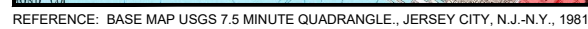


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BT RED HOOK, LLC
44 AND 62 FERRIS STREET / 219 SULLIVAN STREET
BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK



NO ALTERATIONS PERMITTED HEREON EXCEPT AS
PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE
NEW YORK STATE EDUCATION LAW

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G-002	GENERAL NOTES, REFERENCE DRAWINGS, ABBREVIATIONS AND LEGEND
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D:\GROUP-IMDV DB-K DAVIS LD-K DAVIS PIC: PM: C GERACI TW: D NODINE LVR: ON="OFF=REF" ACADVER: 23.0S (LMS TECH) PAGES: 10/252019 9:41 AM BY: STOWELL GARY C:\Users\stowell\BIM 360\Arcadis\ANA - UNITED PARCEL SERVICE\Project Files\RED HOOK 4 DESIGN\2019\B0038984-01-01-0002-GENERAL NOTES.dwg LAYOUT: G-002 SAVED: 10/25/2019 9:08 AM

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GENERAL NOTES:

SAFETY:

- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. SUCH RESPONSIBILITY DOES NOT RELIEVE SUBCONTRACTORS OF THEIR RESPONSIBILITY FOR THE SAFETY OF PERSONS OR PROPERTY IN THE PERFORMANCE OF THEIR WORK, NOR FOR COMPLIANCE WITH APPLICABLE SAFETY LAWS AND REGULATIONS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE THE NECESSARY PROTECTION TO PREVENT DAMAGE, INJURY, OR LOSS TO: ALL PERSONS ON THE SITE, REGARDLESS OF EMPLOYER, OR WHO MAY BE AFFECTED BY THE WORK; ALL THE WORK AND MATERIALS AND EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE ON OR OFF THE SITE; AND OTHER PROPERTY AT THE SITE OR ADJACENT THERETO, INCLUDING TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADWAYS, STRUCTURES, OTHER WORK IN PROGRESS, UTILITIES, AND UNDERGROUND FACILITIES NOT DESIGNATED FOR REMOVAL, RELOCATION, OR REPLACEMENT IN THE COURSE OF CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS RELATING TO THE SAFETY OF PERSONS OR PROPERTY, OR TO THE PROTECTION OF PERSONS OR PROPERTY FROM DAMAGE, INJURY, OR LOSS; AND SHALL ERECT AND MAINTAIN ALL NECESSARY SAFEGUARDS FOR SUCH SAFETY AND PROTECTION. CONTRACTOR SHALL NOTIFY OWNER, CONSTRUCTION MANAGER, AND ENGINEER; THE OWNERS OF ADJACENT PROPERTY, UNDERGROUND FACILITIES, AND OTHER UTILITIES; AND OTHER CONTRACTORS AND UTILITY OWNERS PERFORMING WORK AT OR ADJACENT TO THE SITE, WHEN PROSECUTION OF THE WORK MAY AFFECT THEM, AND SHALL COOPERATE WITH THEM IN THE PROTECTION, REMOVAL, RELOCATION, AND REPLACEMENT OF THEIR PROPERTY OR WORK IN PROGRESS.
- THE SITE IS CLASSIFIED AS A HAZARDOUS WASTE SITE. PRESENCE OF CONTAMINANTS, WHERE KNOWN TO OWNER AND ENGINEER, ARE INDICATED IN THE REPORTS AND DRAWINGS (IF ANY) OF SUCH CONTAMINANTS IDENTIFIED IN THE NOT PART OF CONTRACT DOCUMENTS.
- EACH EMPLOYER WORKING AT THE SITE SHALL DEVELOP AND IMPLEMENT A WRITTEN HEALTH AND SAFETY PLAN FOR ITS EMPLOYEES AND OTHER INDIVIDUALS FOR WHOM SUCH EMPLOYER IS RESPONSIBLE. HEALTH AND SAFETY PLAN SHALL INCLUDE PROCEDURES THAT WILL BE USED TO ENSURE THE SAFE HANDLING OF CONTAMINANTS DURING EXCAVATING, LOADING, AND TRANSPORTING ACTIVITIES. HEALTH AND SAFETY PLAN SHALL COMPLY WITH 29 CFR 1904, 29 CFR 1910, 29 CFR 1926, OTHER LAWS AND REGULATIONS, AND SPECIFICATIONS SECTION 01 35 29 (CONTRACTOR'S HEALTH AND SAFETY PLAN).

EXISTING CONDITIONS, STRUCTURES, AND UNDERGROUND FACILITIES:

- SITE CONDITIONS AT THE TIME OF CONSTRUCTION MAY BE DIFFERENT THAN THOSE SHOWN OR INDICATED ON THE DRAWINGS. CONTRACTOR SHALL VERIFY THE ACCURACY AND COMPLETENESS OF THE INFORMATION SHOWN OR INDICATED ON THE DRAWINGS BEFORE STARTING WORK. PROMPTLY NOTIFY CONSTRUCTION MANAGER AND ENGINEER IN WRITING OF ANY DISCREPANCIES WITH THE POTENTIAL TO AFFECT THE WORK.
- NOT PART OF CONTRACT DOCUMENTS PROVIDE INDICATE INFORMATION AVAILABLE RELATIVE TO SUBSURFACE CONDITIONS AT THE SITE. SUCH INFORMATION AND DATA ARE NOT INTENDED AS A REPRESENTATION OR WARRANTY OF CONTINUITY OF CONDITIONS BETWEEN SOIL BORINGS OR TEST PITS, NOR OF GROUNDWATER LEVELS AT DATES AND TIMES OTHER THAN DATE AND TIME WHEN MEASURED, NOR THAT PURPOSE OF OBTAINING THE INFORMATION AND DATA WERE APPROPRIATE FOR USE BY CONTRACTOR. OWNER AND ENGINEER WILL NOT BE RESPONSIBLE FOR INTERPRETATIONS OR CONCLUSIONS DRAWN THEREFROM BY CONTRACTOR.
- SOIL BORINGS AND OTHER EXPLORATORY OPERATIONS MAY BE MADE BY CONTRACTOR, AT NO ADDITIONAL COST TO OWNER. COORDINATE CONTRACTOR-PERFORMED TEST BORINGS AND OTHER EXPLORATORY OPERATIONS WITH OWNER, UTILITY OWNERS, AND OTHERS AS APPROPRIATE. PERFORM SUCH EXPLORATIONS WITHOUT DISRUPTING OR OTHERWISE ADVERSELY AFFECTING OPERATIONS OF OWNER, UTILITY OWNERS, OR OTHERS. COMPLY WITH LAWS AND REGULATIONS RELATIVE TO REQUIRED NOTIFICATIONS.
- UNDERGROUND FACILITIES KNOWN TO OWNER AND ENGINEER, EXCEPT WATER, GAS, SEWER, ELECTRIC, AND COMMUNICATIONS SERVICES TO INDIVIDUAL BUILDINGS AND PROPERTIES, ARE SHOWN ON THE DRAWINGS. INFORMATION SHOWN FOR UNDERGROUND FACILITIES IS THE BEST AVAILABLE TO OWNER AND ENGINEER BUT, IS NOT GUARANTEED TO BE CORRECT OR COMPLETE.
- CONTRACTOR SHALL EXPLORE AHEAD OF SELECTIVE DEMOLITION, TRENCHING, EXCAVATING, PILE DRIVING, OR OTHER SUBSURFACE WORK AND SHALL SUFFICIENTLY UNCOVER UNDERGROUND FACILITIES THAT WILL OR MAY INTERFERE WITH THE WORK TO DETERMINE THEIR LOCATION, TO PREVENT DAMAGE TO UNDERGROUND FACILITIES, AND TO PREVENT SERVICE INTERRUPTION TO STRUCTURES AND PROPERTIES SERVED BY UNDERGROUND FACILITIES.
- COORDINATE WITH UTILITY OWNERS FOR SHUT OFF OF SERVICES IN ACTIVE PIPING AND CONDUITS, AND FOR TESTING, SHUT OFF OF SERVICES, AND DRAINING, PURGING, OR DE-ENERGIZING WHERE SPECIFIED OR REQUIRED OF PIPING AND CONDUITS OF UNKNOWN STATUS. WHEN REQUIRED BY UTILITY OWNER, OWNER WILL ASSIST CONTRACTOR WITH UTILITY OWNER NOTIFICATIONS. COMPLETELY REMOVE BURIED PIPING AND CONDUITS INDICATED FOR REMOVAL AND NOT OTHERWISE INDICATED AS BEING ABANDONED OR TO REMAIN IN PLACE.
- CONTRACTOR SHALL SUSTAIN IN THEIR PLACES AND PROTECT FROM DIRECT OR INDIRECT INJURY ALL UNDERGROUND FACILITIES AND SURFACE STRUCTURES LOCATED WITHIN OR ADJACENT TO THE LIMITS OF THE WORK. SUCH SUSTAINING AND SUPPORTING SHALL BE DONE CAREFULLY AND AS REQUIRED BY THE PARTY OWNING OR CONTROLLING SUCH FACILITY OR STRUCTURE.
- IF CONTRACTOR DAMAGES AN UNDERGROUND FACILITY, OR THE MATERIAL SURROUNDING OR SUPPORTING THE SAME, CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER, ENGINEER, AND THE OWNER OF THE DAMAGED FACILITY AND RESTORE IT TO ITS PRE-CONSTRUCTION CONDITION, IN ACCORDANCE WITH REQUIREMENTS OF THE OWNER OF THE DAMAGED FACILITY AND THE GENERAL CONDITIONS. SUCH REPAIR OR RESTORATION WORK SHALL BE PERFORMED AT NO ADDITIONAL COST TO OWNER.
- DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY OWNER OR OTHERS, EXCEPT WHEN SUCH INTERRUPTION IS INDICATED IN THE CONTRACT DOCUMENTS OR WHEN ALLOWED IN WRITING BY ENGINEER AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES ARE PROVIDED BY CONTRACTOR FOR THE AFFECTED STRUCTURE OR PROPERTY.

SURVEY:

- BASE MAP MODIFIED FROM DRAWING TITLED "PARTIAL TOPOGRAPHIC SURVEY FOR: ARCADIS U.S., INC. SITE: RED HOOK 3 & 4" DATED DECEMBER 14, 2018 PREPARED BY DPK LAND SURVEYING, LLC.
- PROJECT HORIZONTAL REFERENCE DATUM IS NAD83, NEW YORK STATE PLANE EAST ZONE.
- PROJECT VERTICAL REFERENCE DATUM IS NAVD88.

GENERAL REFERENCE DRAWINGS:

WASTE MANAGEMENT:

- CONTRACTOR IS RESPONSIBLE FOR SCHEDULING, COORDINATING, LOADING, TRANSPORTING, AND DISPOSING OF WASTE MATERIALS AT APPROPRIATE, OWNER-APPROVED FACILITIES IN ACCORDANCE WITH LAWS AND REGULATIONS AND SPECIFICATION SECTIONS 01 74 19 (CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL) AND 02 60 05 (CONTAMINATED WASTE MANAGEMENT AND DISPOSAL).
- EXISTING SITE FEATURES NOT SPECIFICALLY SHOWN OR INDICATED ON THE DRAWINGS MAY REQUIRE REMOVAL BY CONTRACTOR TO ACCOMMODATE THE WORK. THE REMOVAL OF SUCH FEATURES SHALL NOT BE PERFORMED WITHOUT THE PRIOR APPROVAL OF OWNER OR ENGINEER.
- ALL WATER GENERATED DURING THE PROJECT (E.G., FROM EXCAVATION/MATERIAL DEWATERING, DECONTAMINATION OF EQUIPMENT, ETC.) SHALL BE COLLECTED, EXTRACTED, CONVEYED, CONTAINERIZED, TREATED, AND DISCHARGED IN ACCORDANCE WITH SPECIFICATION SECTION 46 07 53 (TEMPORARY WATER TREATMENT SYSTEM). THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS AND FEES ASSOCIATED WITH THE OPERATION AND MAINTENANCE OF THE TEMPORARY WATER TREATMENT SYSTEM (E.G., MEDIA CHANGE-OUT, SYSTEM REPAIRS, COMPLIANCE SAMPLING/ANALYSIS, ETC.) AND DISCHARGE OF TREATED WATER IN ACCORDANCE WITH NYSDEC AND CITY CRITERIA.

SITE MANAGEMENT AND TEMPORARY CONTROLS:

- CONTRACTOR IS RESPONSIBLE FOR ALL FEDERAL, STATE, AND LOCAL PERMITS THAT MAY BE REQUIRED TO PERFORM THE WORK.
- ALL WORK SHALL BE PERFORMED WITHIN THE PROJECT WORK LIMITS. NO WORK SHALL BE PERFORMED BEYOND THE PROJECT WORK LIMITS WITHOUT OWNER'S PRIOR APPROVAL.
- ALL WORK SHALL BE PERFORMED IN A NEAT AND ORDERLY MANNER, IN CONFORMANCE WITH BEST MODERN TRADE PRACTICE, AND BY COMPETENT, EXPERIENCED PERSONNEL. MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH ALL LAWS AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- CONSTRUCTION VEHICLES AND EQUIPMENT SHALL BE DECONTAMINATED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS BEFORE ARRIVING ON-SITE AND BEFORE LEAVING THE SITE. VEHICLES AND EQUIPMENT THAT COME IN CONTACT WITH CONTAMINATED MATERIAL SHALL BE APPROPRIATELY DECONTAMINATED BEFORE HANDLING OFF-SITE FILL MATERIALS OR ON-SITE MATERIALS.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN SITE SECURITY MEASURES IN ACCORDANCE WITH SPECIFICATION SECTION 01 57 33 (SECURITY) TO PREVENT UNAUTHORIZED ENTRY OF PERSONS/VEHICLES INTO THE PROJECT WORK LIMITS DURING BOTH WORKING AND NON-WORKING HOURS (24 HOURS A DAY, SEVEN DAYS A WEEK).
- CONTRACTOR SHALL PROVIDE TEMPORARY TRAFFIC CONTROL MEASURES AND COORDINATE THE HAULING OF MATERIALS ON PUBLIC ROADWAYS IN ACCORDANCE WITH SPECIFICATION SECTIONS 01 14 33 (WORK IN HIGHWAY RIGHTS-OF-WAY) AND 01 55 26 (MAINTENANCE AND PROTECTION OF TRAFFIC). THE LOADING/UNLOADING OF MATERIALS AND EQUIPMENT WITHIN PUBLIC ROADWAYS IS PROHIBITED WITHOUT THE PRIOR WRITTEN APPROVAL OF AUTHORITIES HAVING JURISDICTION.
- SURFACE STRUCTURES AND FACILITIES DAMAGED OR DISTURBED DURING THE WORK SHALL BE RESTORED AT CONTRACTOR'S EXPENSE TO THEIR ORIGINAL CONDITION OR AS SHOWN OR INDICATED IN THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL COMPLY WITH ALL NOISE ORDINANCES AND MAKE EVERY EFFORT TO MINIMIZE NOISE CAUSED BY CONSTRUCTION OPERATIONS. EQUIPMENT SHALL BE EQUIPPED WITH SILENCERS OR MUFFLERS DESIGNED TO OPERATE WITH THE LEAST POSSIBLE NOISE IN COMPLIANCE WITH LAWS AND REGULATIONS.
- CONTRACTOR SHALL PROVIDE MEANS, METHODS, AND FACILITIES REQUIRED TO CONTROL NAPL-RELATED ODORS, VAPORS, AND DUST GENERATED DURING THE WORK. COMPLY WITH ODOR, VAPOR, AND DUST CONTROL REQUIREMENTS OF SPECIFICATION SECTION 01 57 05 (TEMPORARY CONTROLS).
- COMMUNITY AIR MONITORING WILL BE PERFORMED ON A CONTINUOUS BASIS DURING ALL GROUND INTRUSIVE WORK OR DUST-GENERATING WORK.

