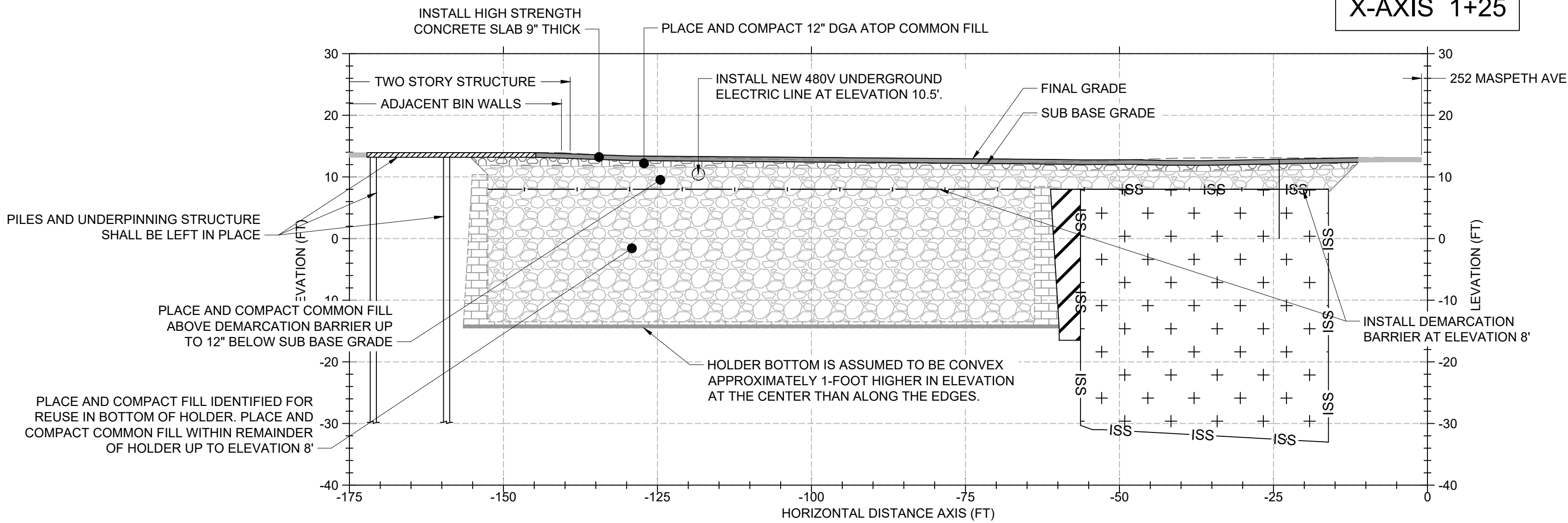
Y-AXIS 0+50



Y-AXIS 1+00



X-AXIS 1+25



RESTORATION CROSS SECTIONS NOTES:

