

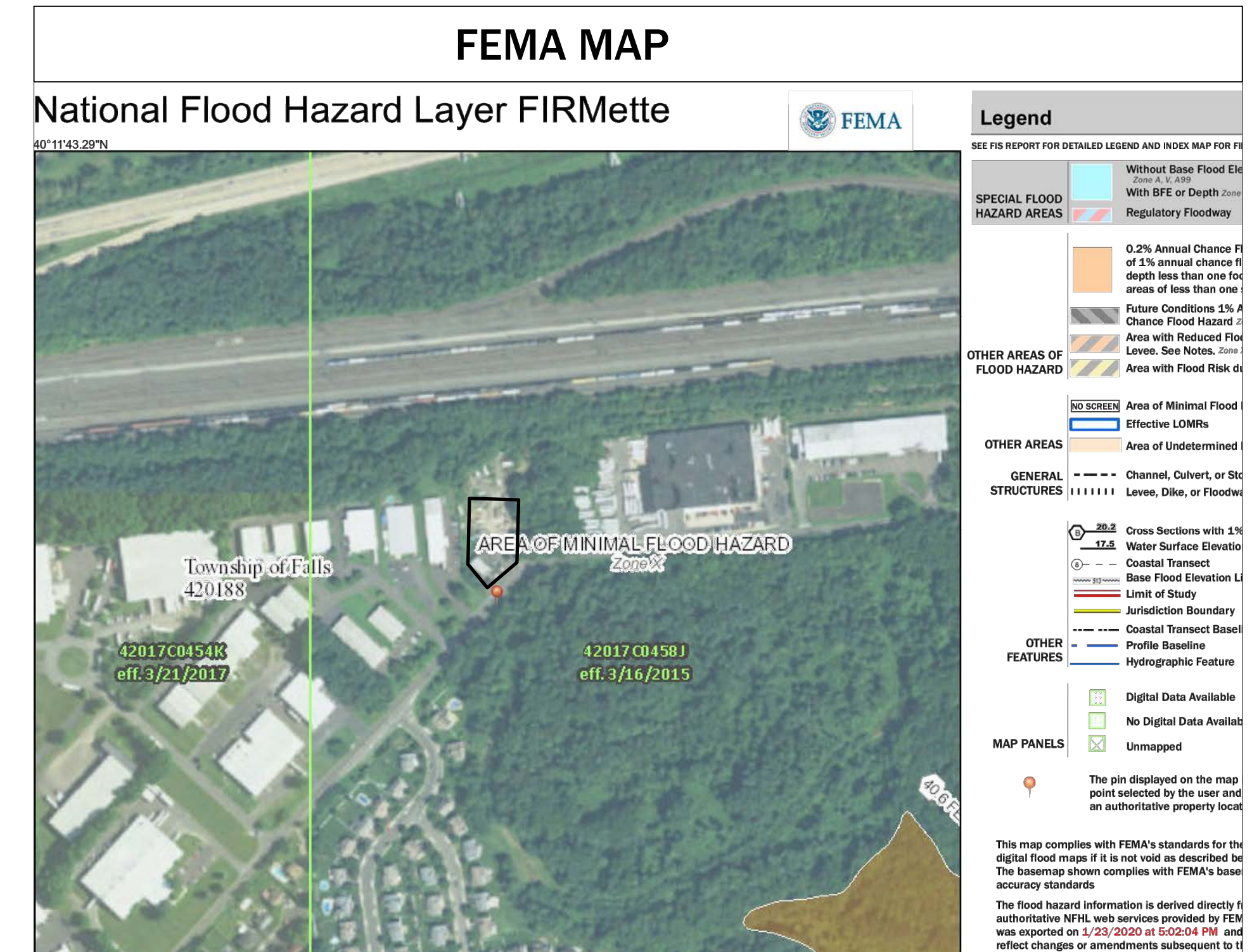