ABBREVIATIONS AND ACRONYMS:

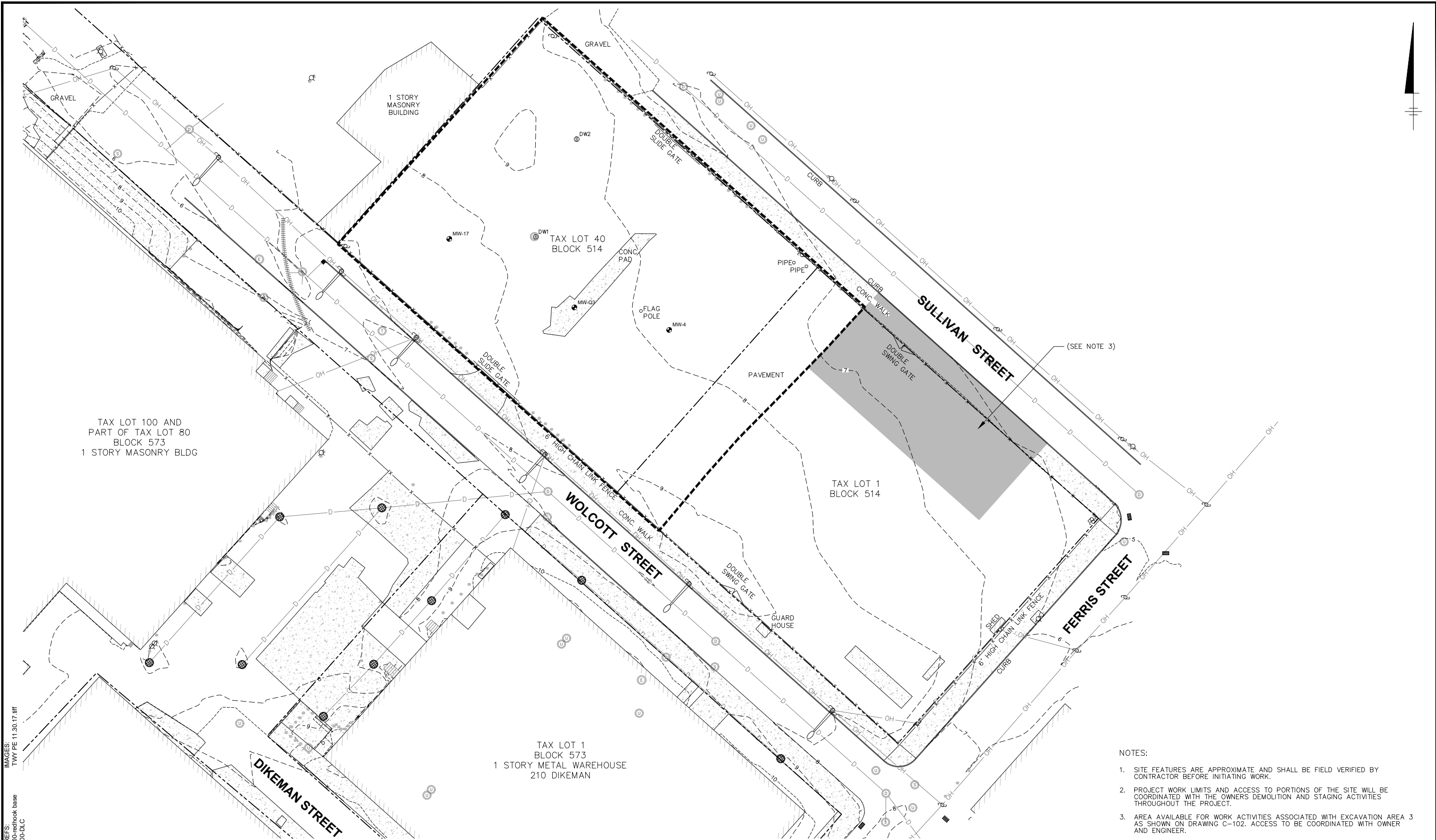
BGS	BELOW GROUND SURFACE
CFR	CODE OF FEDERAL REGULATIONS
CIP	CAST IRON PIPE
AC.	CONCRETE
EL.	ELEVATION
GALV.	GALVANIZED
HDPE	HIGH-DENSITY POLYETHYLENE
ID.	IDENTIFICATION
LF	LINEAR FOOT
MAX.	MAXIMUM
MIN.	MINIMUM
NAD83	NORTH AMERICAN DATUM OF 1983
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
NO.	NUMBER
NYSDEC	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
OD	OUTSIDE DIAMETER
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
SQ.	SQUARE
TYP.	TYPICAL

LEGEND:

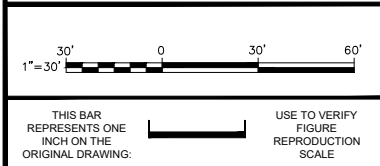
	PROJECT WORK LIMIT
	PROPERTY LINE (APPROXIMATE)
	EASEMENT LINE (APPROXIMATE)
	TOPOGRAPHIC CONTOUR (1-FOOT INTERVAL)
	EDGE OF WATER
	TREE
	EDGE OF PAVEMENT/CONCRETE
	EDGE OF GRAVEL
	CHAIN-LINK FENCE
	BUILDING
	CONCRETE
	OVERHEAD WIRES
	SANITARY SEWER LINE
	STORM SEWER LINE
	WATER LINE
	GAS LINE
	RETIRED GAS LINE
	TELECOMMUNICATIONS LINE
	ELECTRICAL LINE
	BENCHMARK
	BOLLARD
	SIGN
	UTILITY POLE
	UTILITY / LIGHT POLE
	HYDRANT
	SANITARY SEWER MANHOLE
	STORM SEWER MANHOLE
	WATER MANHOLE
	GAS MANHOLE
	TELECOMMUNICATIONS MANHOLE
	ELECTRICAL MANHOLE
	MANHOLE (TYPE UNKNOWN)
	CATCH BASIN
	WATER VALVE
	GAS VALVE
	MONITORING WELL
	MONITORING WELL TO BE DECOMMISSIONED
	SOIL BORING
	SOIL VAPOR MONITORING POINT
	DRY WELL
	PROPOSED TILTMETER LOCATION
	PROPOSED OPTICAL MONITORING POINTS
	PROPOSED SEISMOGRAPH LOCATION
	PROFILE/SECTION/DETAIL NUMBER
	DRAWING NUMBER

SCALE(S) AS INDICATED	1"=40'	USE TO VERIFY REPRODUCTION SCALE	Professional Engineer's Name TERRY W. YOUNG			 Design & Consultancy for natural and built assets	ARCADIS OF NEW YORK, INC.	NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW	BT RED HOOK, LLC • RED HOOK, NEW YORK RED HOOK 4 44 AND 62 FERRIS STREET / 219 SULLIVAN STREET BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK INTERIM REMEDIAL MEASURE	ARCADIS Project No. 30034367.00001	G-002	
			Professional Engineer's No. 074847							Date OCTOBER 2019		ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120
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- NOTES:
1. SITE FEATURES ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY CONTRACTOR BEFORE INITIATING WORK.
 2. PROJECT WORK LIMITS AND ACCESS TO PORTIONS OF THE SITE WILL BE COORDINATED WITH THE OWNERS DEMOLITION AND STAGING ACTIVITIES THROUGHOUT THE PROJECT.
 3. AREA AVAILABLE FOR WORK ACTIVITIES ASSOCIATED WITH EXCAVATION AREA 3 AS SHOWN ON DRAWING C-102. ACCESS TO BE COORDINATED WITH OWNER AND ENGINEER.



No.	Date	Revisions	By	Ckd

Professional Engineer's Name TERRY W. YOUNG		
Professional Engineer's No. 074847		
State NY	Date Signed 10/25/2019	Project Mgr. HD
Designed by DGN	Drawn by KMD	Checked by MCG



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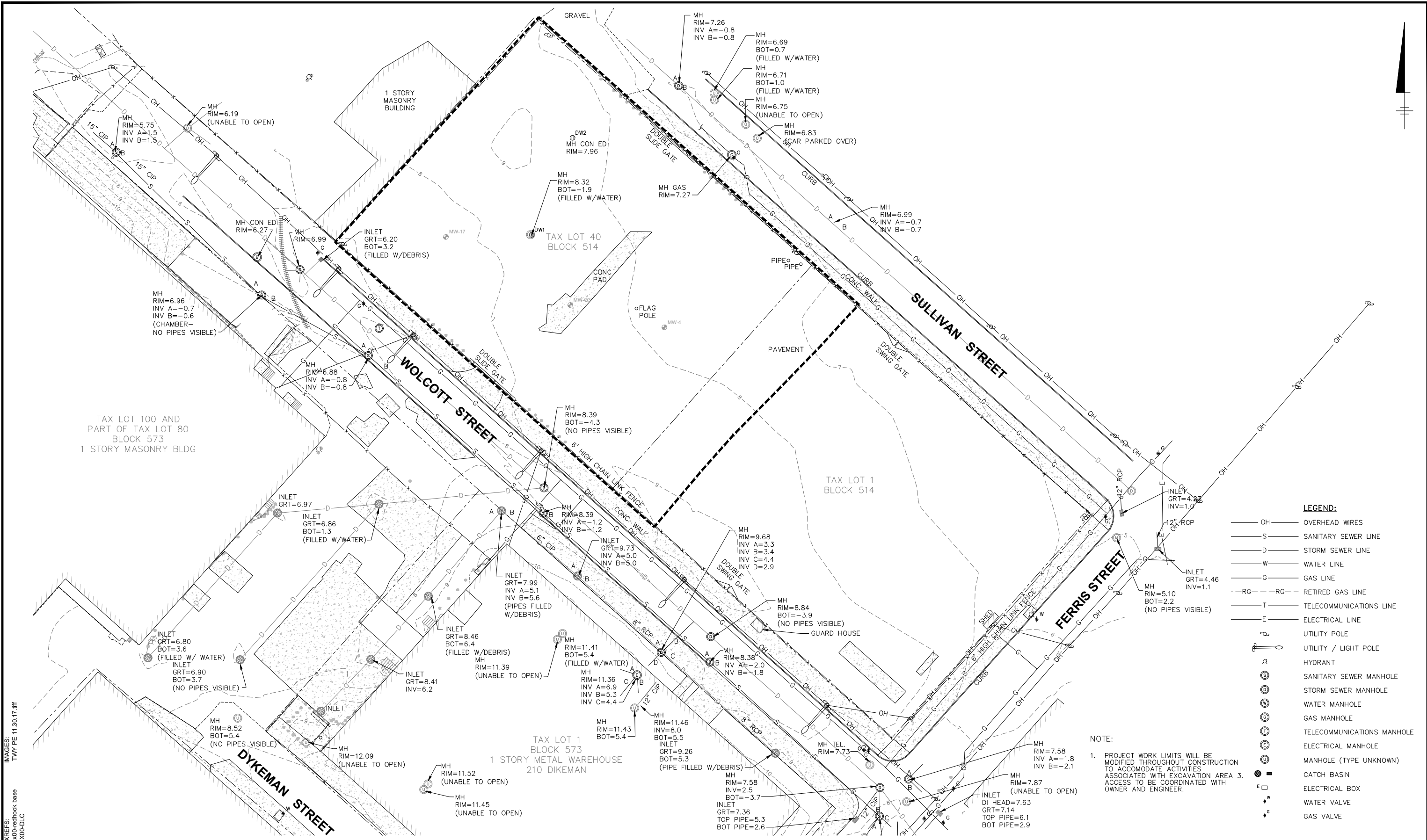
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INTERIM REMEDIAL MEASURE

EXISTING SITE PLAN

ARCADIS Project No. 30034367.00001	G-101
Date OCTOBER 2019	
ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120	

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Professional Engineer's Name
TERRY W. YOUNG

Professional Engineer's No.
074847

State
NY

Date Signed
10/25/2019

Project Mgr.
HD

Designed by
DGN

Drawn by
KMD

Checked by
MCG

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INTERIM REMEDIAL MEASURE

EXISTING UTILITY PLAN

ARCADIS Project No.
30034367.00001

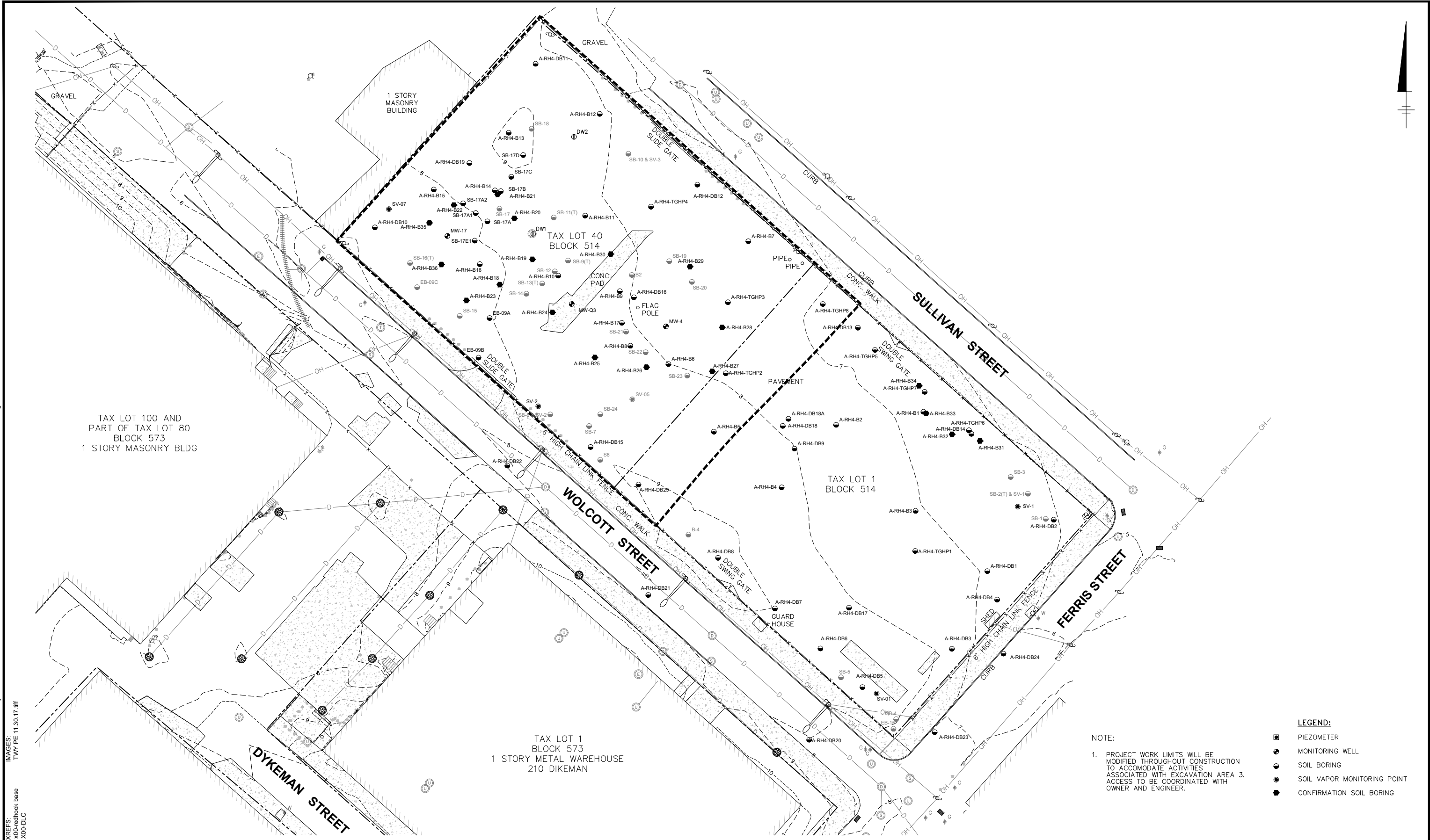
Date
OCTOBER 2019

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G-102

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1"=30'

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Professional Engineer's Name
TERRY W. YOUNG