1. PROPOSED RECOVERY WELL PIPING AND SYSTEM COMPONENTS NOT SHOWN ON THE RESTORATION CROSS SECTIONS. SEE SHEET C-501.

PROJECT

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SHEET TITLE

RESTORATION
CROSS SECTIONS

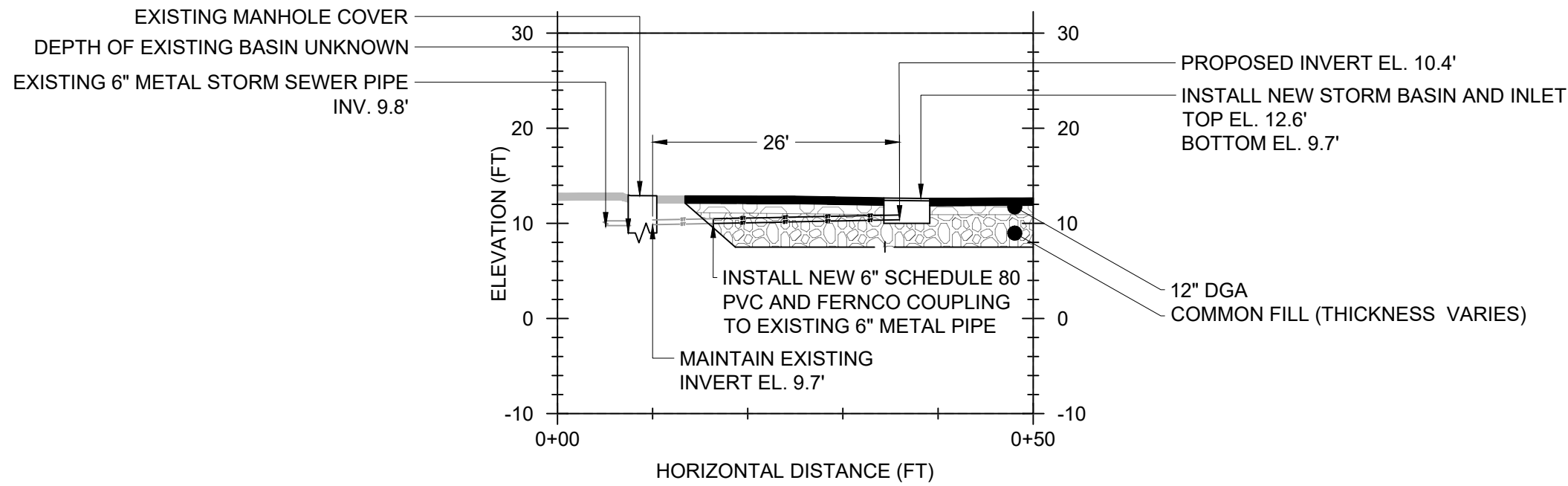
SHEET NUMBER

X-104

D-101

D-102

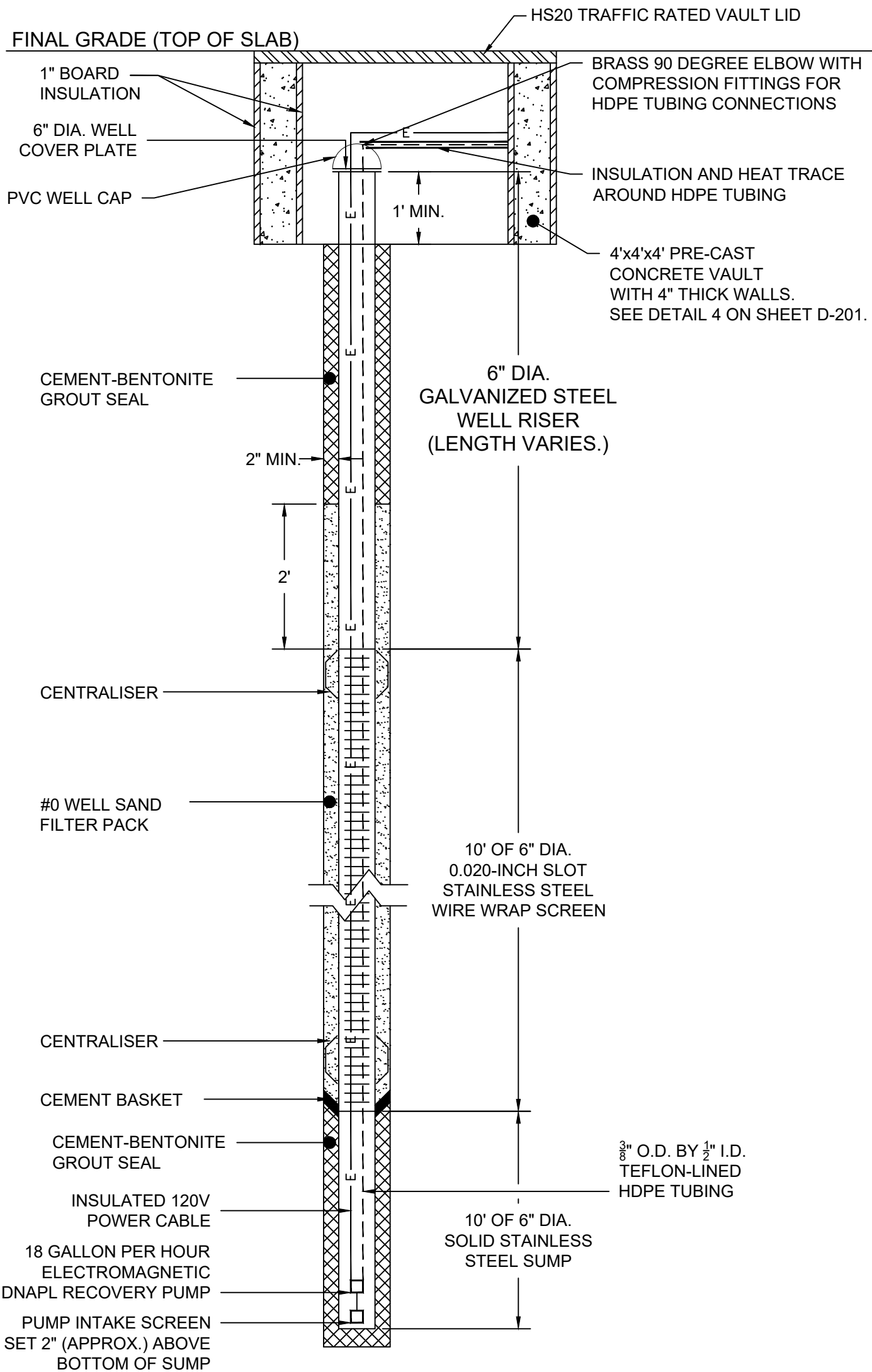
STORM SEWER CENTERLINE



1 STORM SEWER RESTORATION
D-201 NTS

STORM SEWER RESTORATION NOTES:

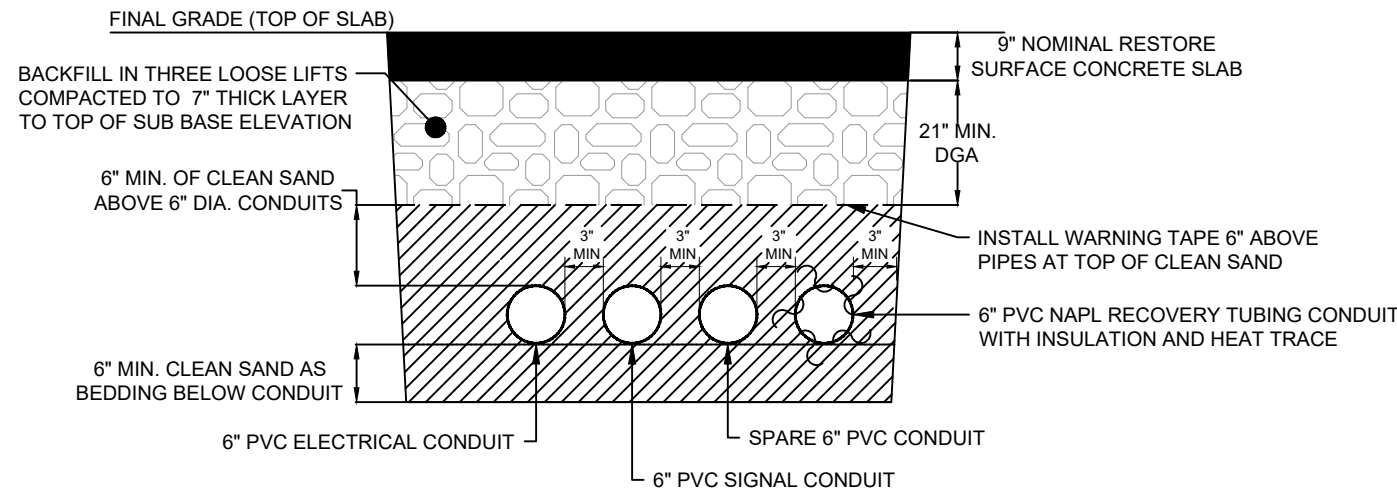
- ELEVATIONS SHOWN ARE IN NAVD88.
- CONTRACTOR SHALL VERIFY EXISTING INVERT ELEVATIONS AND INLET, MANHOLE, AND BASIN SIZE, DEPTHS, AND DIMENSIONS PRIOR TO REMOVAL ACTIVITIES AND REPORT ANY DISCREPANCIES TO THE CM.
- CONTRACTOR SHALL RESTORE TO KIND ALL STORM SEWER SYSTEM COMPONENTS REMOVED OR ALTERED UNLESS ALTERNATIVE MATERIALS, ELEVATIONS, OR DIMENSIONS ARE APPROVED BY THE ENGINEER.
- MINIMUM PIPE SLOPE SHALL BE 2% UNLESS OTHERWISE SPECIFIED BY THE CM IN WRITING.



2 RECOVERY WELL
D-201 NTS

RECOVERY WELL NOTES:

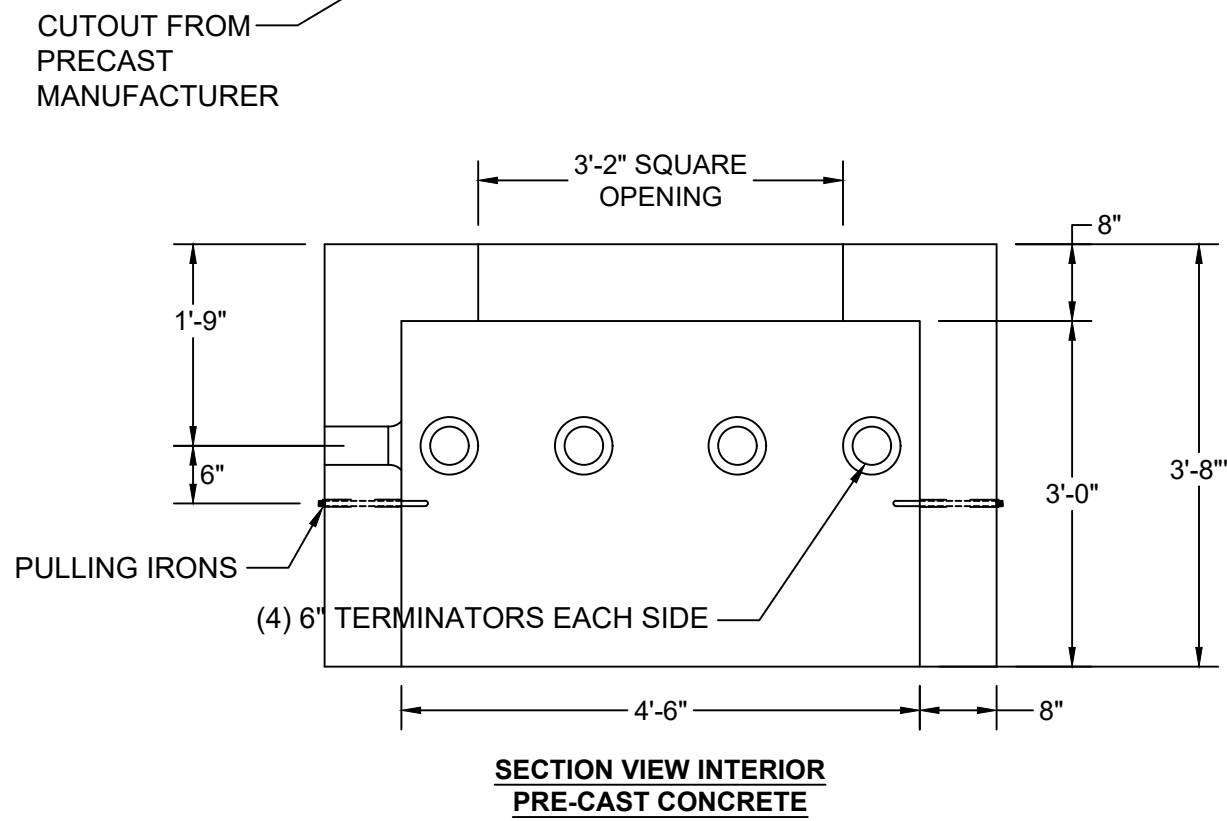
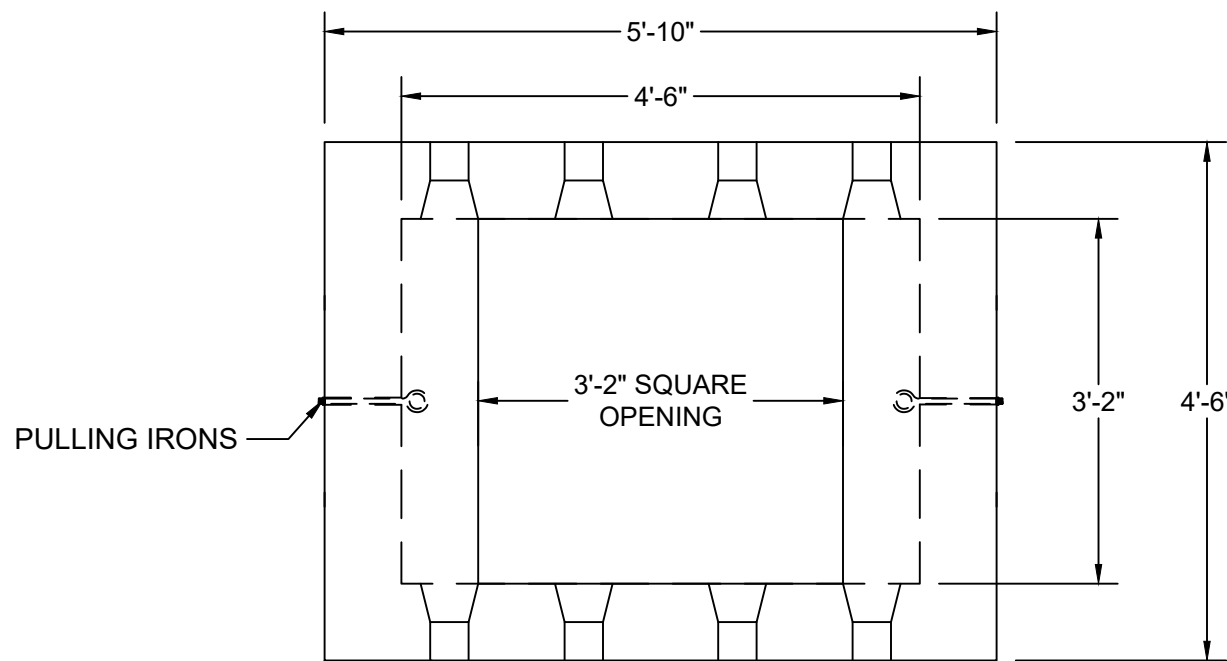
- FILL AND WELL MATERIALS SUBJECT TO ENGINEER APPROVAL.
- PRIOR TO START OF DRILLING WORK, CONTRACTOR SHALL MEET WITH ENGINEER AND CM DISCUSS PLAN FOR WELL INSTALLATION AND CONNECTION WORK AND REQUIREMENTS.



3 RECOVERY CONDUIT TRENCH SECTION
D-201 NTS

RECOVERY CONDUIT TRENCH SECTION NOTES:

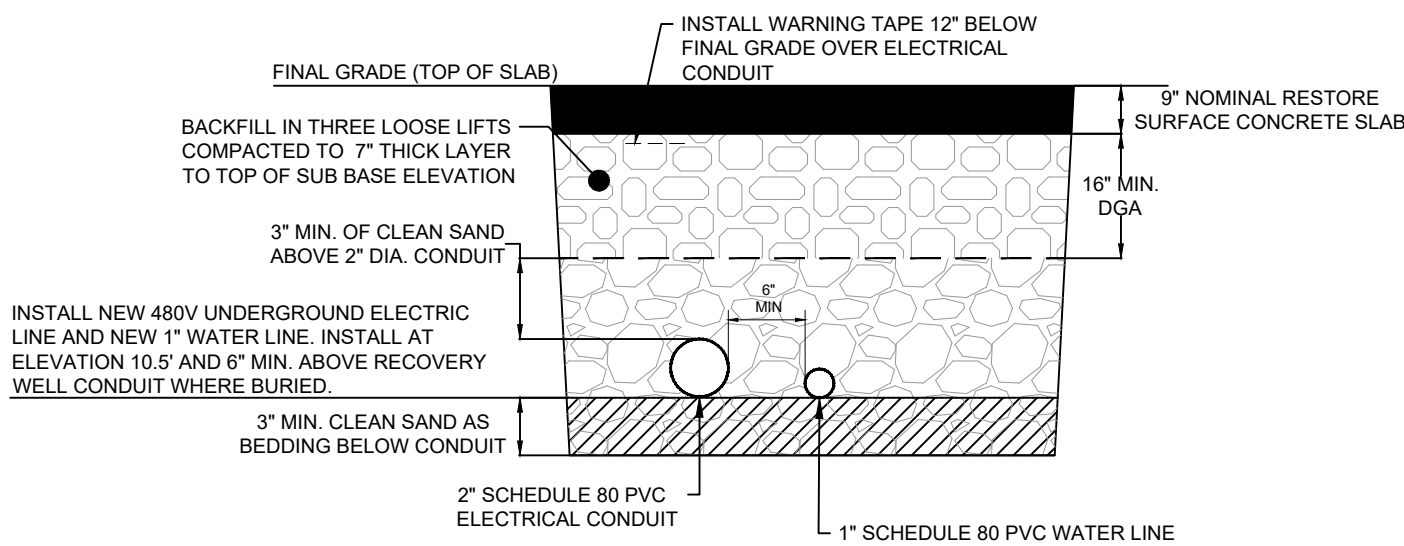
- ADDITIONAL DETAILS AND POTENTIAL REVISIONS TO REQUIRED CONDUIT QUANTITY TO BE PROVIDED IN THE ISSUED FOR BID DRAWING SET.
- PVC CONDUIT SHALL ONLY USE 45-DEGREE ELBOWS FOR BENDS, 90S NOT PERMITTED.