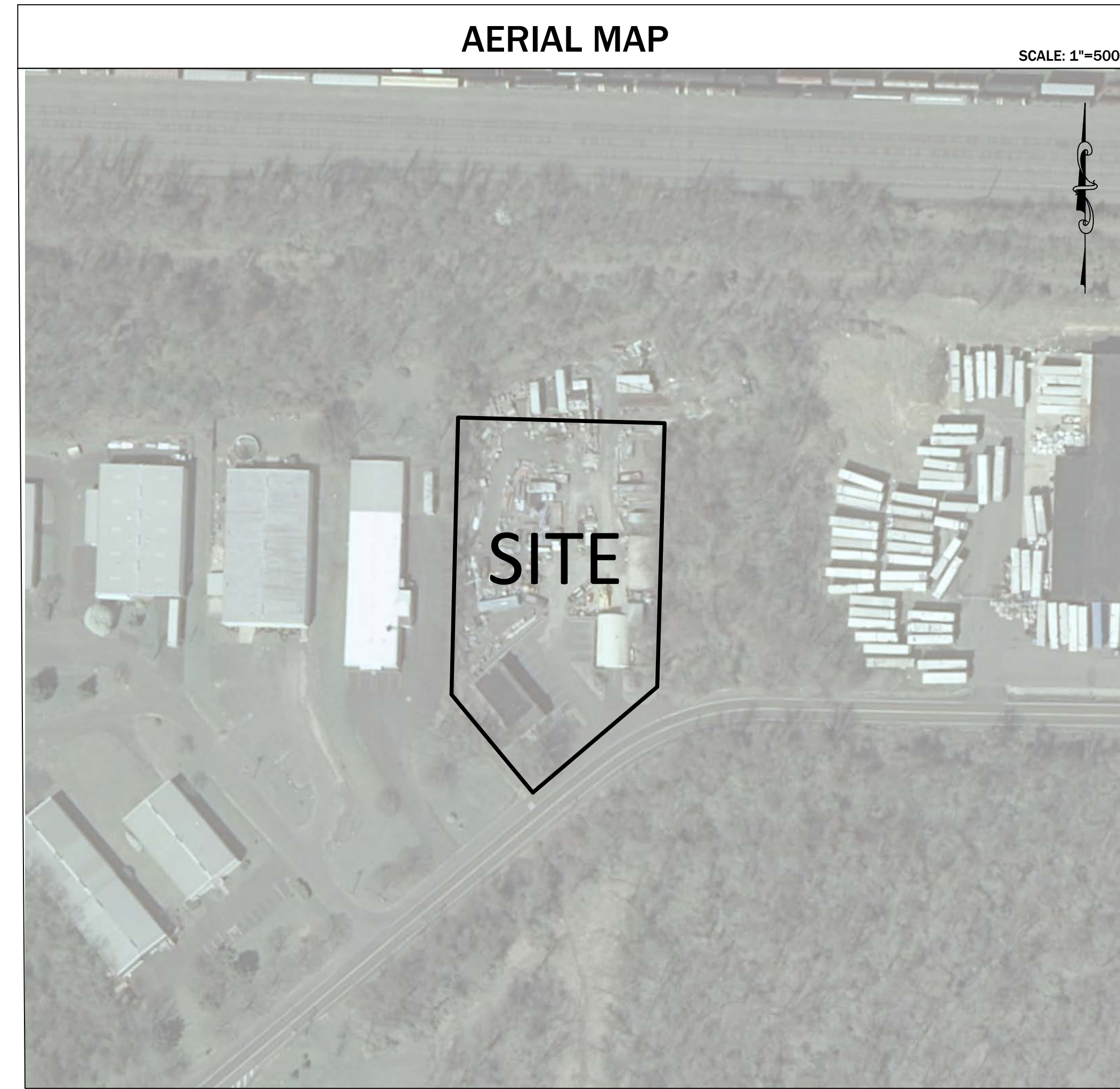
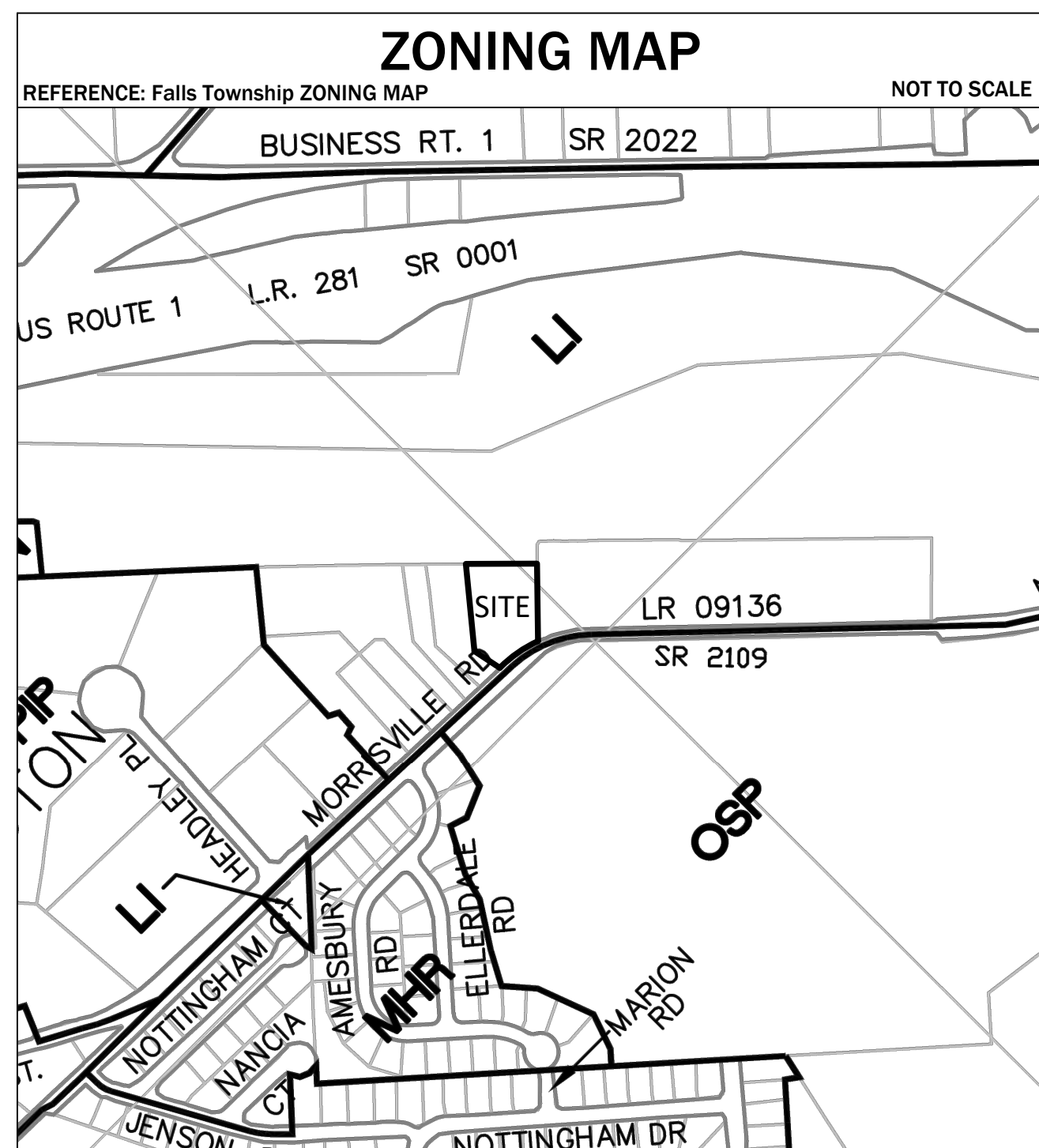