Professional Engineer's No.
074847

State
NY

Date Signed
10/25/2019

Project Mgr.
HD

Designed by
DGN

Drawn by
KMD

Checked by
MCG

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INTERIM REMEDIAL MEASURE

EXISTING SOIL BORING, AND WELL PLAN

ARCADIS Project No.
30034367.00001

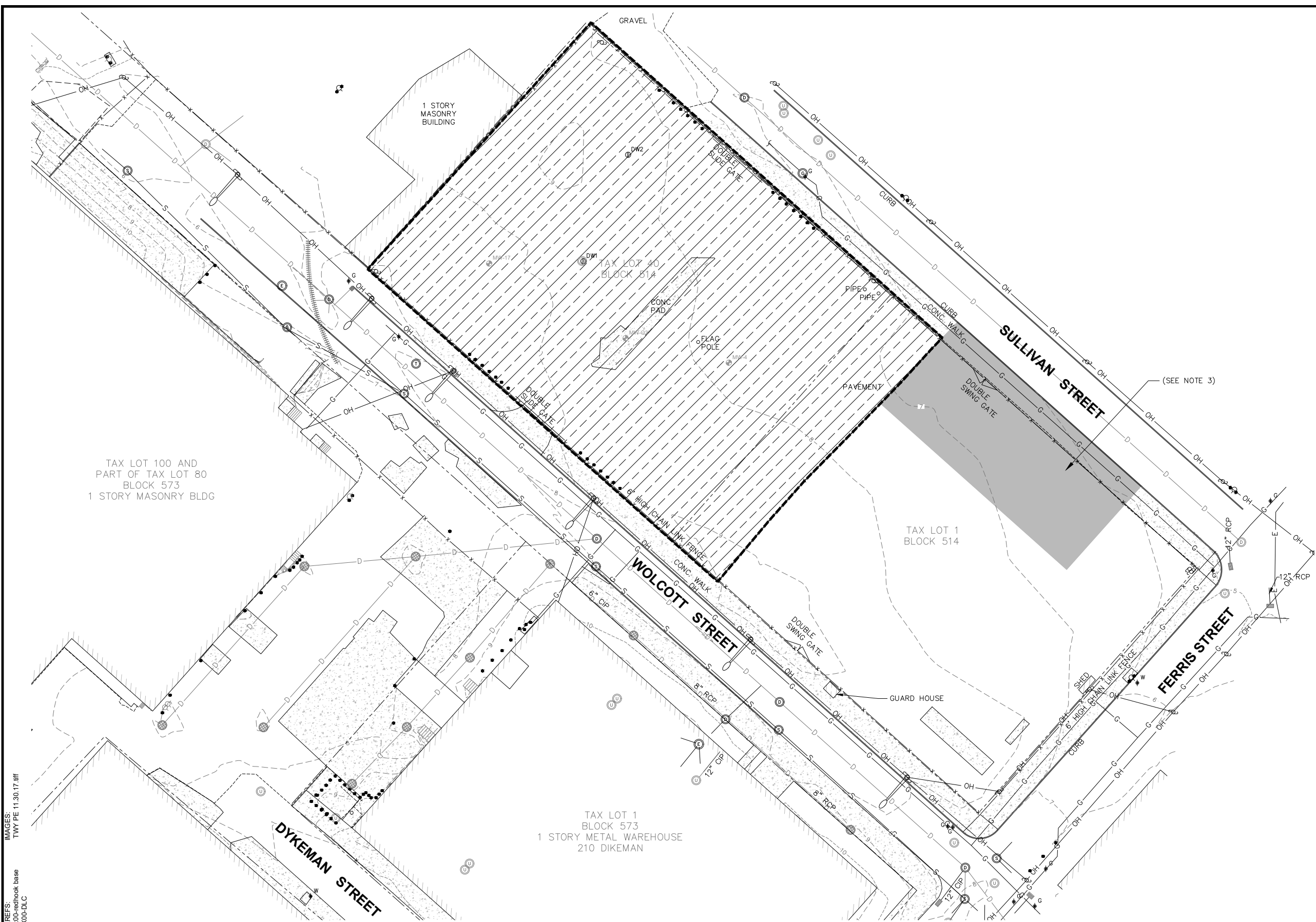
Date
OCTOBER 2019

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110 WEST FAYETTE STREET
STE 300
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

G-103

- NOTE:
- PROJECT WORK LIMITS WILL BE MODIFIED THROUGHOUT CONSTRUCTION TO ACCOMMODATE ACTIVITIES ASSOCIATED WITH EXCAVATION AREA 3. ACCESS TO BE COORDINATED WITH OWNER AND ENGINEER.
- LEGEND:
- PIEZOMETER
 - MONITORING WELL
 - SOIL BORING
 - SOIL VAPOR MONITORING POINT
 - CONFIRMATION SOIL BORING

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LEGEND:

AREA AVAILABLE TO CONTRACTOR FOR TEMPORARY CONSTRUCTION FACILITIES, EQUIPMENT, AND MATERIAL STORAGE (SEE NOTE 1)

- NOTES:**
1. SITE UTILIZATION LIMITS AND ACCESS TO PORTIONS OF THE SITE WILL BE COORDINATED WITH THE OWNERS DEMOLITION AND STAGING ACTIVITIES THROUGHOUT THE PROJECT TO AVOID DISRUPTION OF OWNERS ACTIVITIES.
 2. TEMPORARY CONSTRUCTION FACILITIES MAY INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY UTILITIES, FIELD OFFICES, EQUIPMENT AND SUPPLIES, SHEDS, FIRST-AID FACILITIES, SANITARY FACILITIES, TEMPORARY DECONTAMINATION AREAS, AND TEMPORARY CONTAINMENT AREAS.
 3. AREA AVAILABLE FOR WORK ACTIVITIES ASSOCIATED WITH EXCAVATION AREA 3. ACCESS TO BE COORDINATED WITH OWNER AND ENGINEER.
 4. CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE APPROPRIATE UTILITY OWNERS TO PROVIDE ELECTRIC REQUIRED FOR TEMPORARY CONSTRUCTION FACILITIES.
 5. PROVIDE PROPOSED LOCATION AND LAYOUT OF TEMPORARY CONSTRUCTION FACILITIES AND EQUIPMENT AND MATERIAL STORAGE AREAS TO ENGINEER PRIOR TO MOBILIZATION.
 6. WORK AND FACILITIES ASSOCIATED WITH DISCHARGE OF TREATED WATER WILL EXTEND TO THE DISCHARGE LOCATION. THESE ACTIVITIES PERFORMED OUTSIDE THE AREA AVAILABLE TO THE CONTRACTOR SHALL BE MINIMIZED TO THE EXTENT PRACTICABLE.
 7. REMOVE, RELOCATE, AND REINSTALL TEMPORARY CONSTRUCTION FACILITIES AS NECESSARY TO ACCOMMODATE THE WORK.
 8. COMPLETELY REMOVE TEMPORARY CONSTRUCTION FACILITIES WHEN NO LONGER REQUIRED. REPAIR DAMAGE CAUSED BY TEMPORARY CONSTRUCTION FACILITIES AND THEIR REMOVAL, AND RESTORE THE SITE TO CONDITION REQUIRED BY THE CONTRACT DOCUMENTS. IF RESTORATION OF DAMAGED AREAS IS NOT SPECIFIED, RESTORE TO PRE-CONSTRUCTION CONDITION AND SPECIFICATION OF ENGINEER.

1"=30'

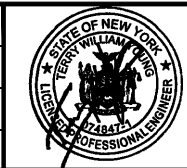
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Professional Engineer's Name TERRY W. YOUNG		
Professional Engineer's No. 074847		
State NY	Date Signed 10/25/2019	Project Mgr. HD
Designed by DGN	Drawn by KMD	Checked by MCG



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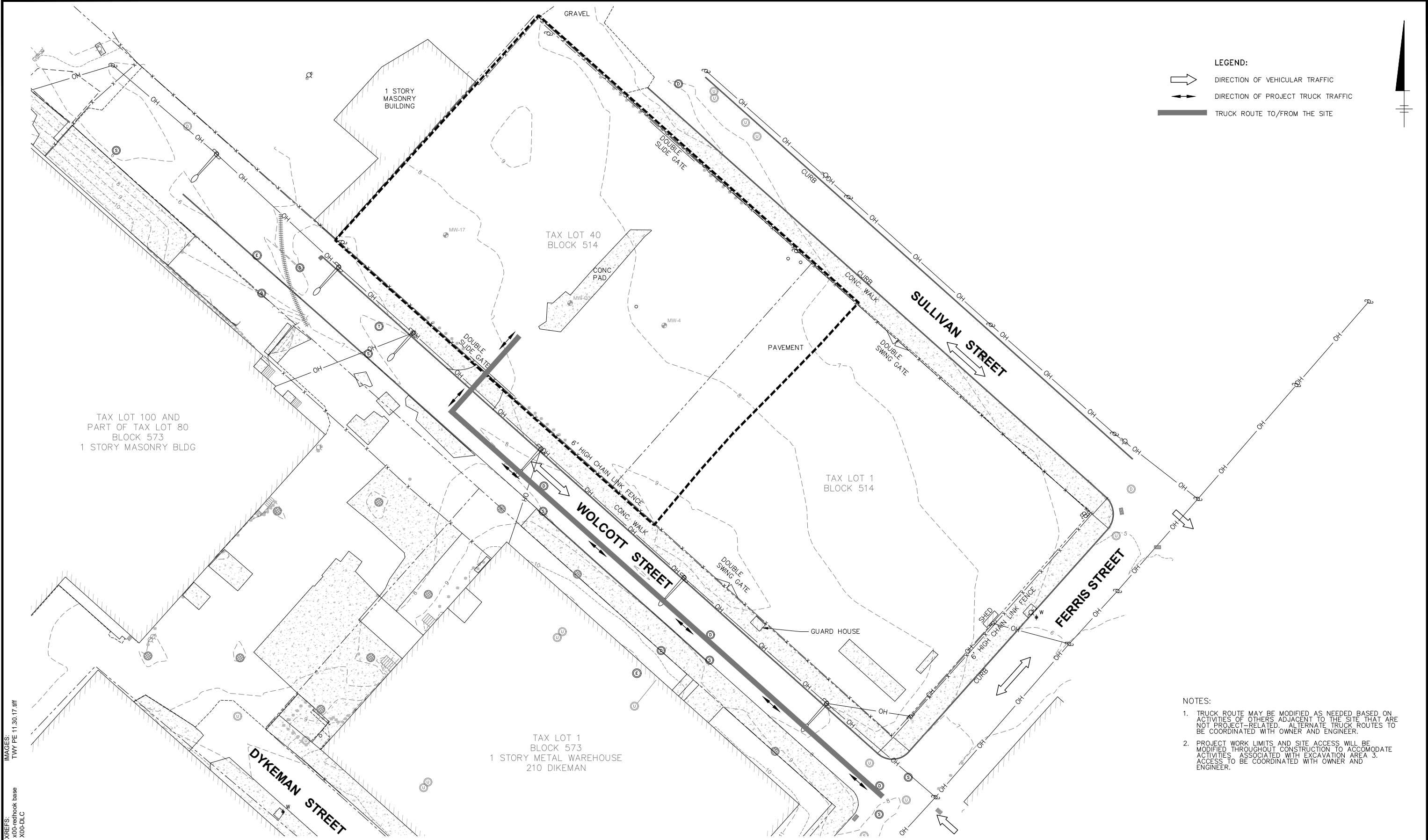
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RED HOOK 4
44 AND 62 FERRIS STREET / 219 SULLIVAN STREET
BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK
INTERIM REMEDIAL MEASURE

SITE UTILIZATION PLAN

ARCADIS Project No. 30034367.00001	G-104
Date OCTOBER 2019	
ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120	

DIR/GROUP:IMDV DB:K DAVIS LD:K DAVIS PIC: PM: C GERACI TM: D NODINE LVR: ON=OFF=REF* ACADVER: 23.0S (LMS TECH) PAGES: 10/25/2019 9:42 AM BY: STOWELL, GARY
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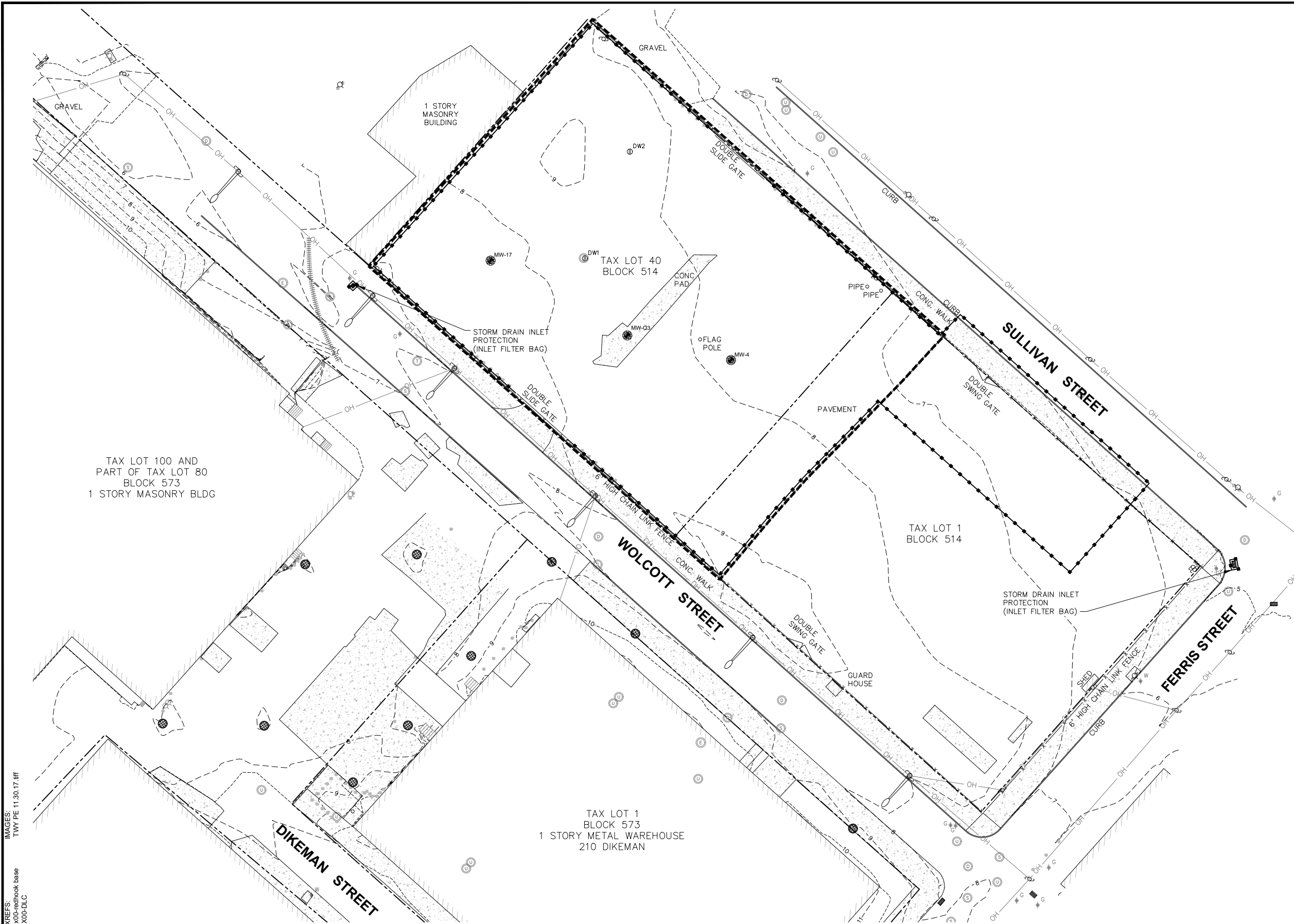
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TWO PE 11.30.17.tiff
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X00-redhook base
X00-DLC



- NOTES:
1. TRUCK ROUTE MAY BE MODIFIED AS NEEDED BASED ON ACTIVITIES OF OTHERS ADJACENT TO THE SITE THAT ARE NOT PROJECT-RELATED. ALTERNATE TRUCK ROUTES TO BE COORDINATED WITH OWNER AND ENGINEER.
 2. PROJECT WORK LIMITS AND SITE ACCESS WILL BE MODIFIED THROUGHOUT CONSTRUCTION TO ACCOMMODATE ACTIVITIES ASSOCIATED WITH EXCAVATION AREA 3. ACCESS TO BE COORDINATED WITH OWNER AND ENGINEER.