4 PRECAST CONCRETE VAULT
D-201 NTS

PRECAST CONCRETE VAULT NOTES:

- SEAL ANNULAR SPACE AROUND 6\"/>



5 480V ELECTRICAL CONDUIT AND WATER LINE TRENCH SECTION
C-501 NTS

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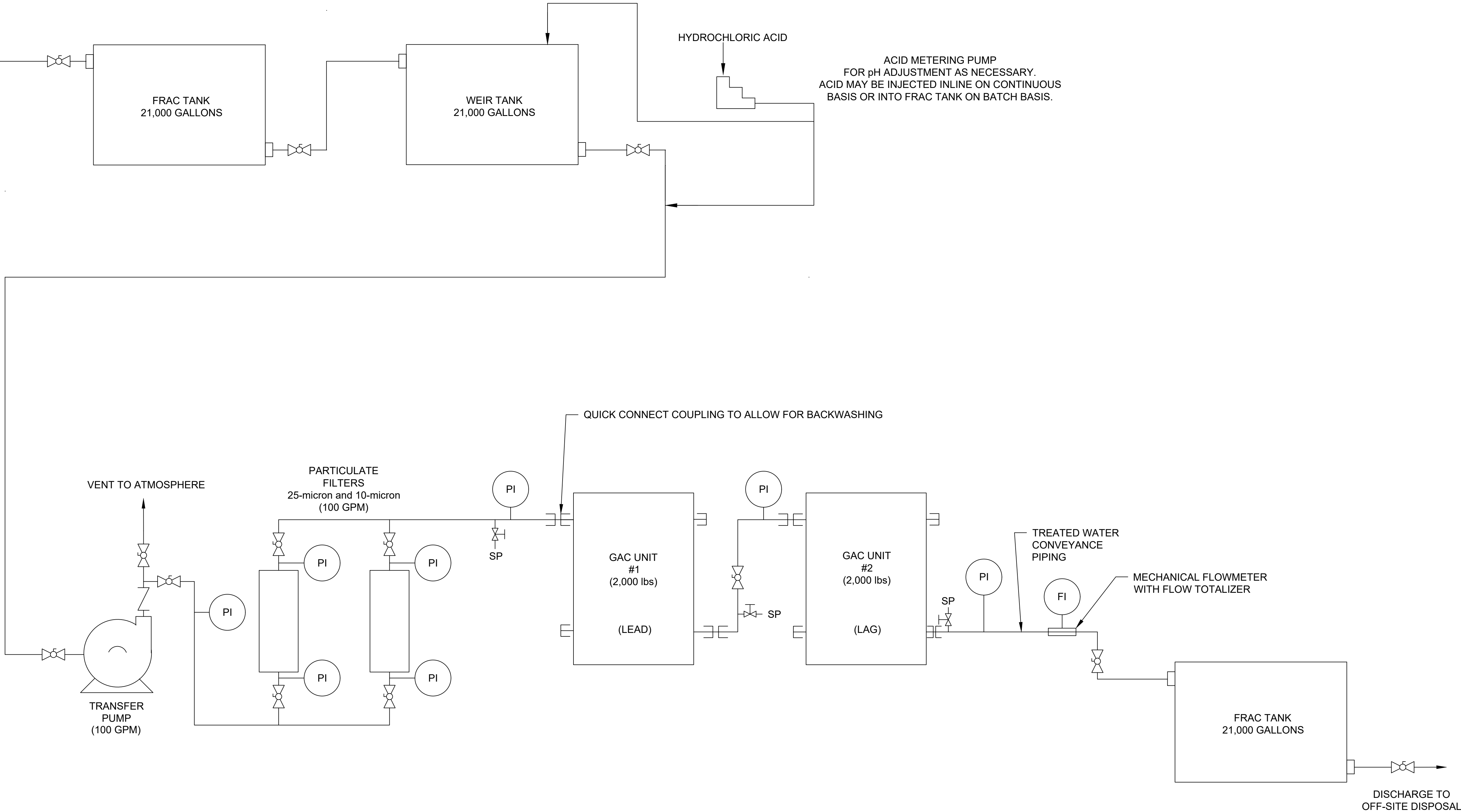
60137362

SHEET TITLE

RESTORATION DETAILS

SHEET NUMBER

D-201



SCALE: NOT TO SCALE

NOTE:

1. ADDITIONAL TREATMENT SCHEMATIC DETAILS TO BE DEVELOPED FOLLOWING DISCHARGE PERMIT APPLICATION.

LEGEND

- FI FLOW INDICATOR
- PI PRESSURE INDICATOR
- SP SAMPLE PORT
- GAC GRANULAR ACTIVATED CARBON
- Check Valve Symbol CHECK VALVE
- Ball Valve Symbol BALL VALVE



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SHEET TITLE

WATER TREATMENT PROCESS
FLOW DIAGRAM

SHEET NUMBER

P-101

GENERAL:

- ALL WORK SHALL CONFORM TO THE FOLLOWING CODES:
 - THE NEW YORK CITY BUILDING CODE 2014.
 - ACI 318-11 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
 - ACI 350 "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES".
 - ACI 530/530.1-13 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES".
 - AISC (LATEST EDITION) - SPECIFICATIONS FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND THE CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
 - AWS D1.1 (LATEST EDITION) "STRUCTURAL WELDING CODE".
 - OSHA - OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION REGULATIONS, STANDARDS - 29CFR.
- ALL CONSTRUCTION WILL BE UNDER NEW YORK CITY SPECIAL INSPECTION REQUIREMENTS.
- COORDINATE ALL WORK OF THESE DRAWINGS WITH WORK REQUIRED CIVIL DRAWINGS.
- THE PROJECT SPECIFICATIONS ARE A PART OF THE CONTRACT DOCUMENTS.

CAST-IN-PLACE CONCRETE:

- REINFORCED CONCRETE IN THE FOUNDATION SHALL BE OF NATURAL AGGREGATE CONFORMING TO ASTM C-33 AND SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI AT 28 DAYS UNLESS OTHERWISE NOTED.
- REINFORCEMENT SHALL BE HIGH TENSILE GRADE DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 60.
- CALCIUM CHLORIDE, ADMIXTURES CONTAINING MORE THAN 0.05 PERCENT CHLORIDE IONS SHALL NOT BE USED.
- FOLLOW ACI 318 AND ACI 350 RULES AS TO STIRRUPS, ANCHORAGE, TEMPERATURE REINFORCEMENT AND SPACING OF BARS IN BEAMS UNLESS OTHERWISE NOTED.
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL CONTAIN AN AIR ENTRAINED ADMIXTURE.
- REINFORCING BARS SPLICED AT POINTS OF STRESS TO BE LAPPED A MINIMUM OF 40 DIAMETERS.
- PROVIDE SUPPORTS FOR REINFORCEMENT IN ACCORDANCE WITH ACI STANDARDS.
- MINIMUM CONCRETE COVER SHALL BE 2.0" TYPICAL UNLESS OTHERWISE NOTED.
- POST INSTALLED ADHESIVE OR MECHANICAL ANCHORS SHALL BE MANUFACTURED BY HILTI OR APPROVED EQUAL.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" TYPICAL UNLESS OTHERWISE NOTED.