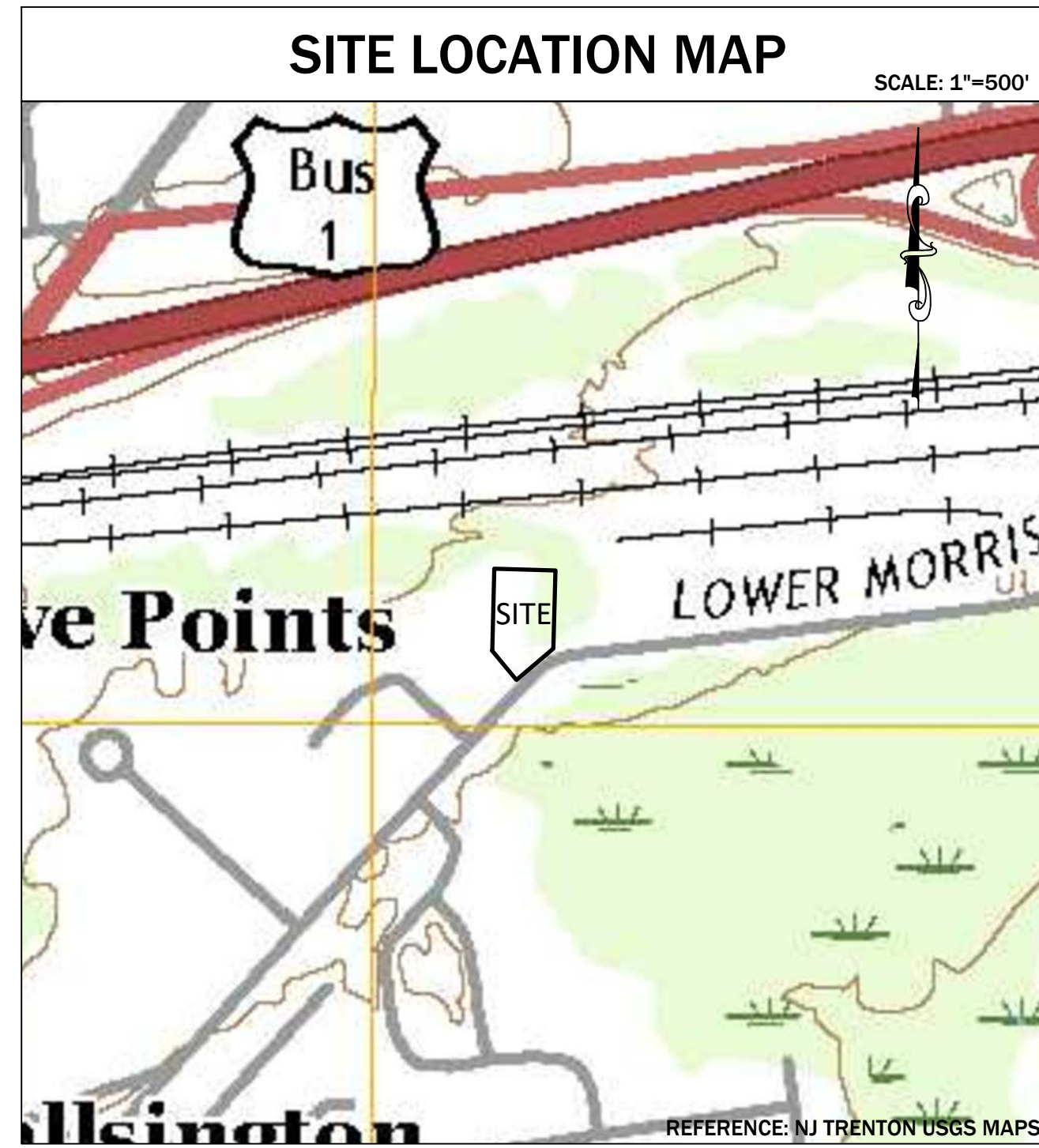
PRELIMINARY & FINAL LAND DEVELOPMENT PLANS