1"=30' THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING. USE TO VERIFY FIGURE REPRODUCTION SCALE		<table><tr><td>No.</td><td>Date</td><td>Revisions</td><td>By</td><td>Ckd</td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table> THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REUSED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.		No.	Date	Revisions	By	Ckd						Professional Engineer's Name TERRY W. YOUNG Professional Engineer's No. 074847 <table><tr><td>State NY</td><td>Date Signed 10/25/2019</td><td>Project Mgr. HD</td></tr><tr><td>Designed by DGN</td><td>Drawn by KMD</td><td>Checked by MCG</td></tr></table>	State NY	Date Signed 10/25/2019	Project Mgr. HD	Designed by DGN	Drawn by KMD	Checked by MCG	ARCADIS <i>Design & Consultancy for natural and built assets</i> ARCADIS OF NEW YORK, INC. NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW	BT RED HOOK, LLC • RED HOOK, NEW YORK RED HOOK 4 44 AND 62 FERRIS STREET / 219 SULLIVAN STREET BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK INTERIM REMEDIAL MEASURE TRUCK TRAFFIC PLAN	ARCADIS Project No. 30034367.00001 <table><tr><td>Date OCTOBER 2019</td></tr><tr><td>ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120</td></tr></table>	Date OCTOBER 2019	ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120	G-105
No.	Date	Revisions	By	Ckd																						
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ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120																										

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C:\Users\stowell\BIM 360\Arcadis\ANA - UNITED PARCEL SERVICE\Project Files\RED HOOK 4 DESIGN\2019\B0038994-000301-DWG\SRRH-07-C101-SITE PREPARATION.dwg LAYOUT: C-101 SAVED: 10/23/2019 11:09 AM

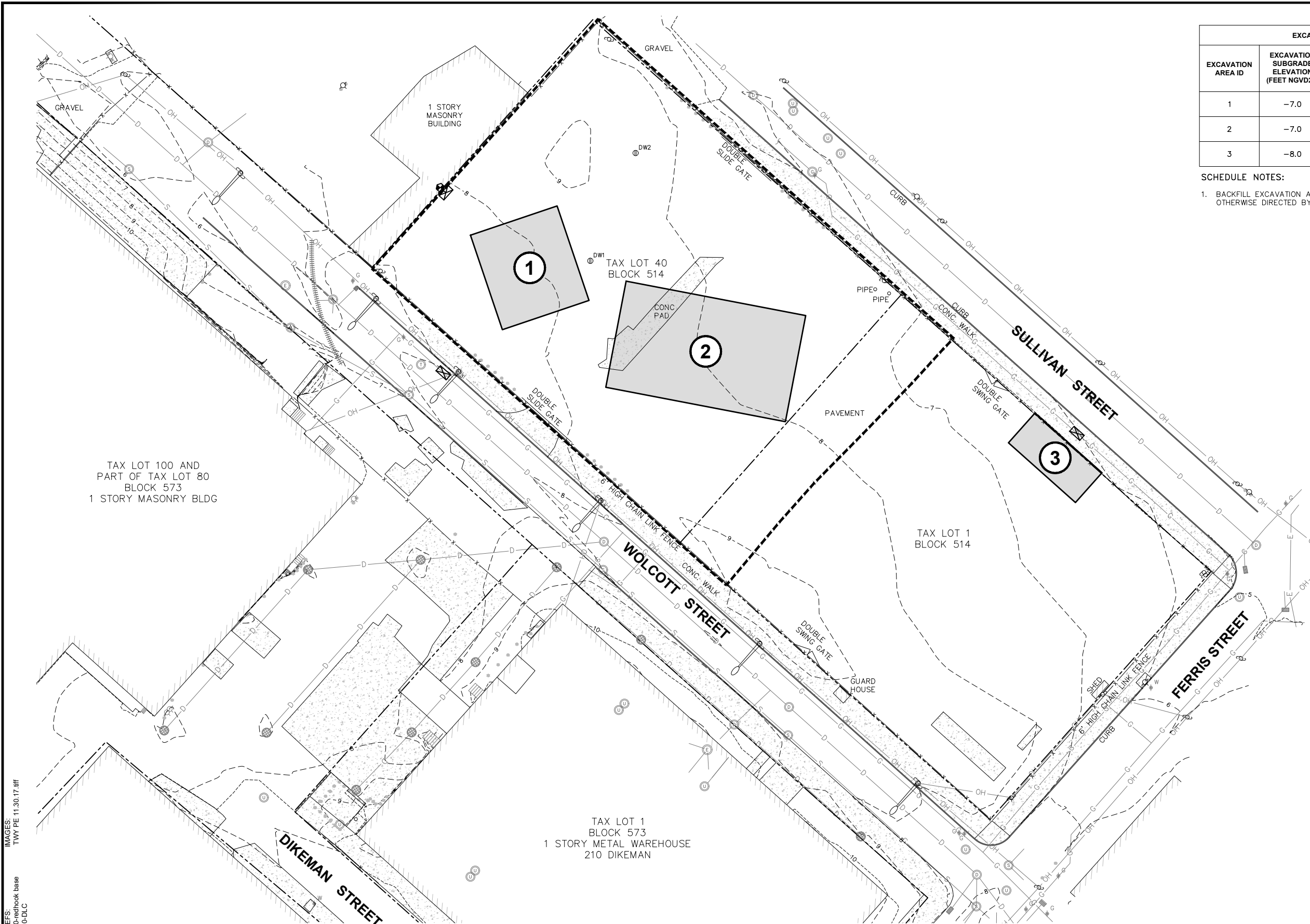


- LEGEND:**
- SILT FENCE 1 C-501 OR
 - STRAW BALE DIKE 2 C-501 OR
 - FILTER SOCK 3 C-501
 - MONITORING WELL TO BE DECOMMISSIONED BY OTHERS

- NOTES:**
- INSTALL EROSION AND SEDIMENT CONTROLS BEFORE DISTURBING ANY SOILS AT THE SITE.
 - ADJUST, RELOCATE, OR PROVIDE ADDITIONAL EROSION AND SEDIMENT CONTROLS AS WORK PROGRESSES INTO PREVIOUSLY UNDISTURBED AREAS OF THE SITE.
 - DO NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS, LAWS, OR REGULATIONS.
 - MAINTAIN EROSION AND SEDIMENT CONTROLS UNTIL THE SITE IS RESTORED.
 - ACTUAL CONFIGURATION OF TEMPORARY EROSION AND SEDIMENT CONTROLS MAY BE ALTERED BASED ON FIELD CONDITIONS AND PROJECT SEQUENCE IN ACCORDANCE WITH ENGINEER APPROVAL.
 - COORDINATE THE REMOVAL OF EXISTING PERIMETER FENCING AND INSTALLATION OF NEW TEMPORARY CONSTRUCTION FENCING SO THAT INTEGRITY OF SITE SECURITY AND PROTECTION OF PEDESTRIANS ARE MAINTAINED THROUGHOUT THE PROJECT.
 - PROTECT STRUCTURES, UNDERGROUND FACILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES INDICATED TO REMAIN FROM DAMAGE CAUSED BY FENCE REMOVAL AND INSTALLATION WORK. REPAIR DAMAGE AT CONTRACTOR'S EXPENSE.
 - CONFIRM THAT PROPERTY LINES AND LEGAL BOUNDARIES OF WORK ARE CLEARLY ESTABLISHED BEFORE INITIATING THE INSTALLATION OF TEMPORARY CONSTRUCTION FENCING.
 - INSTALL TEMPORARY CONSTRUCTION FENCING IN ACCORDANCE WITH LAWS AND REGULATIONS, LOCAL CODE, APPLICABLE PROVISIONS OF ASTM F567, AND THE CONTRACT DOCUMENTS, AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
 - CLEAN ADJACENT STRUCTURES, FACILITIES, PROPERTIES, AND IMPROVEMENTS OF DUST, DIRT, AND DEBRIS CAUSED BY FENCE REMOVAL AND INSTALLATION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
 - PROPERLY DISPOSE OF WASTES RESULTING FROM FENCE REMOVAL AND INSTALLATION WORK IN ACCORDANCE WITH LAWS AND REGULATIONS AND THE CONTRACT DOCUMENTS.
 - PROJECT WORK LIMITS WILL BE MODIFIED THROUGHOUT CONSTRUCTION TO ACCOMMODATE ACTIVITIES ASSOCIATED WITH EXCAVATION AREA 3. ACCESS TO BE COORDINATED WITH OWNER AND ENGINEER.

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BT RED HOOK, LLC • RED HOOK, NEW YORK RED HOOK 4 44 AND 62 FERRIS STREET / 219 SULLIVAN STREET BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK INTERIM REMEDIAL MEASURE		ARCADIS Project No. 30034367.00001 Date OCTOBER 2019 ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120	
SITE PREPARATION PLAN		C-101	

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EXCAVATION AND BACKFILL SCHEDULE				
EXCAVATION AREA ID	EXCAVATION SUBGRADE ELEVATION (FEET NGVD29)	DEPTH OF EXCAVATION (FEET BGS)	ESTIMATED SURFACE AREA (SQUARE FEET)	ESTIMATED EXCAVATION VOLUME (IN-SITU CUBIC YARDS)
1	-7.0	15	3,300	1,833
2	-7.0	15	7,150	3,972
3	-8.0	15	1,296	720

SCHEDULE NOTES:

1. BACKFILL EXCAVATION AREAS WITH GENERAL FILL TO SUBGRADE LEVEL UNLESS OTHERWISE DIRECTED BY ENGINEER.

- LEGEND:
- EXCAVATION AREA
 - IRM/EXCAVATION AREA ID
 - SEISMOGRAPH (SEE NOTE 4)
 - OPTICAL MONITORING POINT (SEE NOTE 4)

- NOTES:
- COMPLY WITH SPECIFICATION SECTION 31 23 00 (EXCAVATION AND FILL).
 - EXCAVATIONS IN AREAS 1, 2, AND 3 SHALL BE SUPPORTED WITH STEEL SHEETPIILING IN ACCORDANCE WITH SPECIFICATION SECTION 31 50 00 (EXCAVATION SUPPORT AND PROTECTION) AND DRAWINGS S-101 AND S-102.
 - HANDLING AND DISPOSAL OF EXCAVATED MATERIALS AND WASTE SHALL BE IN ACCORDANCE WITH LAWS AND REGULATIONS AND SPECIFICATION SECTION 02 60 05 (REMOVAL AND DISPOSAL OF CONTAMINATED MATERIALS).
 - FOR MONITORING REQUIREMENTS, REFER TO SPECIFICATION SECTION 31 09 13 (GEOTECHNICAL INSTRUMENTATION AND MONITORING) AND DRAWINGS S-101 AND S-102.
 - CONTRACTOR TO INSTALL PIEZOMETERS FOR MONITORING THE PIEZOMETRIC PRESSURES IN THE SAND UNIT DURING EXCAVATION AND BACKFILLING ACTIVITIES. LOCATIONS OF PIEZOMETERS TO BE SELECTED BY CONTRACTOR FOR APPROVAL BY ENGINEER. ONE PIEZOMETER SHALL BE INSTALLED IN THE INTERIOR OF EACH EXCAVATION AREA AND SUBAREA AND A MINIMUM OF ONE PIEZOMETER SHALL BE INSTALLED EXTERIOR OF EACH EXCAVATION AREA. PIEZOMETER DEPTHS WILL VARY AND BE DEPENDENT UPON DEPTH TO BOTTOM OF CLAY LAYER. REFER TO SPECIFICATION SECTION 31 09 13 (GEOTECHNICAL INSTRUMENTATION AND MONITORING) FOR INSTALLATION AND MONITORING REQUIREMENTS.
 - EXCAVATION DEWATERING TO BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 31 23 00 (EXCAVATION AND FILL). DEWATERING METHODS MAY INCLUDE LOCALIZED SUMPS, DEWATERING WELLS, OR A COMBINATION OF BOTH IN ACCORDANCE WITH ENGINEER APPROVAL.
 - EXCAVATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH OSHA REGULATIONS.
 - PROJECT WORK LIMITS WILL BE MODIFIED THROUGHOUT CONSTRUCTION TO ACCOMODATE ACTIVITIES ASSOCIATED WITH EXCAVATION AREA 3. ACCESS TO BE COORDINATED WITH OWNER AND ENGINEER.

30'0"

0

30'0"

60'0"

1"=30'

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Professional Engineer's Name
TERRY W. YOUNG

Professional Engineer's No.
074847

State
NY

Date Signed
10/25/2019

Project Mgr.
HD

Designed by
DGN

Drawn by
KMD

Checked by
MCG

Professional Engineer's Seal

Professional Engineer

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BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK
INTERIM REMEDIAL MEASURE

REMEDIAL EXCAVATION PLAN

ARCADIS Project No.
30034367.00001

Date
OCTOBER 2019

ARCADIS
110 WEST FAYETTE STREET
STE 300
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

C-102

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1"=30'

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30'

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Professional Engineer's No. 074847		
State NY	Date Signed 10/25/2019	Project Mgr. HD
Designed by DGN	Drawn by KMD	Checked by MCG



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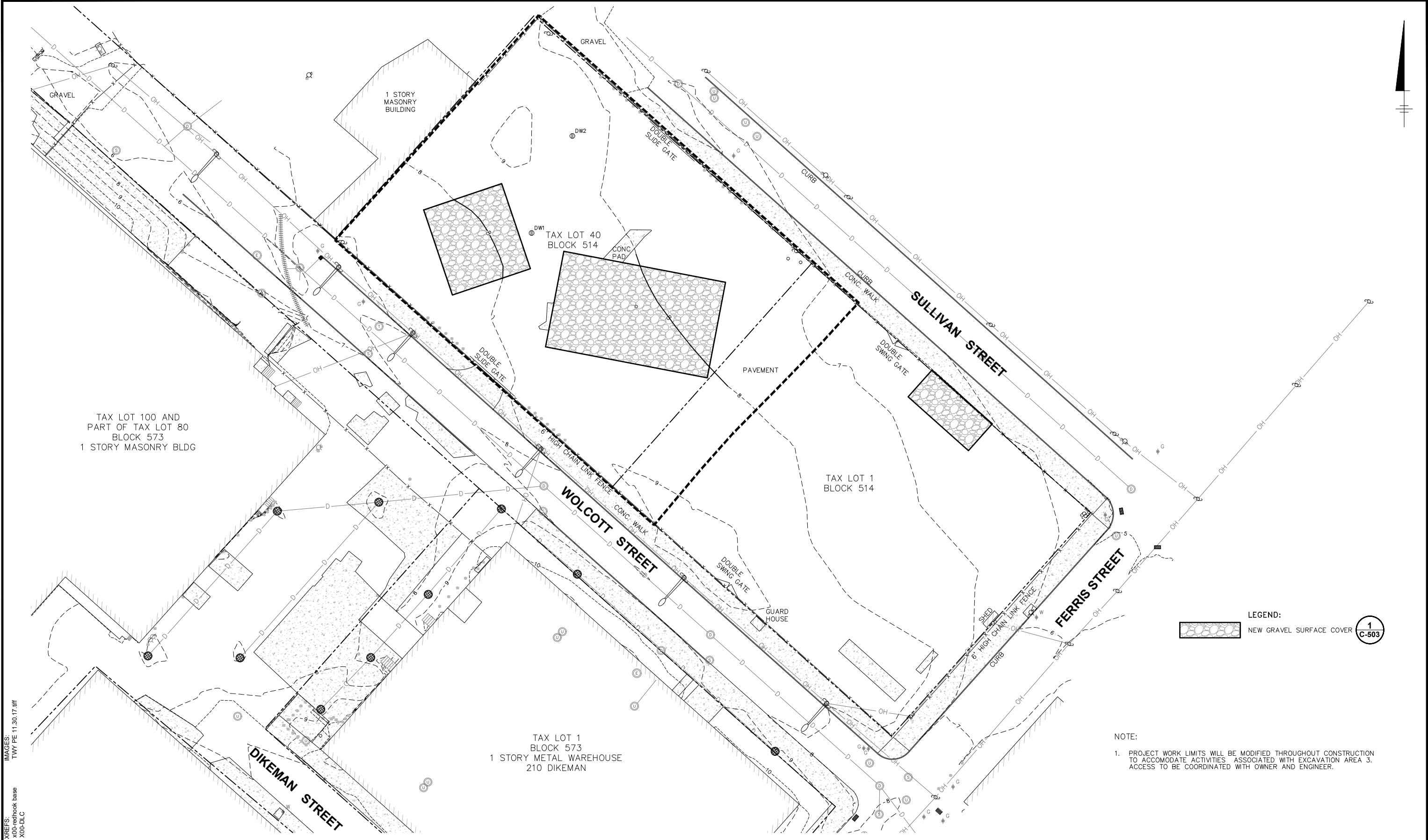
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INTERIM REMEDIAL MEASURE

SITE RESTORATION AND FINAL GRADING PLAN

ARCADIS Project No. 30034367.00001
Date OCTOBER 2019
ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120