EXISTING CONDITIONS:

- WORK SHALL CONFORM TO THE LATEST EDITION OF ALL APPLICABLE REFERENCES, SPECIFICATIONS AND TO GOVERNING BUILDING CODES AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
- REMOVAL SHALL BE SUBJECT TO SPECIAL INSPECTION IN ACCORDANCE WITH CHAPTER 17 OF LATEST EDITION OF NYC BUILDING CODE.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS (AS-BUILT CONSTRUCTION) IN FIELD BEFORE PROCEEDING WITH WORK. ANY DEVIATIONS FROM THAT SHOWN ON THE EXISTING DRAWINGS SHALL BE REPORTED TO THE ENGINEER.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING ALL TEMPORARY SHORING, BRACING; AND SUPPORTS, ETC IN ORDER TO MAINTAIN SAFETY DURING CONSTRUCTION.
- ALL NEW OPENINGS TO BE CUT IN EXISTING BEAMS, SLABS AND WALLS SHALL BE DONE WITH A SAW IN ORDER NOT TO DISTURB THE INTEGRITY OF THE EXISTING REMAINING CONCRETE AND THE REINFORCEMENT THAT IS TO BE LEFT INTACT UNLESS OTHERWISE NOTED.
- WHERE EXISTING WORK IS TO BE CUT, THE CONTRACTOR SHALL PROVIDE ALL NEEDLING, SHORING, BRACING AND WEDGING AS REQUIRED AND SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY OF THE STRUCTURE DURING THE PERFORMANCE OF WORK.
- THE CONTRACTOR SHALL REPAIR AND PATCH ANY AREAS THAT ARE ALTERED OR DAMAGED DURING THE PROCESS OF ALTERATION.
- THE CONTRACTOR SHALL MAKE CONTINUOUS OBSERVATIONS OF THE EXISTING STRUCTURE DURING THE PERFORMANCE OF THE WORK. SHOULD ANY CONDITIONS, SUCH AS CRACKS AND ADDITIONAL DEFLECTIONS, BECOME EVIDENT, CONTRACTOR SHALL NOTIFY THE ENGINEER.
- EXISTING CONCRETE SURFACE PREPARATION: INTENTIONALLY ROUGHEN EXISTING CONCRETE SURFACES WHERE NEW CONCRETE IS BEING PLACED AGAINST THE EXISTING CONCRETE AND CONNECTED BY DRILLING AND EPOXY GROUTING. THE ENTIRE COMMON SURFACE WHERE THE EXISTING CONCRETE ABUTS THE NEW CONCRETE SHALL BE COATED WITH AN EPOXY GROUTING. THE ENTIRE COMMON SURFACE WHERE THE EXISTING CONCRETE ABUTS THE NEW SHALL BE COATED WITH AN EPOXY BONDING AGENT. FOLLOW ALL ADDITIONAL REQUIREMENTS OF SURFACE PREPARATION AS REQUIRED BY THE BONDING AGENT MANUFACTURER AND AS SHOWN IN THE PROJECT SPECIFICATIONS.
- THE CONTRACTOR SHALL PREPARE A CONDITION SURVEY REPORT OF THE EXISTING STRUCTURE PRIOR TO THE COMMENCEMENT OF WORK.

CONSTRUCTION PROCEDURE:

- EXCAVATE SOIL ADJACENT TO THE TANK WALLS AND AT NEW BEAM FOOTPRINT.
- CUT THE TANK WALL WHERE REQUIRED. LEAVE A 1.0" GAP BETWEEN TANK WALL AND BEAM SIDES AND BOTTOM AND PLACE A 1.0" THICK POLYSTYRENE SHEET TO SEPARATE THE BEAM AND THE TANK WALL.
- INSTALL PILES AS PER MANUFACTURER GUIDELINES TO ACHIEVE THE SPECIFIED CAPACITIES IN THE DRAWING.
- PLACE BEAM REINFORCEMENT AND POUR CONCRETE.
- LEAVE A 1" DEEP GAP BETWEEN THE TOP OF THE NEWLY POURED SLAB SECTION AND THE UNDERSIDE OF EXISTING WALL STRUCTURE. FILL THE GAP THOROUGHLY WITH NON-SHRINK GROUT 3 DAYS AFTER CONCRETE POURING.
- WAIT A MINIMUM OF 40 DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OF THE AREA WITHIN THE HOLDER DEEPER THAN ELEVATION 8' NAVD88 AND 25 DAYS FOR EXCAVATION OF THE AREA WITHIN THE 10' OFFSET FROM THE TWO-STORY STRUCTURE AS SHOWN ON C-201 UNLESS OTHERWISE APPROVED BY THE ENGINEER AND CM IN WRITING. THE 40 DAYS WAIT CAN BE REDUCED TO 20 DAYS IF A 'HIGH EARLY STRENGTH' (HIGH PERFORMANCE) CONCRETE IS USED. THE 'HIGH EARLY STRENGTH' MATERIAL SHALL BE PRESENTED IN THE TEP AT BID AND MUST BE APPROVED BY THE ENGINEER FOR USE.

SHOP DRAWINGS:

- SHOP DRAWINGS SUBMITTALS SHALL INCLUDE THE FOLLOWING UNLESS OTHERWISE NOTED:
 - CONCRETE MIX DESIGN.
 - FOUNDATION REINFORCING BARS.

DESIGN CRITERIA:

(BUILDING TO BE SUPPORTED BY UNDERPINNING)

STRUCTURE OCCUPANCY CATEGORY: II

LIVE LOAD:
UPPER FLOOR LIVE LOAD = 300 PSF
ROOF LIVE LOAD = 20 PSF

SNOW LOAD:
GROUND SNOW LOAD = 20.0 PSF
FLAT ROOF SNOW LOAD = 16.8 PSF
SNOW IMPORTANCE FACTOR = 1.0
SNOW EXPOSURE FACTOR = 1.0
THERMAL FACTOR = 1.2

WIND DESIGN DATA:
BASIC WIND SPEED = 117 MPH
WIND IMPORTANCE FACTOR = 1.0
EXPOSURE CATEGORY: C
RISK CATEGORY: II
WIND DIRECTIONALITY FACTOR = 0.85
TOPOGRAPHIC FACTOR = 1.00
LOAD CALCULATION PROCEDURE: ENVELOPE PROCEDURE (ASCE7-10, CH. 28)

EARTHQUAKE DESIGN DATA:
MAPPED SPECTRAL ACCELERATION FOR SHORT PERIOD = 0.276
MAPPED SPECTRAL ACCELERATION FOR 1 SECOND PERIOD = 0.071
SITE CLASS = D
SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.291 G, SD1 = 0.114 G
SEISMIC DESIGN CATEGORY = B
LONG-PERIOD TRANSITION PERIOD = 6.0 SEC
SITE MODIFIED PEAK GROUND ACCELERATION = 0.243



PROJECT

222 MASPETH AVENUE PARCEL
INTERIM REMEDIAL MEASURE
K - EQUITY WORKS MANUFACTURED GAS PLANT (MGP) SITE
BROOKLYN, KINGS COUNTY, NY
NYSDEC SITE NO. 224050
ORDER ON CONSENT INDEX NO. A2-0552-0606

CLIENT

NATIONAL GRID
www.nationalgridus.com

CONSULTANT

AECOM
250 APOLLO DRIVE
CHELMSFORD, MA 01824
www.aecom.com

REGISTRATION

ISSUE/REVISION

D	03-18-2022	100% DESIGN/IFB
C	03-02-2022	95% DESIGN
B	07-19-2021	90% DESIGN
A	10-28-2020	60% DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