FOR

261 LOWER MORRISVILLE ROAD

T.M.P. # 13-028-019

FALLS TOWNSHIP, BUCKS COUNTY, PA



CONTACTS

- | | |
|---|---|
| <p>Assistant Township Manager/ Chief Code Enforcement Officer / Zoning Officer
 Falls Township
 Matthew Takita
 557 Lincoln Highway,
 Fairless Hills, PA 19030
 215-949-9000 x 251</p> <p>Falls Township Public Works Department
 Jason Lawson, Director
 557 Lincoln Highway,
 Fairless Hills, PA 19030
 215-949-9000 x280</p> <p>Township of Falls Authority
 Timothy Hartman, Executive Director
 557 Lincoln Highway,
 Fairless Hills, PA 19030
 215-946-6062</p> <p>Morrisville Municipal Authority
 John Warena, Executive Director
 35 Union Street
 Morrisville, PA 19067
 215-295-8181</p> <p>Bucks County Planning Commission
 1260 Almshouse Road,
 Doylestown, PA 18901
 215-345-3400</p> | <p>Bucks County Conservation District
 1456 Ferry Road, #704
 Doylestown, PA 18901
 215-345-7577</p> <p>PECO Energy Distribution Headquarters
 2301 Market Street
 PO Box 8699
 Philadelphia, PA 19101
 215-841-4000</p> <p>Comcast Cable Inc.
 55 Industrial Drive
 Ivyland, PA 18974
 1-800-263-9463</p> <p>Verizon Pennsylvania Inc.
 900 Race Street, 6th Floor
 Philadelphia, PA 19107
 215-591-6448</p> |
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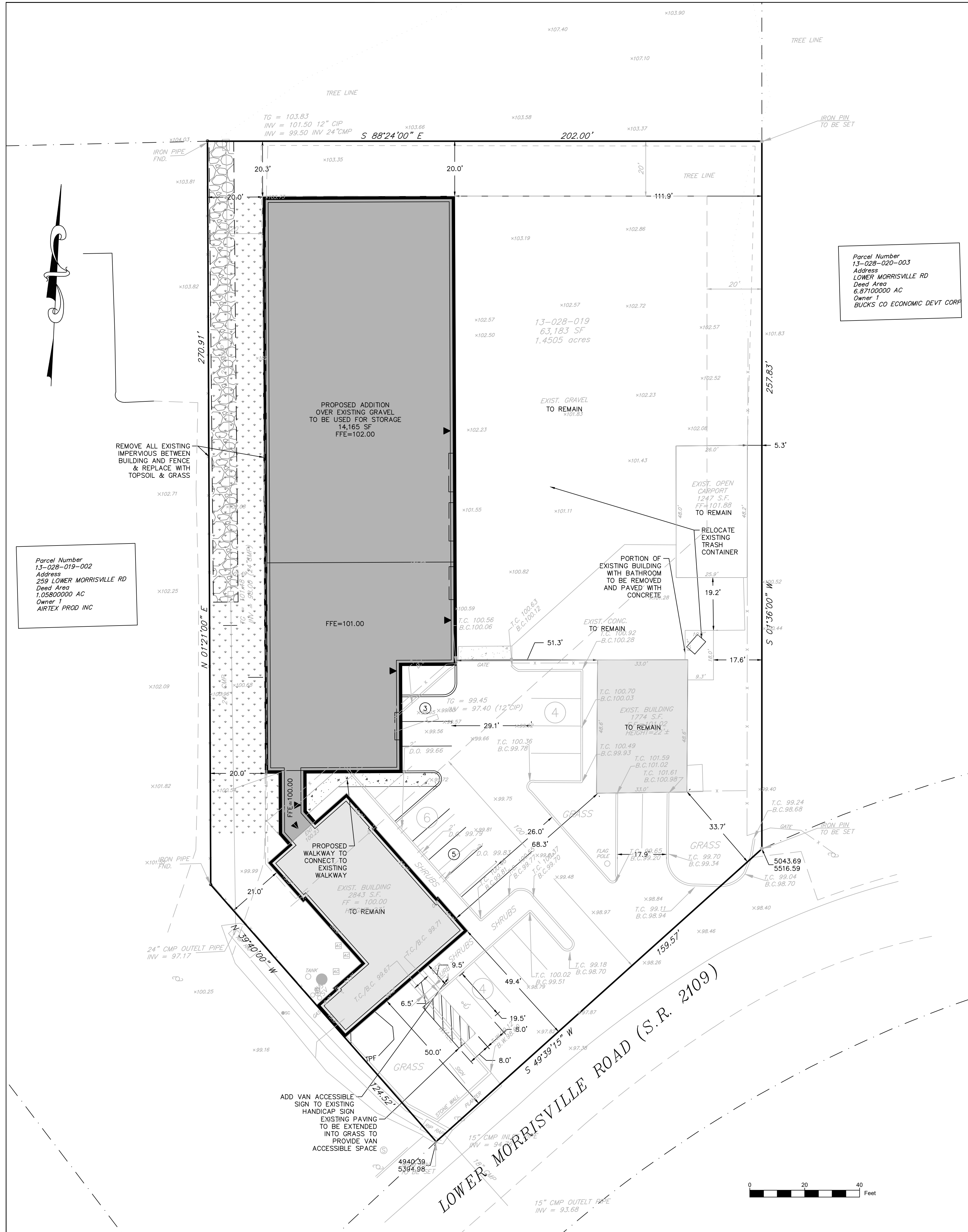
DRAWING LIST			
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	LAST REVISED DATE
1	C0.0	COVER SHEET	7/31/2020
2	C0.1	EXISTING CONDITIONS & DEMOLITION PLAN	7/31/2020
3	C1.0	RECORD SITE PLAN	7/31/2020
4	C1.1	CONSTRUCTION IMPROVEMENT PLAN	7/31/2020
5	C1.2	CONSTRUCTION DETAILS	7/31/2020
6	C2.0	TRAFFIC CIRCULATION PLAN	7/31/2020
7	C2.1	SIGHT DISTANCE PLAN	7/31/2020
8	C3.0	STORMWATER FLOW PLAN	7/31/2020
9	C4.0	LANDSCAPE & LIGHTING PLAN	7/31/2020
10	C5.0	EROSION AND SEDIMENT CONTROL PLAN	4/24/2020
11	C5.1	EROSION AND SEDIMENT CONTROL DETAILS	4/24/2020