C-103



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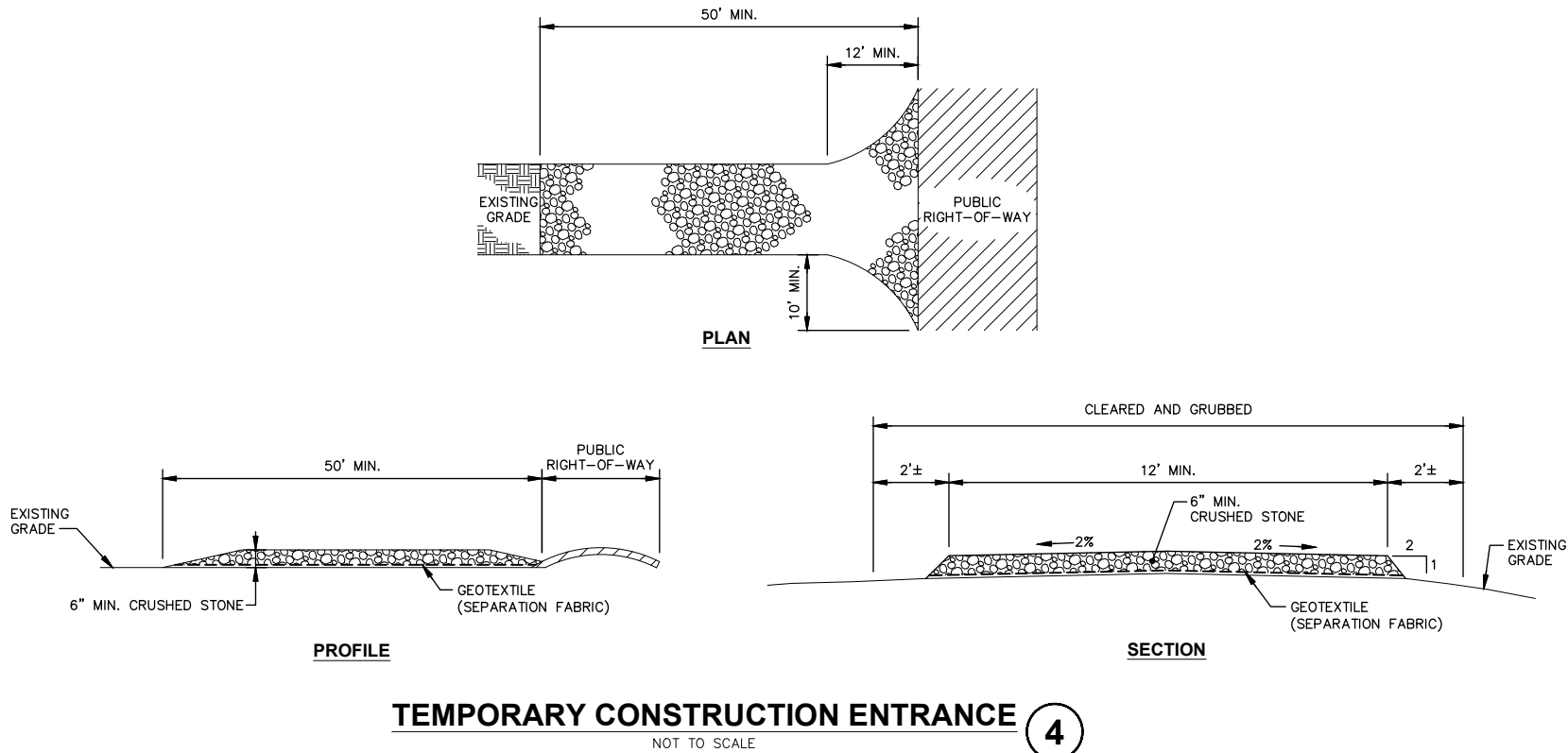
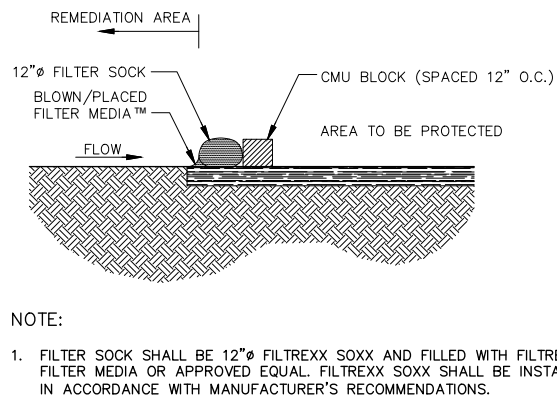
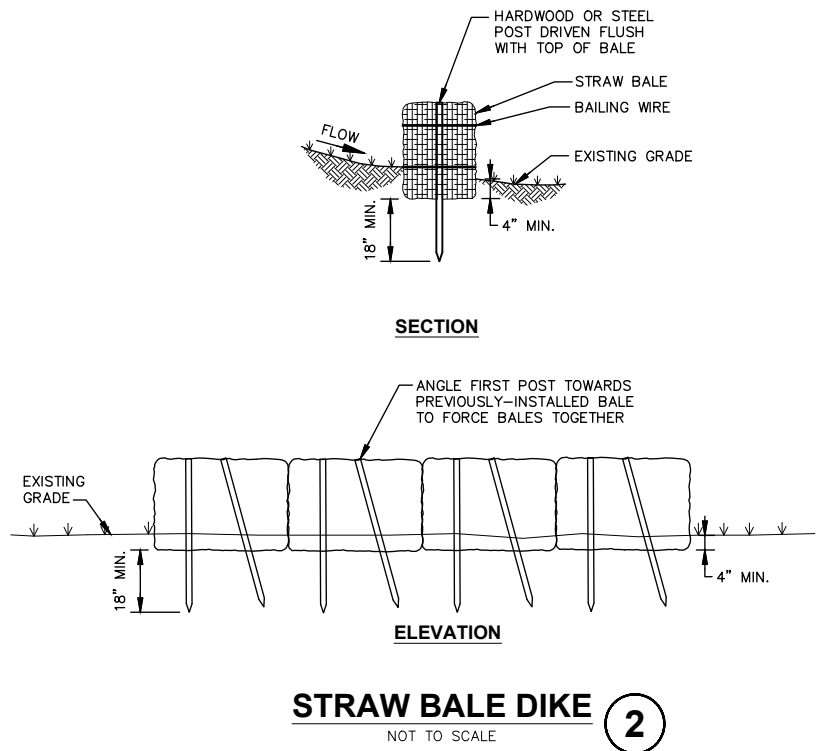
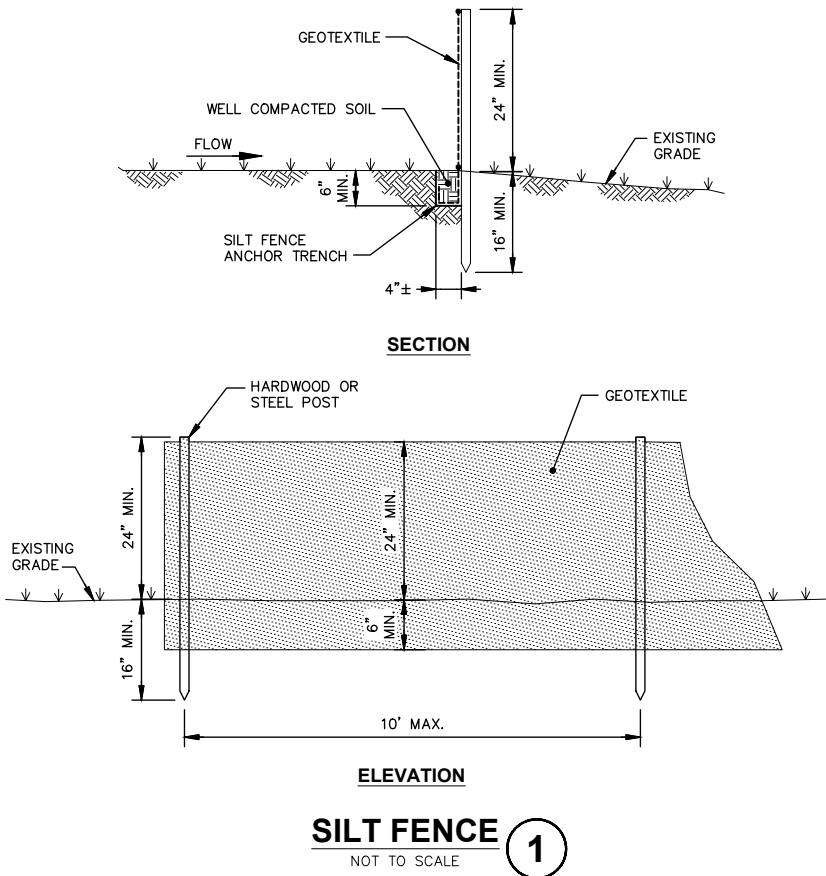
NEW GRAVEL SURFACE COVER

1

C-503

NOTE:
1. PROJECT WORK LIMITS WILL BE MODIFIED THROUGHOUT CONSTRUCTION TO ACCOMMODATE ACTIVITIES ASSOCIATED WITH EXCAVATION AREA 3. ACCESS TO BE COORDINATED WITH OWNER AND ENGINEER.

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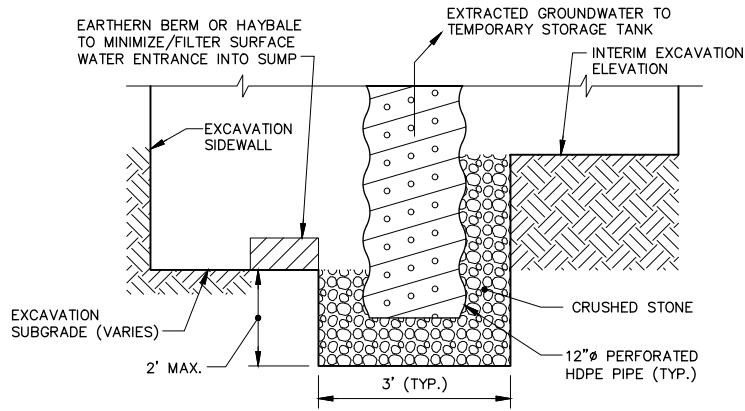
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INTERIM REMEDIAL MEASURE
TEMPORARY EROSION AND SEDIMENT CONTROL DETAILS

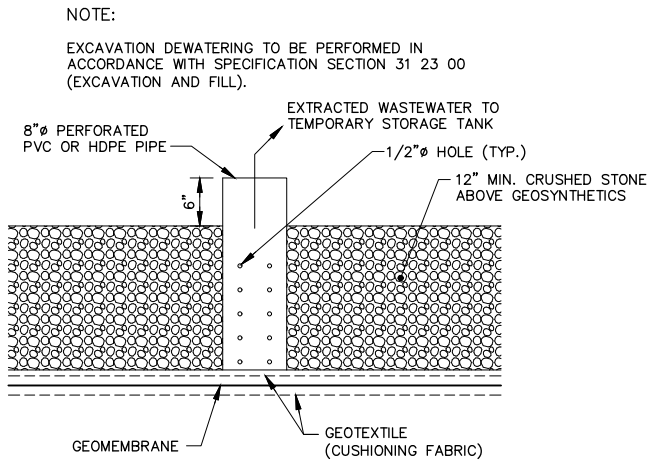
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STE 300
SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

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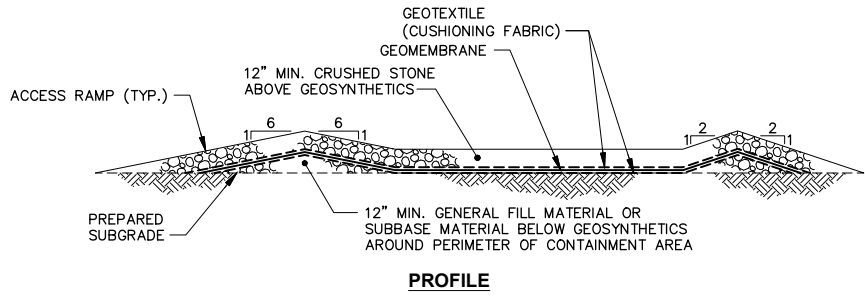
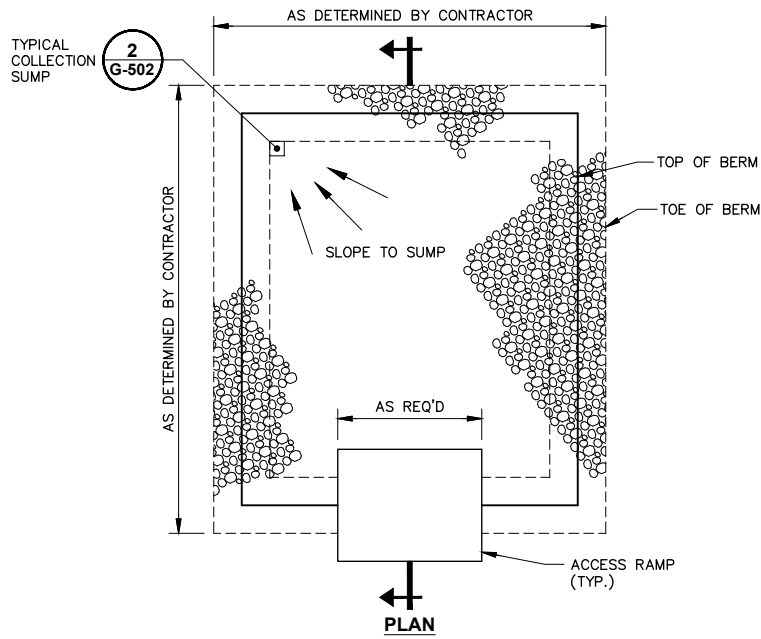
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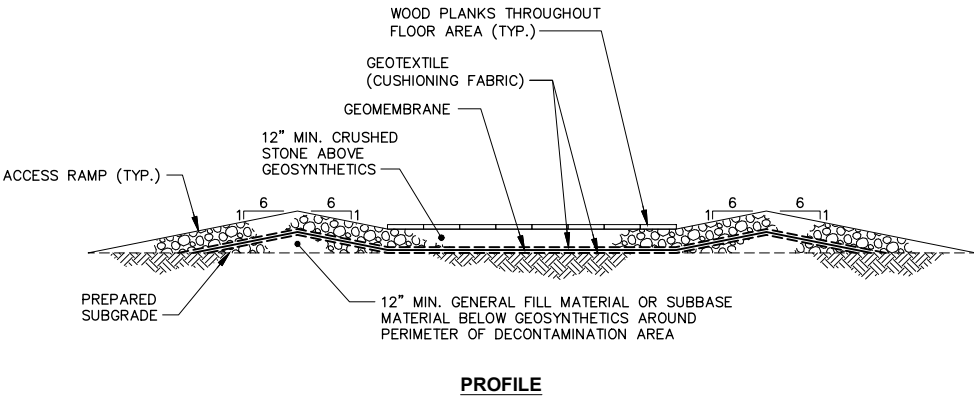
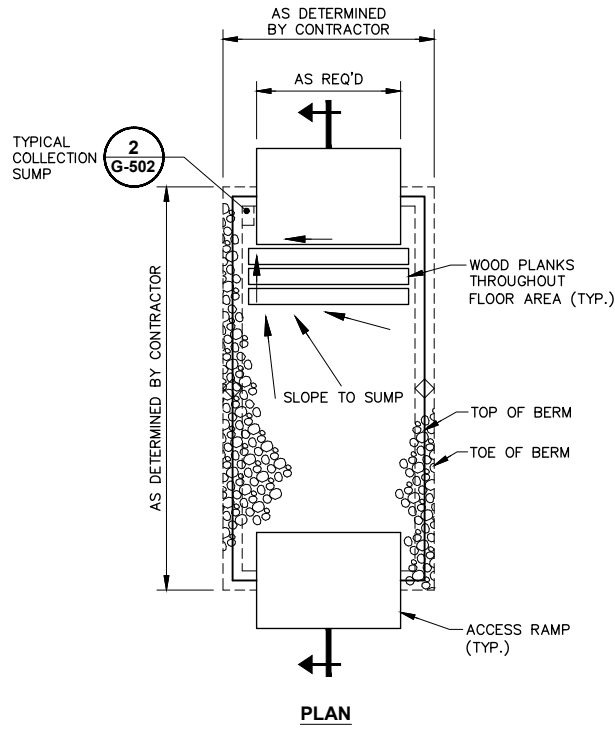
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TYPICAL COLLECTION SUMP 2
 NOT TO SCALE