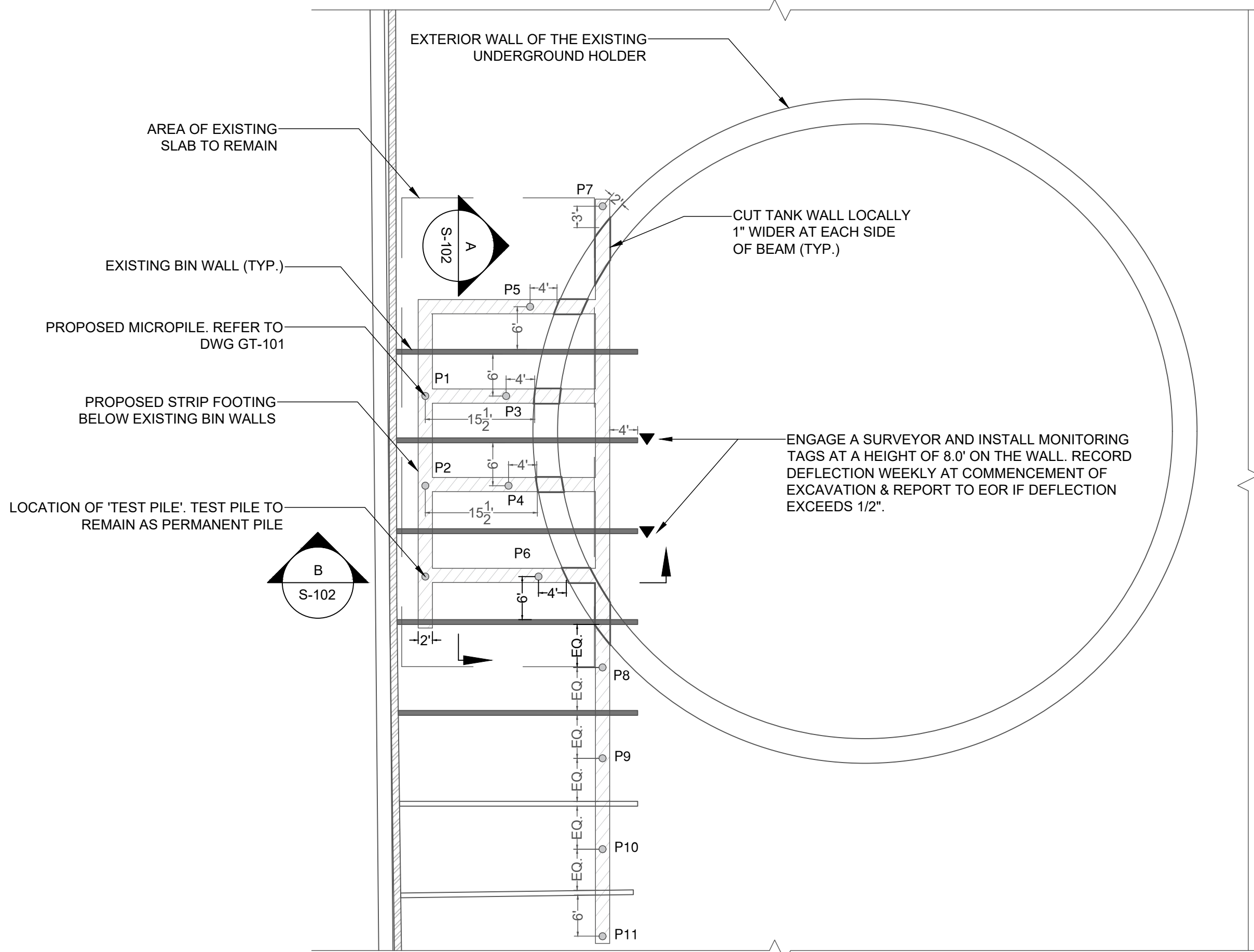
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SHEET TITLE