PREPARED BY:

HOLMES CUNNINGHAM LLC
 409 EAST BUTLER AVENUE
 UNIT 5
 DOYLESTOWN, PA 18901
 (215) 586-3330

OWNER/APPLICANT:
 ROBERT & ELIZABETH MARQUIS
 7219 NORTH RADCLIFFE STREET
 BRISTOL, PA 19007

REVISED:	7/31/2020
DATE:	4/24/2020
PROJECT #	1485
DRAWING #	C0.0
SHEET	1 OF 11



- SITE PLAN NOTES:**
- THE PROPERTY IS SERVED BY PUBLIC WATER AND SEWER.
 - BY GRAPHIC PLOTTING ONLY, LEASE BOUNDARIES ARE LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN) OF THE FLOOD INSURANCE RATE MAP, PANEL NO. 458 OF 532, COMMUNITY MAP NO. 42017C0458J WHICH BEARS AN EFFECTIVE DATE OF MARCH 21, 2017.
 - PROPERTY SHALL HAVE A BLANKET EASEMENT IN FAVOR OF FALLS TOWNSHIP FOR ACCESS TO AND MAINTENANCE OF THE EXISTING UTILITIES THAT EXIST IN THIS PROPERTY.
 - REFERENCE IS MADE TO THE EXISTING FEATURES PLAN PREPARED BY TEI CONSULTING ENGINEERS, INC.
 - ALL UTILITIES ARE OWNED BY FALLS TOWNSHIP WITH THE EXCEPTION OF THE VERIZON FIBER OPTICS LINE.
 - ALL MATERIAL STORAGE AND STOCKPILE LOCATIONS ARE APPROXIMATE AND SHOULD NOT BE PLACED IN LOCATIONS THAT BLOCK STORMWATER INLETS OR THE TRAFFIC FLOW.
 - THERE IS AN EXISTING 2,843 CONTRACTOR OFFICE TO REMAIN AND A 1,774 ACCESSORY BUILDING HOUSING CONTRACTOR EQUIPMENT.
 - CONTRACTOR'S EQUIPMENT IS ALSO STORED ON EXISTING GRAVEL SITE AREA.
 - THE PROPOSED 14,140 SF ONE-STORY ADDITION TO THE CONTRACTOR'S OFFICE IS PROPOSED TO BE USED TO HOUSE THE CONTRACTOR'S EQUIPMENT THAT IS PRESENTLY STORED ON THE EXISTING SITE.
 - THE CONSTRUCTION OF THE PROPOSED ADDITION WILL NOT RESULT IN THE HIRING OF ANY ADDITIONAL EMPLOYEES THEREFORE THERE WILL BE NO INCREASE IN THE USE OF ADDITIONAL WATER OR ADDITIONAL SANITARY SEWER DISCHARGE.
 - THERE WILL BE NO INCREASE IN IMPERVIOUS SURFACE AFTER CONSTRUCTION OF THE ADDITION IS COMPLETED.
 - MONUMENTS SHALL BE PLACED AT KEY POINTS AGREED UPON BETWEEN THE TOWNSHIP ENGINEER AND THE DEVELOPER'S ENGINEER.
 - A SEWAGE FACILITIES PLANNING MODULE APPLICATION HAS BEEN SUBMITTED TO THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
 - THE APPLICANT WILL REMOVE ENCROACHMENTS TO THE REAR OF THE PROPERTY AND RESTORE THE AREA BACK TO A VEGETATED STATE.