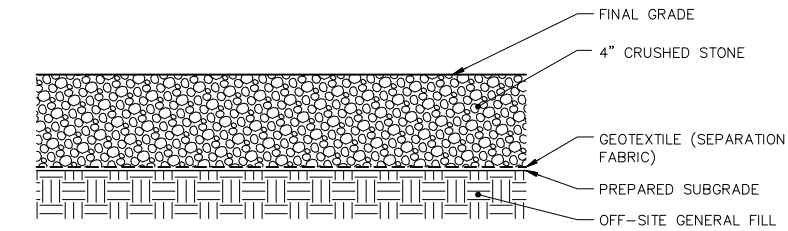
TYPICAL TEMPORARY CONTAINMENT AREA 3
 NOT TO SCALE



TYPICAL TEMPORARY DECONTAMINATION AREA 4
 NOT TO SCALE

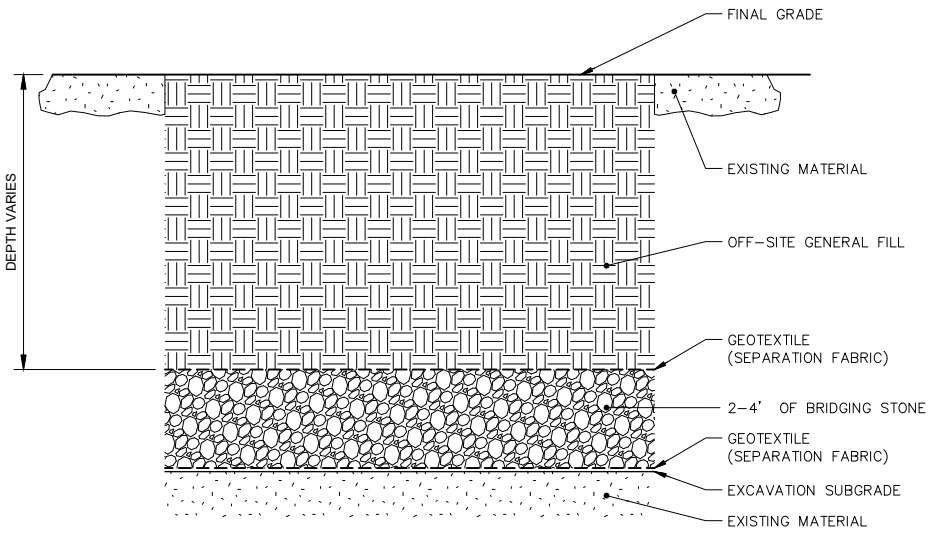
SCALE(S) AS INDICATED		Professional Engineer's Name TERRY W. YOUNG Professional Engineer's No. 074847 State NY Date Signed 10/25/2019 Project Mgr. HD Designed by DGN Drawn by KMD Checked by MCG			 ARCADIS OF NEW YORK, INC. NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW	BT RED HOOK, LLC • RED HOOK, NEW YORK RED HOOK 4 44 AND 62 FERRIS STREET / 219 SULLIVAN STREET BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK INTERIM REMEDIAL MEASURE	ARCADIS Project No. 30034367.00001	C-502
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IMAGES: TWY PE 11.30.17.tif



NEW GRAVEL SURFACE COVER
NOT TO SCALE

1



EXCAVATION BACKFILL WITH BRIDGING STONE
NOT TO SCALE

2

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NY	10/25/2019	HD
Designed by	Drawn by	Checked by
DGN	KMD	MCG





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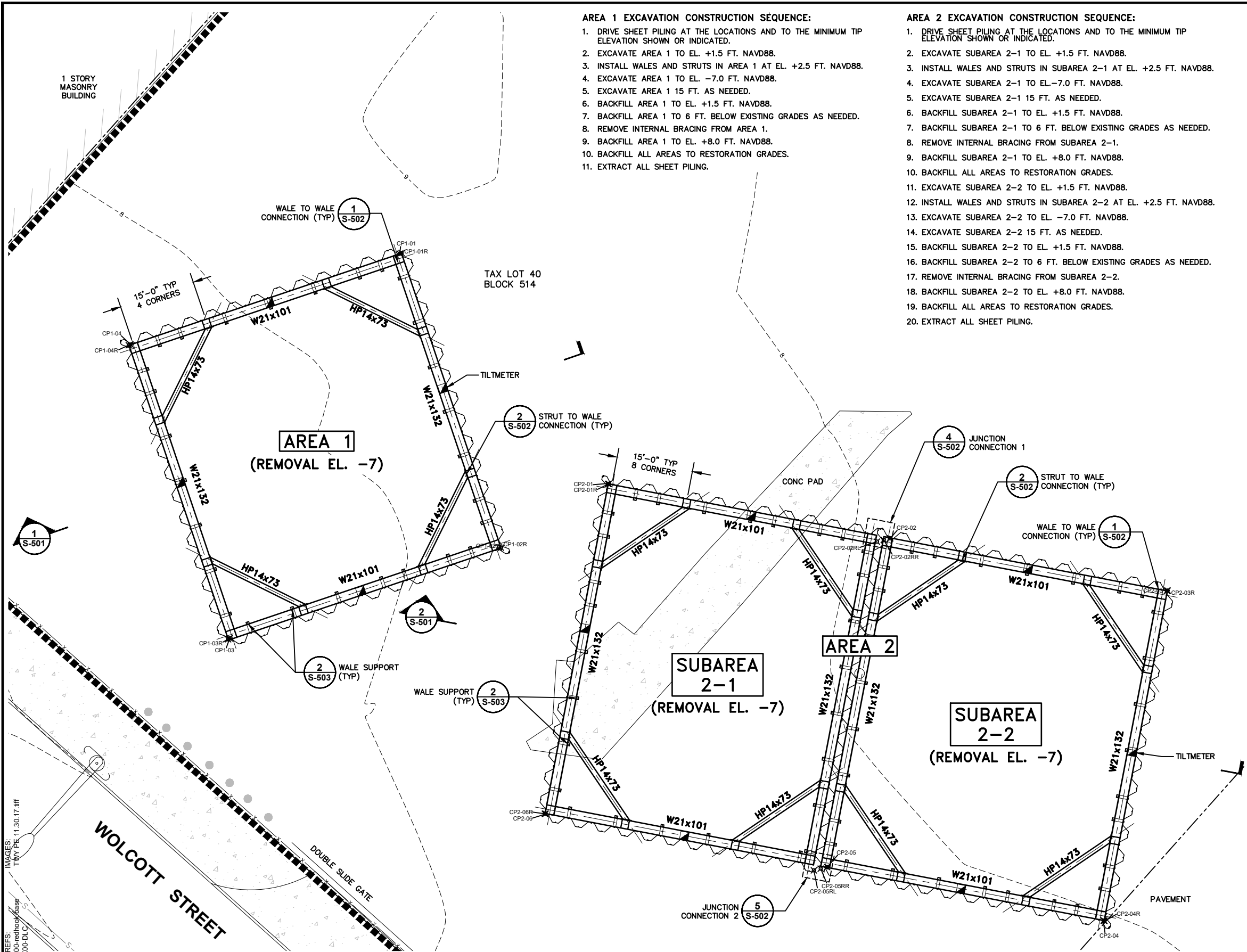
BT RED HOOK, LLC • RED HOOK, NEW YORK
RED HOOK 4
44 AND 62 FERRIS STREET / 219 SULLIVAN STREET
BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK
INTERIM REMEDIAL MEASURE

SITE RESTORATION DETAILS

ARCADIS Project No. 30034367.00001
Date OCTOBER 2019
ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120

C-503

DIV/GRP:IMDV DB-K DAVIS LD-K DAVIS PIC: C GERACI TM D NODINE LVR ON OFF=REF ACADVER: 23.0S LMS TECH PAGESETUP: PDF-D2B BW PLOTSTYLETABLE: PLTCONT.CTB PLOTTED: 10/25/2019 9:43 AM BY: STOWELL GARY
C:\Users\stowell\BIM 360\Arcadis\ANA - UNITED PARCEL SERVICE\Project Files\RED HOOK 4 DESIGN\2019\B0038994.000301-DWG\SRRH-15-101-SHORING PLAN.dwg LAYOUT: S-101 SAVED: 10/24/2019 1:15 PM



AREA 1 EXCAVATION CONSTRUCTION SEQUENCE:

1. DRIVE SHEET PILING AT THE LOCATIONS AND TO THE MINIMUM TIP ELEVATION SHOWN OR INDICATED.
2. EXCAVATE AREA 1 TO EL. +1.5 FT. NAVD88.
3. INSTALL WALES AND STRUTS IN AREA 1 AT EL. +2.5 FT. NAVD88.
4. EXCAVATE AREA 1 TO EL. -7.0 FT. NAVD88.
5. EXCAVATE AREA 1 15 FT. AS NEEDED.
6. BACKFILL AREA 1 TO EL. +1.5 FT. NAVD88.
7. BACKFILL AREA 1 TO 6 FT. BELOW EXISTING GRADES AS NEEDED.
8. REMOVE INTERNAL BRACING FROM AREA 1.
9. BACKFILL AREA 1 TO EL. +8.0 FT. NAVD88.
10. BACKFILL ALL AREAS TO RESTORATION GRADES.
11. EXTRACT ALL SHEET PILING.

AREA 2 EXCAVATION CONSTRUCTION SEQUENCE:

1. DRIVE SHEET PILING AT THE LOCATIONS AND TO THE MINIMUM TIP ELEVATION SHOWN OR INDICATED.
2. EXCAVATE SUBAREA 2-1 TO EL. +1.5 FT. NAVD88.
3. INSTALL WALES AND STRUTS IN SUBAREA 2-1 AT EL. +2.5 FT. NAVD88.
4. EXCAVATE SUBAREA 2-1 TO EL. -7.0 FT. NAVD88.
5. EXCAVATE SUBAREA 2-1 15 FT. AS NEEDED.
6. BACKFILL SUBAREA 2-1 TO EL. +1.5 FT. NAVD88.
7. BACKFILL SUBAREA 2-1 TO 6 FT. BELOW EXISTING GRADES AS NEEDED.
8. REMOVE INTERNAL BRACING FROM SUBAREA 2-1.
9. BACKFILL SUBAREA 2-1 TO EL. +8.0 FT. NAVD88.
10. BACKFILL ALL AREAS TO RESTORATION GRADES.
11. EXCAVATE SUBAREA 2-2 TO EL. +1.5 FT. NAVD88.
12. INSTALL WALES AND STRUTS IN SUBAREA 2-2 AT EL. +2.5 FT. NAVD88.
13. EXCAVATE SUBAREA 2-2 TO EL. -7.0 FT. NAVD88.
14. EXCAVATE SUBAREA 2-2 15 FT. AS NEEDED.
15. BACKFILL SUBAREA 2-2 TO EL. +1.5 FT. NAVD88.
16. BACKFILL SUBAREA 2-2 TO 6 FT. BELOW EXISTING GRADES AS NEEDED.
17. REMOVE INTERNAL BRACING FROM SUBAREA 2-2.
18. BACKFILL SUBAREA 2-2 TO EL. +8.0 FT. NAVD88.
19. BACKFILL ALL AREAS TO RESTORATION GRADES.
20. EXTRACT ALL SHEET PILING.

LOT 40 CONTROL POINT SCHEDULE			
ID	Northing(Y)	Easting(X)	SPECIAL PILE CONNECTION TYPE
CP1-01	187135.30	979644.85	
CP1-01R	187135.42	979645.20	C 14
CP1-02	187077.83	979664.26	
CP1-02R	187077.78	979664.64	C 14
CP1-03	187060.05	979611.58	
CP1-03R	187059.86	979611.25	C 14
CP1-04	187117.51	979592.18	
CP1-04R	187117.39	979591.83	C 14
CP2-01	187090.27	979685.73	
CP2-01R	187090.24	979685.59	C 14
CP2-02	187079.61	979740.79	
CP2-02RL	187078.96	979738.19	JUNC. CONNECTION 1
CP2-02RR	187079.30	979739.52	JUNC. CONNECTION 1
CP2-03	187069.35	979794.92	
CP2-03R	187069.38	979795.06	C 14
CP2-04	187004.82	979782.56	
CP2-04R	187004.78	979782.70	C 14
CP2-05	187015.29	979728.46	
CP2-05RL	187014.65	979725.86	JUNC. CONNECTION 2
CP2-05RR	187014.98	979727.20	JUNC. CONNECTION 2
CP2-06	187025.74	979673.37	
CP2-06R	187025.71	979673.23	C 14

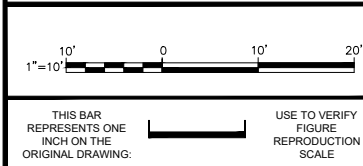
LOT 40 SHEET PILE SCHEDULE					
WALL ALIGNMENT		LENGTH OF WALL (LF)	MIN. SHEET PILE TIP EL. (FEET NAVD88)	MIN. REQUIRED SECTION	DESIGN SECTION
FROM	TO				
CP1-01R	CP1-02R	61	-35.0	NZ 14	NZ 19
CP1-02R	CP1-03R	56	-35.0	NZ 14	NZ 19
CP1-03R	CP1-04R	61	-35.0	NZ 14	NZ 19
CP1-04R	CP1-01R	56	-35.0	NZ 14	NZ 19
CP2-01R	CP2-02RL	54	-35.0	NZ 14	NZ 19
CP2-02RL	CP2-05RL	65	-35.0	NZ 14	NZ 19
CP2-05RL	CP2-06R	54	-35.0	NZ 14	NZ 19
CP2-06R	CP2-01R	66	-35.0	NZ 14	NZ 19
CP2-02RR	CP2-03R	56	-35.0	NZ 14	NZ 19
CP2-03R	CP2-04R	66	-35.0	NZ 14	NZ 19
CP2-04R	CP2-05RR	56	-35.0	NZ 14	NZ 19
CP2-05RR	CP2-02RR	65	-35.0	NZ 14	NZ 19

LEGEND:

- PROPOSED TILTMETER LOCATION

NOTES:

1. CONTRACTOR SHALL COMPLY WITH SPECIFICATION SECTIONS 31 23 00 (EXCAVATION AND FILL), AND 31 50 00 (EXCAVATION SUPPORT AND PROTECTION).
2. FOUNDATIONS OF FORMER STRUCTURES AND EXISTING AT-GRADE CONCRETE SLABS AND PADS PRESENT WITHIN THE REMOVAL LIMITS SHALL BE REMOVED. SUCH MATERIALS SHALL BE MANAGED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
3. PRIOR TO SHEET PILE INSTALLATION, THE CONTRACTOR SHALL INSTALL ENGINEERING SEISMOGRAPHS ON STRUCTURES WITHIN 50 FEET OF THE ACTIVE WORK AREA AS RECOMMENDED IN THE SPECIFICATION AND ESTABLISH BASELINE MONITORING. STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO, EXISTING GAS LINES, ROADWAYS, AND BUILDINGS. CONTRACTOR SHALL ADJUST THE LOCATION OF SEISMOGRAPHS AS NEEDED TO REMAIN 50 FEET OF THE ACTIVE WORK AREA.
4. DEFLECTION MONITORING IN STRUCTURES SHALL BE CONDUCTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS USING THEODOLITE AND REFLECTIVE TARGETS (E.G. LEICA RETRO REFLECTIVE TARGET).
5. DEFLECTION MONITORING IN SHEET PILES SHALL BE CONDUCTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS USING TILTMETERS (E.G. DCSI EL TILTMETER) ATTACHED TO THE EXCAVATION FACE OF THE SHEET PILES, NEAR THE TOP OF THE SHEET PILE.
6. SEISMIC AND DEFLECTION MONITORING SHALL BE PERFORMED DURING EXCAVATION AND BACKFILL, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
7. EXCAVATED TREATMENT AREAS SHALL BE BACKFILLED WITH GENERAL FILL TO REQUIRED ELEVATION.



No.	Date	Revisions	By	Ckd

Professional Engineer's Name		
TERRY W. YOUNG		
Professional Engineer's No.		
074847		
State	Date Signed	Project Mgr.
NY	10/25/2019	HD
Designed by	Drawn by	Checked by
DGN	KMD	MCG



ARCADIS Design & Consultancy for natural and built assets

ARCADIS OF NEW YORK, INC.