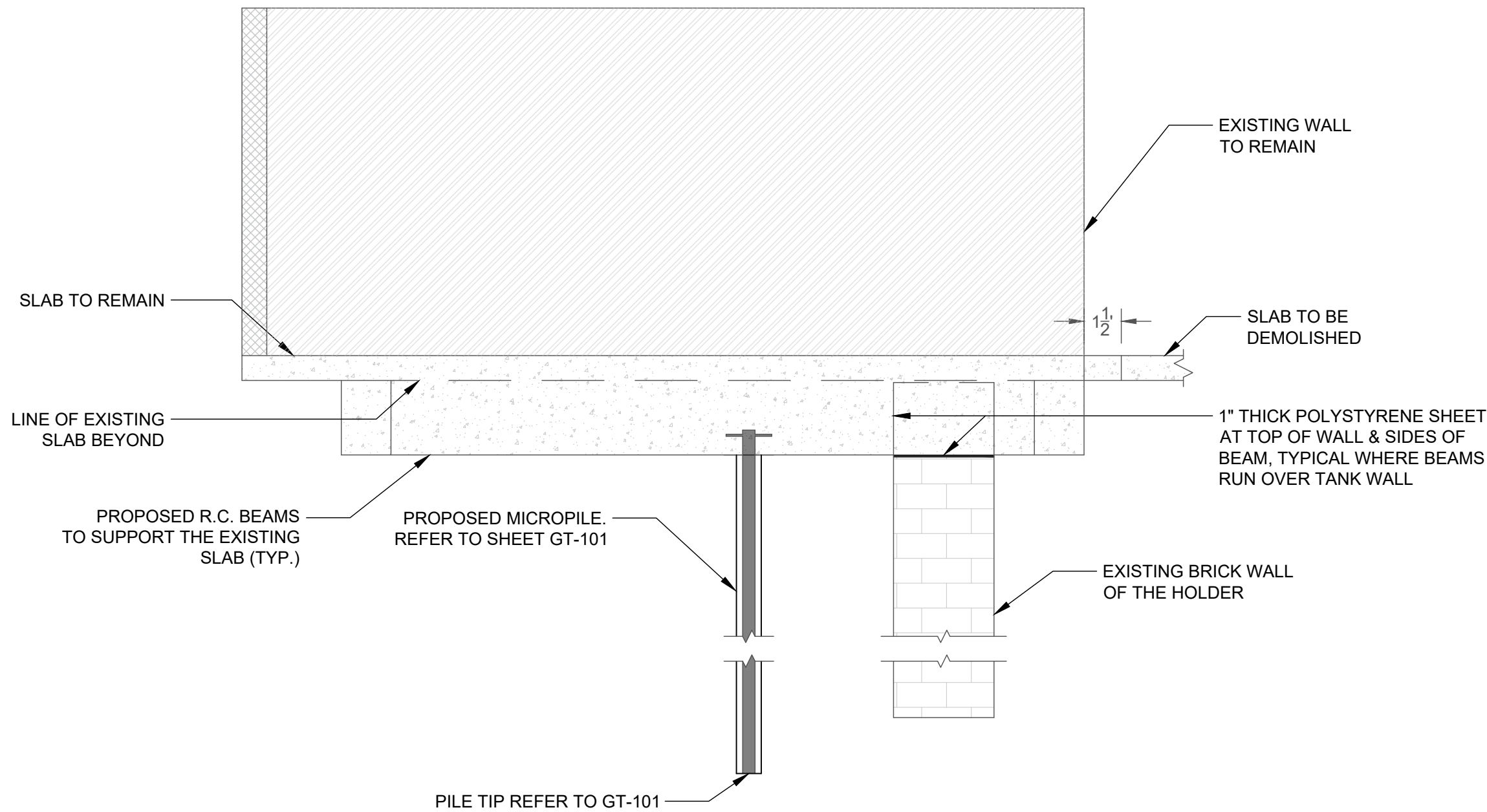
STRUCTURAL GENERAL NOTES

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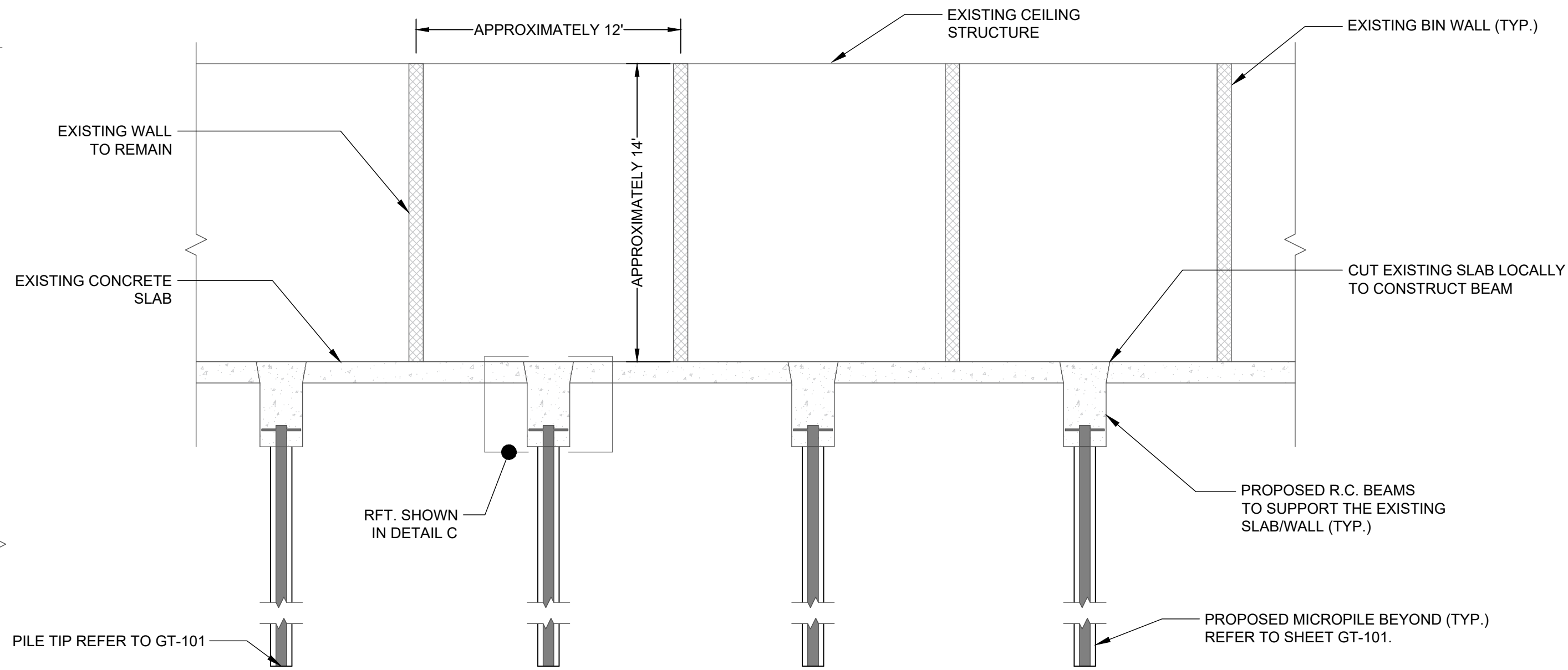
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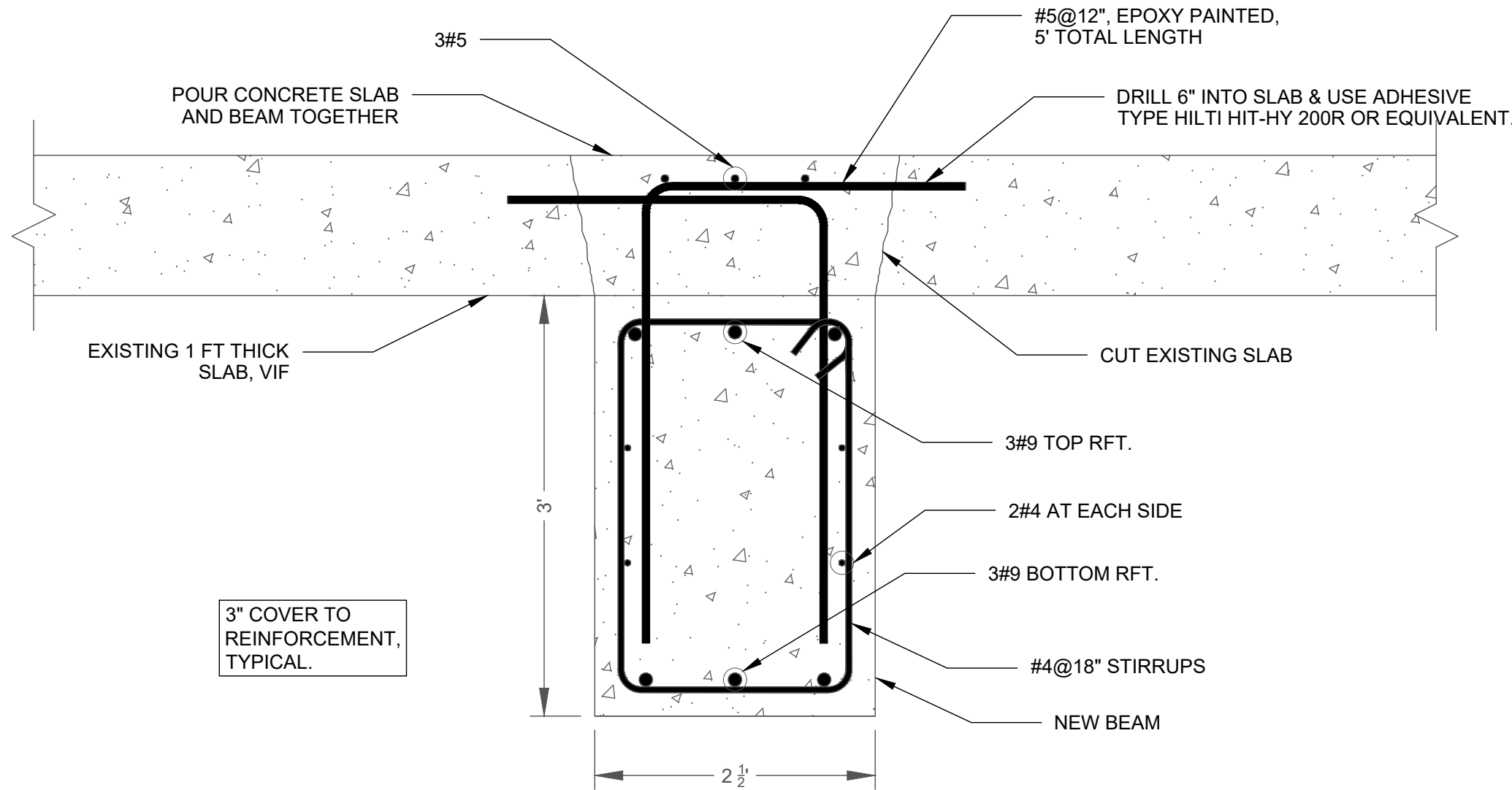
1 PLAN VIEW OF THE PROPOSED UNDERPINNING STRUCTURE
SCALE: 1"=14'