ZONING TABLE

Zone: LI Light Industrial District

Item	Required	Existing	Proposed	Ordinance Section
Permitted Uses:	Contractor Office			
Max. Building Height	50 FT	21.8 FT	28 FT	209-27 E
Min. Tract Area	0.5 AC	1.45 AC	1.45 AC	209 Attachment 7 Table 5
Min. Lot Area per Principal Building	0.5 AC	1.45 AC	1.45 AC	209 Attachment 7 Table 5
Min. Lot Frontage	60 FT	159.57 FT	159.57 FT	209 Attachment 7 Table 5
Min. Lot Width	60 FT	159.57 FT	159.57 FT	209 Attachment 7 Table 5
Min. Lot Depth	150 FT	257.83 FT	257.83 FT	209 Attachment 7 Table 5
Min. Front Yard Setback	100 FT	49.35 FT (N)	49.35 FT (N)	209 Attachment 7 Table 5
Min. Side Yard Setback (Each)	20 FT	0 FT (N)	0 FT (N)	209 Attachment 7 Table 5
Min. Rear Yard Setback	20 FT	178.21 FT	20 FT	209 Attachment 7 Table 5
Max. Building Coverage	40%	9.3%	31.4%	209 Attachment 7 Table 5
Max. Impervious Coverage	50%	90.3% (N)	82.6% (N)	209 Attachment 7 Table 5
Min. Parking Spaces Needed	1 space per 170 SF of office floor area	18	19	209-42 (8)

(N) Existing Nonconformity to Remain

Site Capacity Calculations

	Area (SF)	Area (AC)
Gross Site Area	63,183	1.450
Existing Streets Rights-of-Way	0	0.000
Existing Utility Rights-of-Way or Easements	0	0.000
Land without Development Opportunities due to Restrictions	0	0.000
Base Site Area	63,183	1.450

Protected Site Area

Natural Resource	Protection Ratio	Acres of Land in Resource	Acres of Resource Protection Area	Proposed Resource Protection Land (AC)
100 Year Floodplain	1.00	0.00	0.00	0.00
Wetlands	1.00	0.00	0.00	0.00
Wetlands Margin	0.80	0.00	0.00	0.00
Lakes or Ponds	1.00	0.00	0.00	0.00
Lakes and Ponds Shoreline	0.80	0.00	0.00	0.00
Watercourse	1.00	0.00	0.00	0.00
Steep Slopes (15-25%)	0.70	0.00	0.00	0.00
Steep Slopes (more than 25%)	0.85	0.00	0.00	0.00
Environmental Sensitive Woodlands	0.80	0.00	0.00	0.00
Other Woodlands	0.50	0.00	0.00	0.00
TOTALS		0.00	0.00	0.00