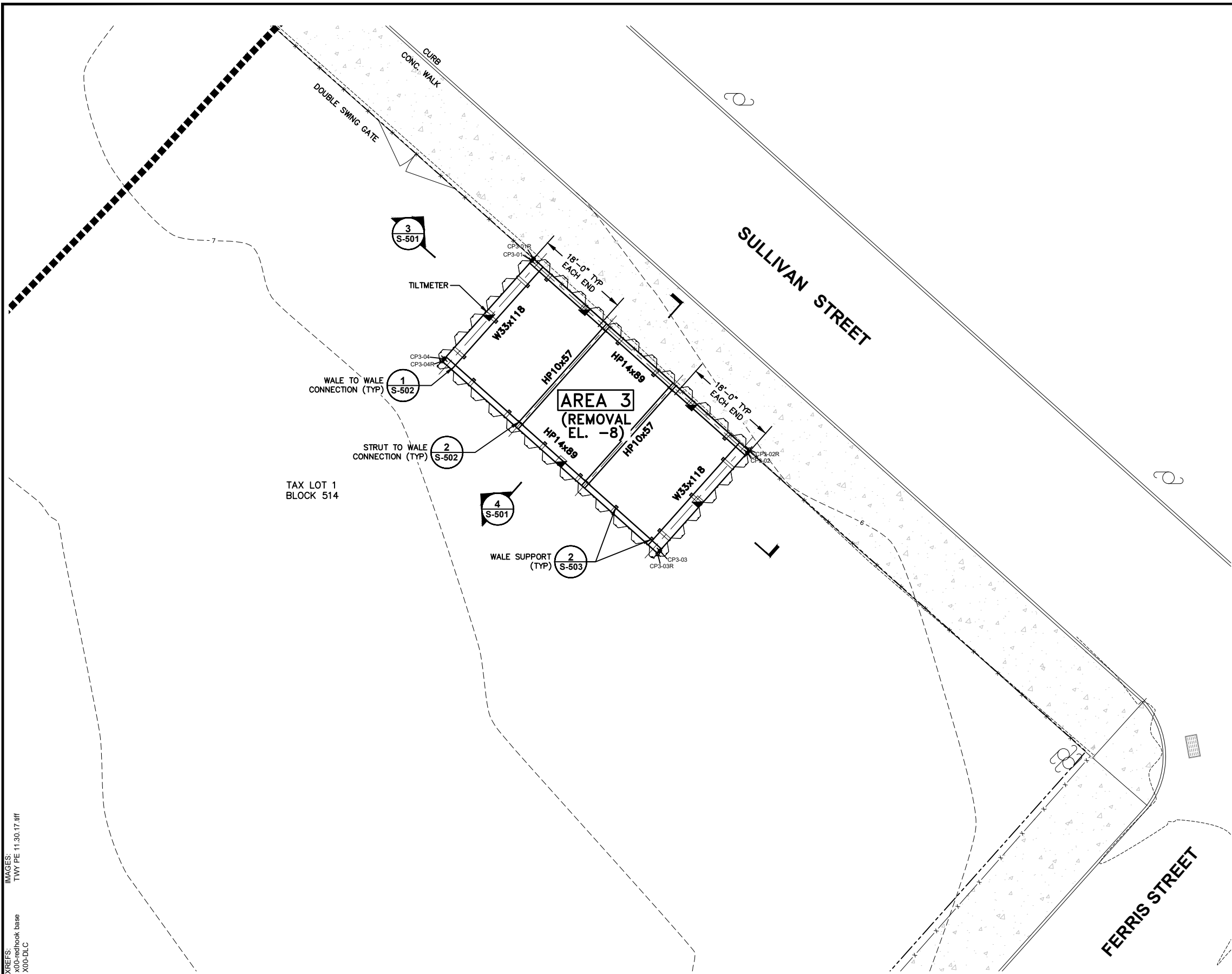
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44 AND 62 FERRIS STREET / 219 SULLIVAN STREET
BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK
INTERIM REMEDIAL MEASURE
AREAS 1 AND 2
EXCAVATION AND SHORING PLAN

ARCADIS Project No. 30034367.00001	
Date OCTOBER 2019	S-101
ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120	

DIV/GROUP:IMDV DB:K DAVIS LD:K DAVIS PIC: PM: C GERACI TM: D NODINE LYR: ON=OFF=REF* ACADVER: 23.0S(LMS TECH) PAGES: 10/25/2019 9:43 AM BY: STOWELL GARY C:\Users\stowell\BIB\360\Arcadis\ANA - UNITED PARCEL SERVICE\Project Files\RED HOOK 4 DESIGN\2019\B0038994.00301-DWG\SRRH-15-S101-SHORING PLAN.dwg LAYOUT: S-102 SAVED: 10/24/2019 1:15 PM

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LOT 1 CONTROL POINT SCHEDULE			
ID	Northing(Y)	Easting(X)	SPECIAL PILE CONNECTION TYPE
CP3-01	187009.97	979931.76	
CP3-01R	187010.36	979932.11	C 14
CP3-02	186972.96	979973.24	
CP3-02R	186973.60	979973.59	C 14
CP3-03	186954.09	979956.41	
CP3-03R	186953.56	979955.97	C 14
CP3-04	186991.10	979914.93	
CP3-04R	186990.61	979914.49	C 14

LOT 1 SHEET PILE SCHEDULE					
WALL ALIGNMENT		LENGTH OF WALL (LF)	MIN. SHEET PILE TIP EL. (FEET NAVD88)	MIN. REQUIRED SECTION	DESIGN SECTION
FROM	TO				
CP3-01R	CP3-02R	55	-35.0	NZ 14	NZ 19
CP3-02R	CP3-03R	27	-35.0	NZ 14	NZ 19
CP3-03R	CP3-04R	56	-35.0	NZ 14	NZ 19
CP3-04R	CP3-01R	26	-35.0	NZ 14	NZ 19

AREA 3 EXCAVATION CONSTRUCTION SEQUENCE:

1. DRIVE SHEET PILING AT THE LOCATIONS AND TO THE MINIMUM TIP ELEVATION SHOWN OR INDICATED.
2. EXCAVATE AREA 3 TO EL. -0.5.
3. INSTALL WALES AND STRUTS IN AREA 3 AT EL. +0.5.
4. EXCAVATE AREA 3 TO EL. -3.0.
5. BEFORE CONTINUING EXCAVATION, CONFIRM PIEZOMETRIC LEVEL IN THE SAND LAYER DOES NOT EXCEED MAXIMUM ALLOWABLE ELEVATION FOR AREA 3. DO NOT CONTINUE EXCAVATION UNTIL PIEZOMETRIC LEVEL IN THE SAND LAYER IS BELOW THE MAXIMUM ALLOWABLE ELEVATION.
6. EXCAVATE NORTHERN HALF OF AREA 3 TO EL. -8.0 AND BACKFILL THIS HALF TO EL. -3.0.
7. EXCAVATE REMAINING SOUTHERN HALF OF AREA 3 TO EL. -8.0 AND BACKFILL THIS HALF TO EL. -3.0.
8. BACKFILL AREA 3 TO EL. -0.5.
9. REMOVE INTERNAL BRACING FROM AREA 3.
10. BACKFILL TO RESTORATION GRADE.
11. EXTRACT ALL SHEET PILING.

LEGEND:

- PROPOSED TILTMETER LOCATION

NOTES:

1. CONTRACTOR SHALL COMPLY WITH SPECIFICATION SECTIONS 31 23 00 (EXCAVATION AND FILL), AND 31 50 00 (EXCAVATION SUPPORT AND PROTECTION, AND OF 31 09 13 (GEOTECHNICAL INSTRUMENTATION AND MONITORING).
2. FOUNDATIONS OF FORMER STRUCTURES AND EXISTING AT-GRADE CONCRETE SLABS AND PADS PRESENT WITHIN THE REMOVAL LIMITS SHALL BE REMOVED. SUCH MATERIALS SHALL BE MANAGED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
3. PRIOR TO SHEET PILE INSTALLATION, THE CONTRACTOR SHALL INSTALL SEISMOGRAPHS ON STRUCTURES WITHIN 50 FEET OF THE ACTIVE WORK AREA AND ESTABLISH BASELINE MONITORING. STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO, EXISTING GAS LINES, ROADWAYS, AND BUILDINGS.
4. FOR GAS LINE MONITORING, CONTRACTOR SHALL ADJUST THE LOCATION OF SEISMOGRAPHS SUCH THAT THE METER IS ABOVE THE GAS LINE AT THE POINT CLOSEST TO SHEET PILE INSTALLATION.
5. DEFLECTION MONITORING OF BUILDINGS SHALL BE CONDUCTED USING THEODOLITE AND REFLECTIVE TARGETS (E.G. LEICA RETRO REFLECTIVE TARGET).
6. DEFLECTION MONITORING OF SHEET PILES SHALL BE CONDUCTED USING TILTMETERS (E.G. DCSI EL TILTMETER) ATTACHED TO THE EXCAVATION FACE OF THE SHEET PILES, NEAR THE TOP OF THE SHEET PILE.
7. PIEZOMETRIC AND DEFLECTION MONITORING SHALL BE PERFORMED DURING EXCAVATION AND BACKFILL ACTIVITIES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

1"=10'

10' 0 10' 20'

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.

USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

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Professional Engineer's Name TERRY W. YOUNG		
Professional Engineer's No. 074847		
State NY	Date Signed 10/25/2019	Project Mgr. HD
Designed by DGN	Drawn by KMD	Checked by MCG

SEAL OF THE STATE OF NEW YORK
TERRY W. YOUNG
074847
REGISTERED PROFESSIONAL ENGINEER

ARCADIS

Design & Consultancy for natural and built assets

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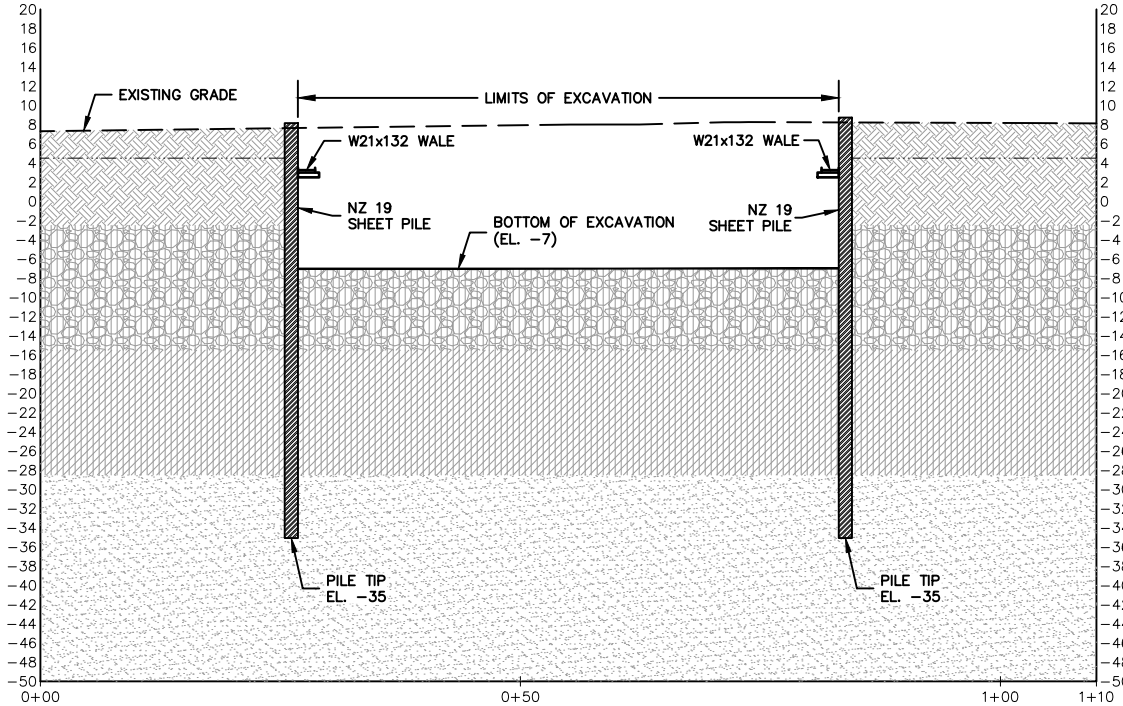
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BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK
INTERIM REMEDIAL MEASURE

AREA 3 EXCAVATION AND SHORING PLAN

ARCADIS Project No. 30034367.00001	S-102
Date OCTOBER 2019	
ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120	

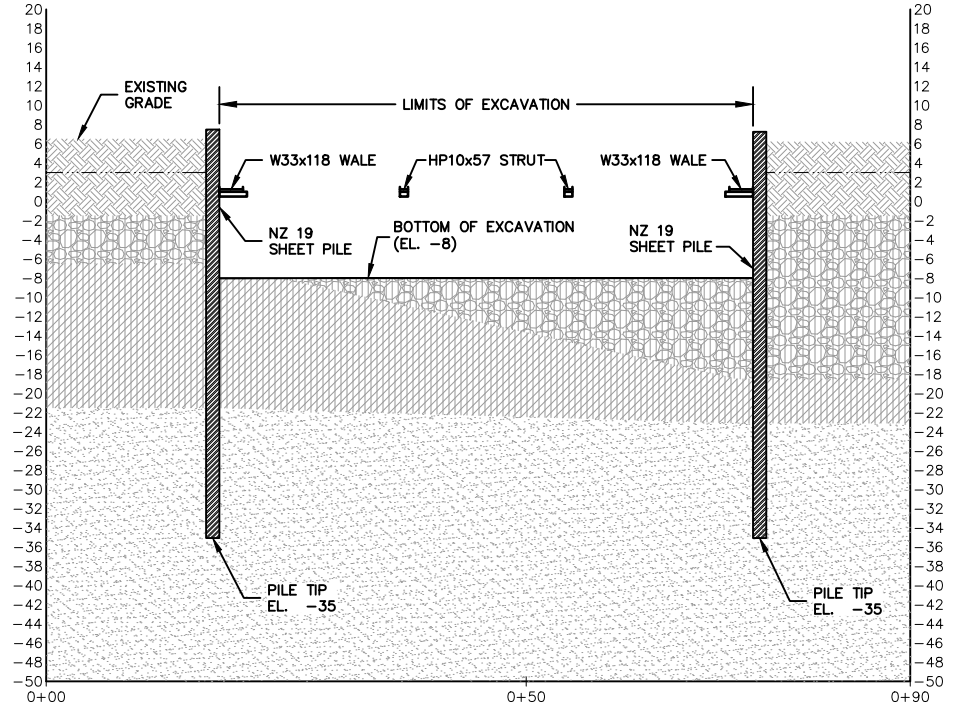
DIV/GRP:IMDV DB:K DAVIS LD:K DAVIS PIC: PM: C GERACI TM: D NODINE LVR: ON=OFF=REF* ACADVER: 23.0S (LMS TECH) PAGES: 21 OF 21 PLOT: 10/25/2019 9:44 AM BY: STOWELL, GARY C:\Users\gastowell\BIM 360\Arcadis\Project Files\RED HOOK 4 DESIGN\2019\B0038994-000301-DWG\SRH4-16-5501-SHORING SECTIONS.dwg LAYOUT: S-501 SAVED: 10/24/2019 3:00 PM

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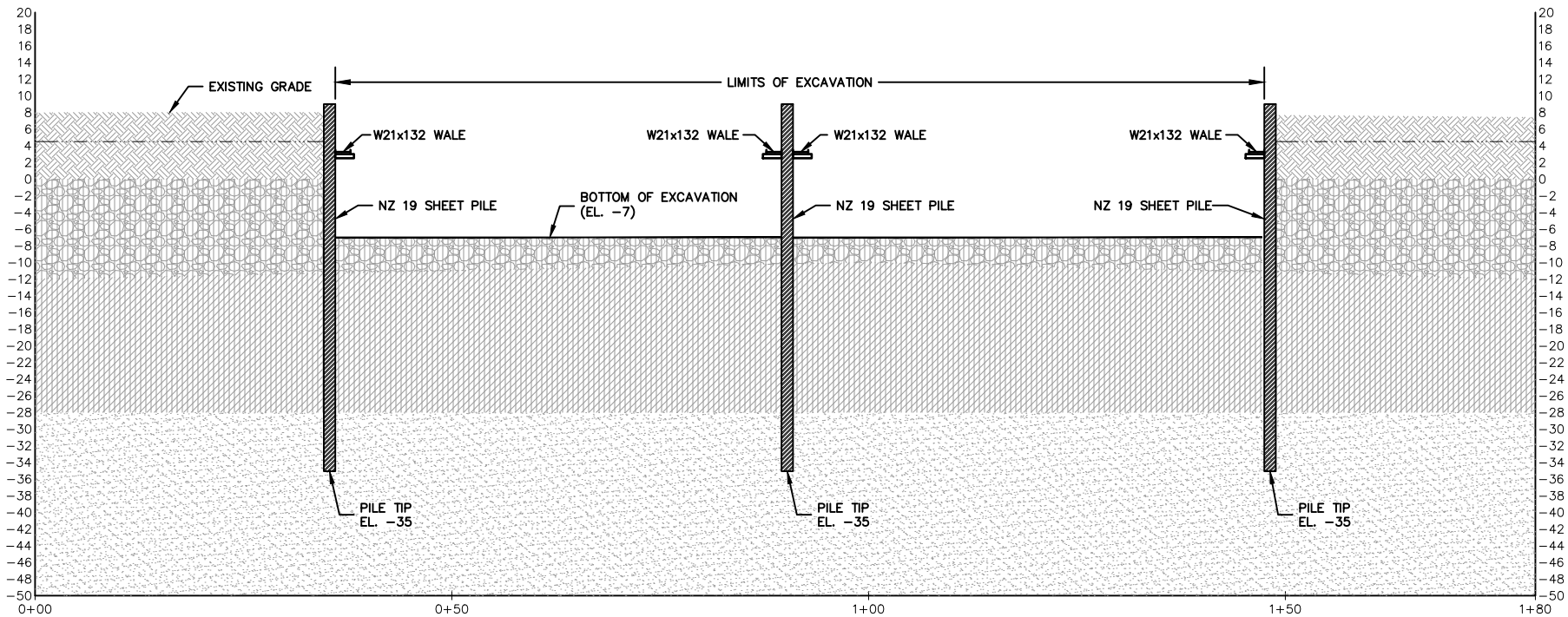
SECTION 1