B SECTION B - PROPOSED STRUCTURAL SUPPORT
SCALE: 1"=5'



A SECTION A - PROPOSED STRUCTURAL SUPPORT
SCALE: 1"=5'



C TYPICAL CROSS-SECTION OF BEAM
SCALE: 1"=1'

PILE SAFE LOADING SCHEDULE (WORKING LOADS)			
PILE TAG	PILE COMPRESSION (KIPS)	PILE TENSION (KIPS)	PILE LATERAL LOAD (KIPS)
P1	50	50	15
P2	50	50	15
P3	100	0	15
P4	100	0	15
P5	120	0	15
P6	120	0	15
P7	150	0	15
P8	150	0	15
P9	50	0	15
P10	50	0	15
P11	50	0	15
TEST PILE	150	50	15

PROJECT

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K - EQUITY WORKS MANUFACTURED GAS PLANT (MGP) SITE
BROOKLYN, KINGS COUNTY, NY
NYSDEC SITE NO. 224050
ORDER ON CONSENT INDEX NO. A2-0552-0606

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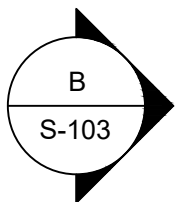
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SHEET TITLE

UNDERPINNING STRUCTURE

SHEET NUMBER

S-102



A
S-103



B
S-103

PROJECT

INTERIM REMEDIAL MEASURE

K - EQUITY WORKS MANUFACTURED
GAS PLANT (MGP) SITE
BROOKLYN, KINGS COUNTY, NY
NYSDEC SITE NO. 224050
ORDER ON CONSENT INDEX NO. A2-0552-0606

CLIENT

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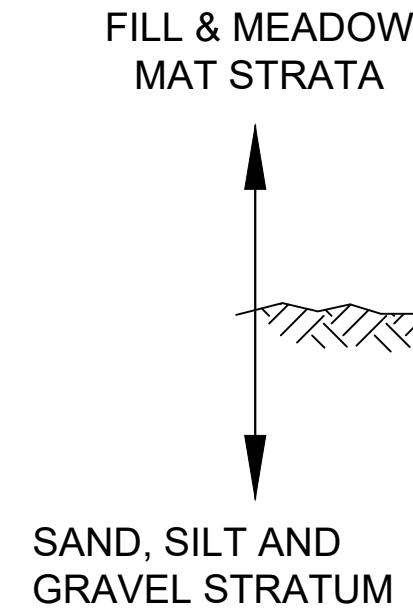
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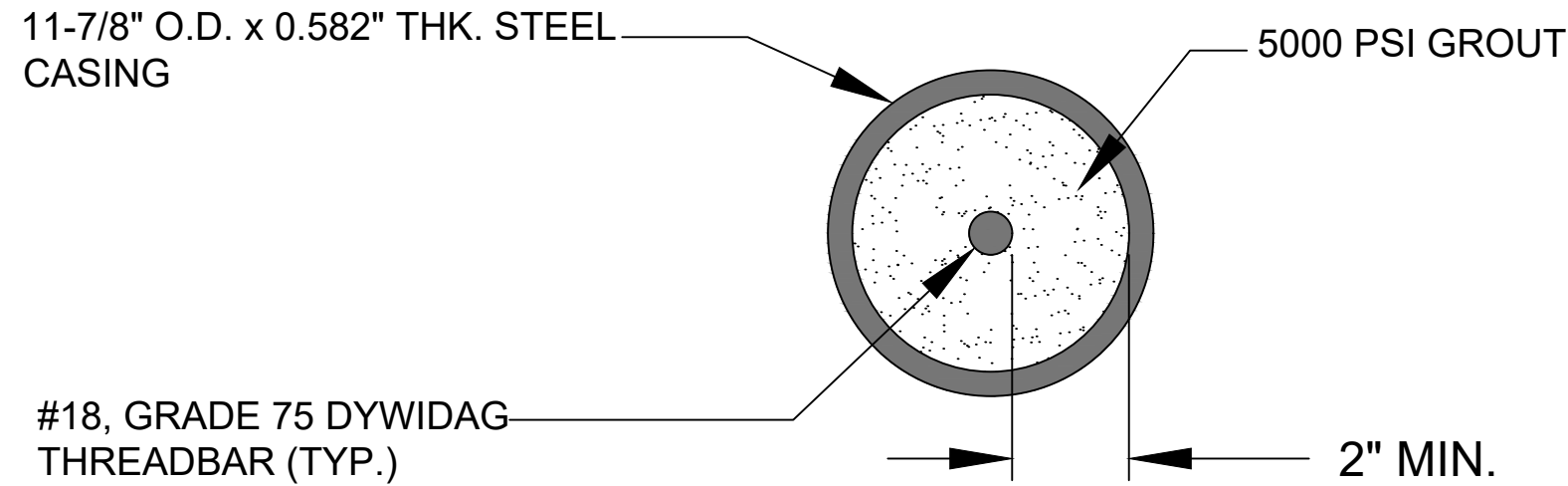
UNDERPINNING STRUCTURE

SHEET NUMBER

S-103



75 TONS
50 TONS
4 TONS
11 TONS



1. SET UP DRILL RIG ON PROPER LOCATION AND PLUMB THE MAST.
2. MAINTAIN A POSITIVE WATER HEAD INSIDE CASING DURING ALL DRILLING OPERATIONS.
3. INSTALL FIRST PIECE OF CASING WITH ATTACHED CARBIDE CUTTING TEETH.
4. DRILL CASING DOWN WITH EITHER WATER OR WATER AND POLYMER DRILLING MUD.
5. IF DUAL ROTARY DRILLING, MAINTAIN A SOIL PLUG 2 FEET OR TWO DIAMETERS OF THE CASING, WHICHEVER IS LARGER, AT THE BOTTOM OF THE CASING.
6. ADD ADDITIONAL CASING SEGMENTS UNTIL THE BOTTOM OF THE CASING REACHES THE PILE TIP ELEVATION.
7. INSTALL REINFORCING STEEL WITH CENTRALIZERS.
8. PLACE 3/4 IN. DIAMETER PVC GROUT TUBE TO WITHIN 2 FT OF THE BOTTOM OF THE MICROPILE AND PUMP GROUT UNTIL ALL DRILLING FLUID IS DISPLACED AND GOOD GROUT FLOWS OUT OF THE TOP OF THE MICROPILE.
9. SLOWLY WITHDRAW THE CASING TO THE ELEVATION SHOWN ON THIS DRAWING. PUMP GROUT WHILE WITHDRAWING THE CASING TO FILL THE VOID LEFT BY THE CASING.
10. CUT THE STEEL CASING AND REINFORCING STEEL TO PROPER ELEVATION AS SHOWN ON THE DRAWINGS.
11. MINIMUM BOND LENGTH SHALL BE CONFIRMED BY LOAD TEST BASED ON THE NEW YORK CITY BUILDING CODE REQUIREMENTS PRIOR TO INSTALLATION OF PRODUCTION PILES.