SCALE: 1" = 10' HORIZONTAL AND VERTICAL



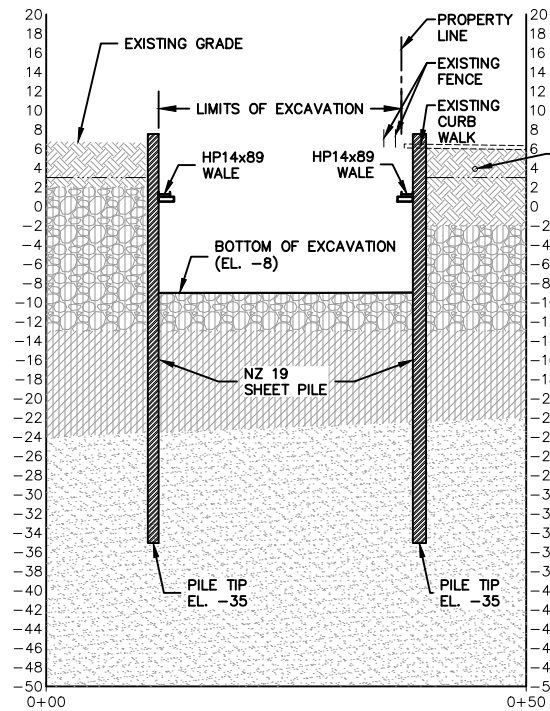
SECTION 3

SCALE: 1" = 10' HORIZONTAL AND VERTICAL



SECTION 2

SCALE: 1" = 10' HORIZONTAL AND VERTICAL



SECTION 4

SCALE: 1" = 10' HORIZONTAL AND VERTICAL

LEGEND:

- FILL
- SAND, SILT, AND GRAVEL
- SILT AND CLAY
- SAND
- NATURAL GAS LINE
- APPROXIMATE GROUNDWATER LEVEL (SEE NOTE 2)

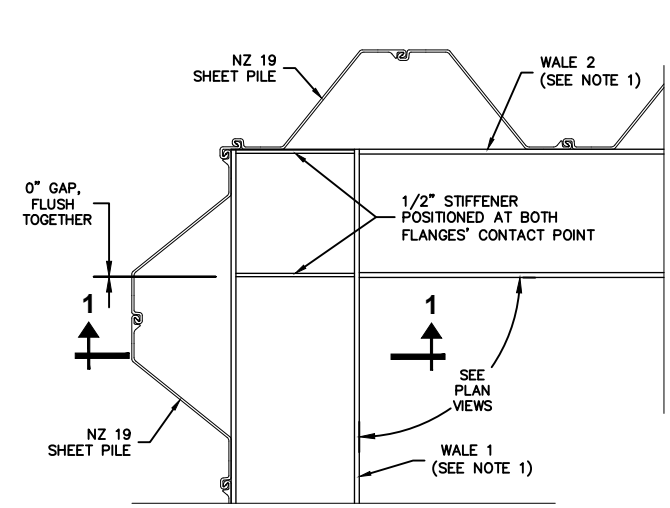
NOTES:

- INFORMATION RELATED TO SUBSURFACE CONDITIONS SHOULD BE CONSIDERED APPROXIMATE AND SHOULD NOT BE RELIED UPON AS A COMPLETE DESCRIPTION OF SITE CONDITIONS. SITE FEATURES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO START OF WORK.
- EXCAVATION DEWATERING TO BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 31 23 00 (EXCAVATION AND FILL).
- PIEZOMETRIC LEVEL IN THE SAND UNIT SHALL BE BELOW MAXIMUM ALLOWABLE ELEVATION WHEN EXCAVATING OR BACKFILLING WITHIN 5 FEET OF BOTTOM OF EXCAVATION. REFER TO SPECIFICATION SECTION 31 23 00 FOR MAXIMUM ALLOWABLE PIEZOMETRIC ELEVATIONS FOR EACH EXCAVATION AREA.
- EXCAVATION AREAS SHALL BE BACKFILLED WITH GENERAL FILL TO REQUIRED ELEVATION.
- OFFSET MAY BE MODIFIED IN THE FIELD DUE TO CONSTRUCTABILITY AND PRESENCE OF UTILITIES.

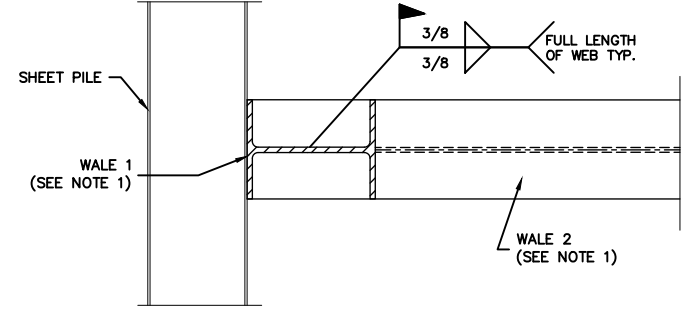
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.		USE TO VERIFY REPRODUCTION SCALE			
Professional Engineer's Name TERRY W. YOUNG		Professional Engineer's No. 074847		State NY	
Date Signed 10/25/2019		Project Mgr. HD		Checked by MCG	
Designed by DGN		Drawn by KMD			
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ARCADIS Project No. 30034367.00001				Date OCTOBER 2019	
ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120				S-501	

EXCAVATION SUPPORT SECTIONS

DIV/GRP:IMDV DB:K DAVIS LD:K DAVIS PIC: PM: C GERACI TM: D NODINE LVR: ON=OFF=REF* ACADVER: 23.0S(LMS TECH) PAGES: 23 OF 23 PLOT: 10/25/2019 9:44 AM BY: STOWELL GARY
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XREFS: X00-DLC



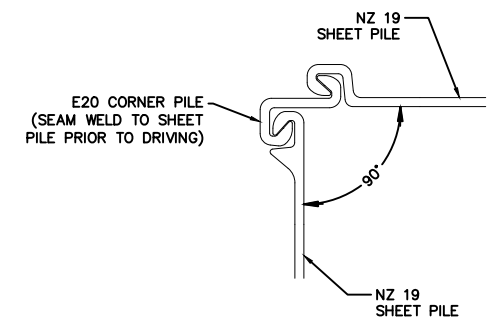
PLAN



SECTION 1-1

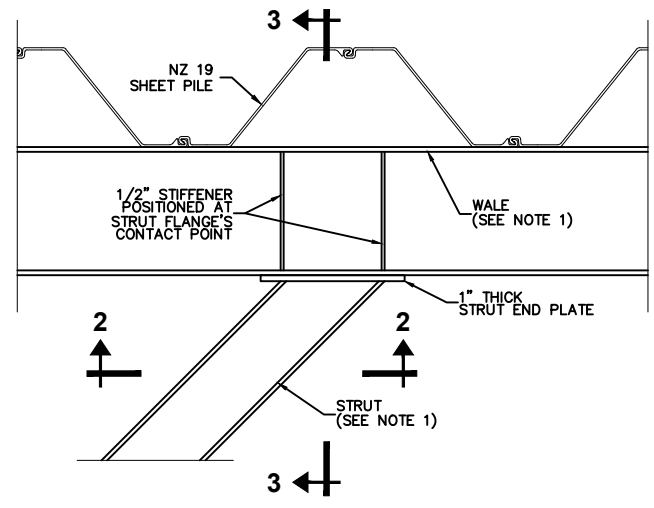
WALE TO WALE CONNECTION DETAIL 1

SCALE: 3/4"=1'-0"

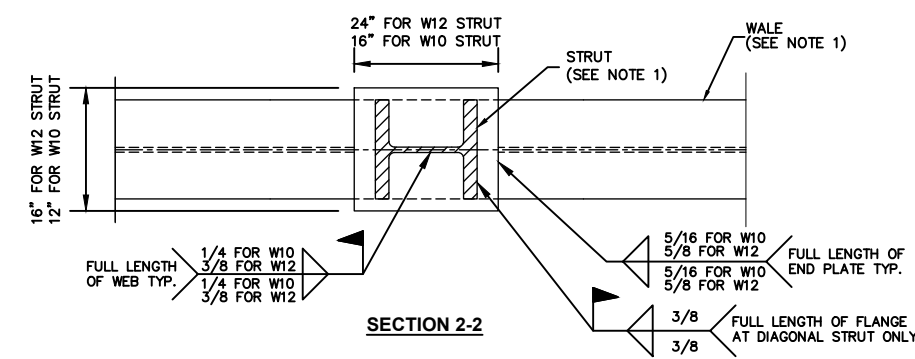


TYPICAL C 14 CORNER 3

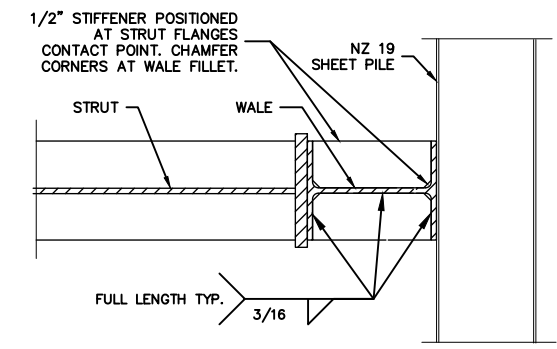
SCALE: 3"=1'-0"



PLAN



SECTION 2-2



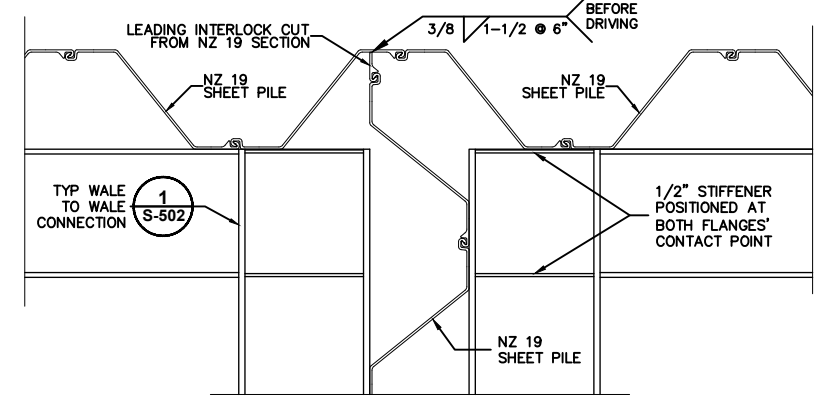
SECTION 3-3

STRUT TO WALE CONNECTION DETAIL 2

SCALE: 3/4"=1'-0"

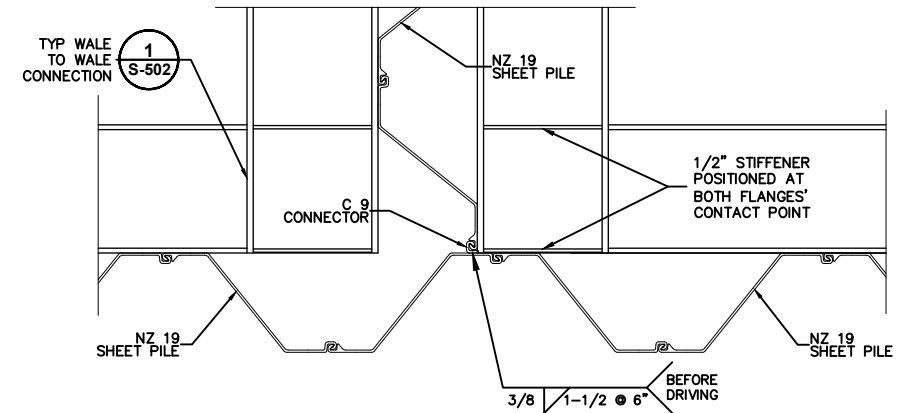
NOTE:

1. REQUIRED STRUT AND WALE SECTIONS VARY. SEE DRAWINGS S-101 AND S-102.



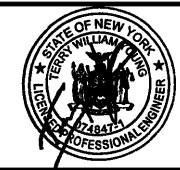
JUNCTION CONNECTION 1 4

SCALE: 3/4"=1'-0"



JUNCTION CONNECTION 2 5

SCALE: 3/4"=1'-0"



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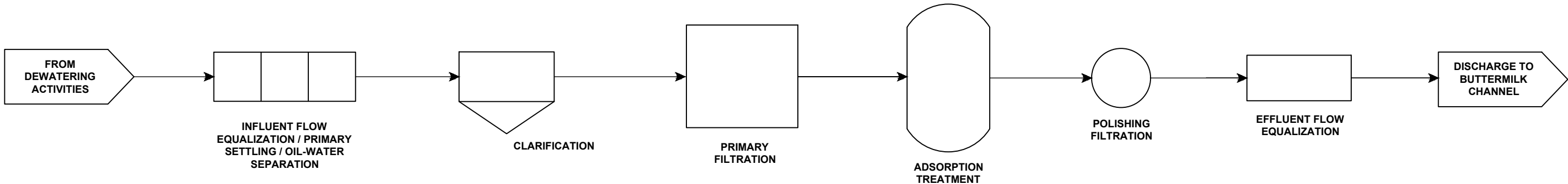
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ARCADIS Project No. 30034367.00001
Date OCTOBER 2019
ARCADIS 110 WEST FAYETTE STREET
STE 300 SYRACUSE, NEW YORK 13202
TEL. 315.446.9120

S-502

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NOTES:

1. CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR WATER MANAGEMENT AND COMPLIANCE WITH THE NYSDEC DISCHARGE REQUIREMENTS.
2. TEMPORARY WATER TREATMENT SYSTEM COMPONENTS SHOWN ARE CONCEPTUAL ONLY. IDENTIFY ALL WATER MANAGEMENT METHODS INCLUDING, BUT NOT LIMITED TO: TREATMENT SYSTEM PROCESS, TREATMENT COMPONENTS, LOCATION OF SYSTEM, SIZING ALL TREATMENT SYSTEM ELEMENTS, AND IDENTIFICATION OF ALTERNATIVE PROPOSED METHODS FOR WATER MANAGEMENT (I.E., TREATMENT PROCESS, OFF-SITE TREATMENT, ETC).
3. THE WATER TREATMENT SYSTEM SHALL BE CAPABLE OF OPERATING IN COLD (FREEZING) CONDITIONS WITHOUT DISRUPTION.
4. PERFORM ANY ADDITIONAL TESTING (JAR TESTS, CHEMICAL TESTING, ETC.) TO CONFIRM THE ABILITY OF THE TREATMENT SYSTEM TO MEET NYSDEC DISCHARGE REQUIREMENTS. CONTRACTOR WILL ALSO BE REQUIRED TO OPERATE THE SYSTEM IN ACCORDANCE WITH THE NYSDEC DISCHARGE REQUIREMENTS TO DEMONSTRATE THE SYSTEM'S ABILITY TO MEET DISCHARGE REQUIREMENTS DURING OPERATION.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY WATER TREATMENT SYSTEM OPERATION, MAINTENANCE, AND MONITORING.

WATER TREATMENT PROCESS FLOW DIAGRAM

NOT TO SCALE

SCALE(S) AS INDICATED		<table><tr><td>No.</td><td>Date</td><td>Revisions</td><td>By</td><td>Ckd</td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>		No.	Date	Revisions	By	Ckd						<table><tr><td colspan="3">Professional Engineer's Name TERRY W. YOUNG</td></tr><tr><td colspan="3">Professional Engineer's No. 074847</td></tr><tr><td>State NY</td><td>Date Signed 10/25/2019</td><td>Project Mgr. HD</td></tr><tr><td>Designed by DGN</td><td>Drawn by KMD</td><td>Checked by MCG</td></tr></table>		Professional Engineer's Name TERRY W. YOUNG			Professional Engineer's No. 074847			State NY	Date Signed 10/25/2019	Project Mgr. HD	Designed by DGN	Drawn by KMD	Checked by MCG		 ARCADIS OF NEW YORK, INC. NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW	BT RED HOOK, LLC • RED HOOK, NEW YORK RED HOOK 4 44 AND 62 FERRIS STREET / 219 SULLIVAN STREET BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK INTERIM REMEDIAL MEASURE		<table><tr><td colspan="2">ARCADIS Project No. 30034367.00001</td></tr><tr><td>Date OCTOBER 2019</td><td rowspan="2">D-601</td></tr><tr><td colspan="2">ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120</td></tr></table>		ARCADIS Project No. 30034367.00001		Date OCTOBER 2019	D-601	ARCADIS 110 WEST FAYETTE STREET STE 300 SYRACUSE, NEW YORK 13202 TEL. 315.446.9120	
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