Percent of Base Site Area Classified as Resource Protection Land: 0%

PARKING CALCULATIONS

Use	Requirement	Square Footage	Parking Spaces Needed	Existing	Provided
Contractor Office	1 space for each 170 square feet of office floor area or fraction thereof	2,843	8	18	19

LOT AREA CALCULATIONS

	S.F.
Gross Lot Area	63,183
Street Right of Way	0
Net Lot Area	63,183

IMPERVIOUS COVERAGE CALCULATIONS

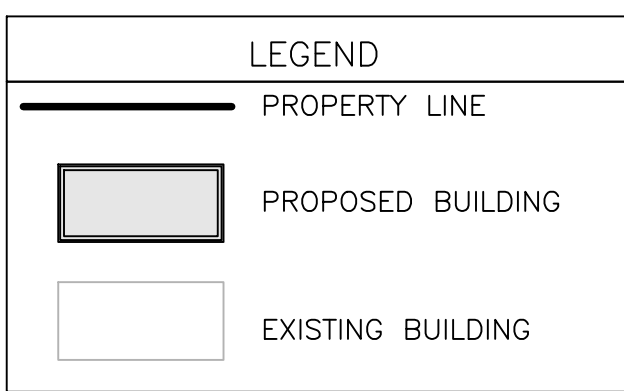
Category	Area
Existing Building	2,843
Existing Garage	1,774
Existing Open Carport	1,247
Existing Concrete Curb/Walk	615
Existing Asphalt Driveway	9,422
Existing Concrete Driveway	2,350
Existing Gravel/Stone Area	38,818
Total Existing Impervious	57,070
Existing Impervious Coverage	90.3%

Proposed Impervious Area

Existing Building to Remain	2,843
Existing Garage to Remain	1,595
Existing Open Carport to Remain	1,247
Existing Concrete Curb/Walk to Remain	402
Existing Asphalt Driveway to Remain	8,749
Existing Gravel/Stone Area to Remain	20,290
Existing Concrete Driveway to Remain	2,350
Proposed Addition	14,165
Proposed Asphalt	63
Proposed Concrete Curb/Walk	302
Proposed Concrete Driveway	179
Total Proposed Impervious	52,187
Proposed Impervious Coverage	82.6%

Change in Impervious Area

Existing Building Coverage	9.3%
Proposed Building Coverage	31.4%



FALLS TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT AND STORMWATER MANAGEMENT ORDINANCE WAIVERS REQUESTED:

- SALDO SECTION 191-37(B) - WAIVER FROM PROVIDING 15' OF OPEN SPACE BETWEEN THE CURBLINE OF ANY UNCOVERED PARKING AREA AND A PROPOSED BUILDING.
- SALDO SECTION 191-39.G - WAIVER FROM PROVIDING SIDEWALK ALONG LOWER MORRISVILLE ROAD.
- SALDO SECTION 191-44(D) - WAIVER FROM PROVIDING TOP AND BOTTOM OF SLOPES TO BE 5' FROM PROPERTY LINES.
- SALDO SECTION 191-48 - WAIVER FROM PROVIDING STREET TREES ALONG THE STREET FRONTAGE.
- SALDO SECTION 191-62(B) - WAIVER FROM PROVIDING CURBING AND WIDENING ALONG LOWER MORRISVILLE ROAD.
- SALDO SECTION 191-78(C)(2) - PARTIAL WAIVER FROM PROVIDING EXISTING FEATURES WITHIN 200 FEET OF ANY PART OF THE LAND TO BE DEVELOPED.
- SWMO 187-13.B - WAIVER FROM PROVIDING MINIMUM 15" DIAMETER RCP OR HDPE PIPES.

RECOMMENDED FOR APPROVAL BY THE FALLS TOWNSHIP PLANNING COMMISSION
THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE FALLS TOWNSHIP PLANNING COMMISSION ON THIS _____ DAY OF _____, 20____.

(CHAIRMAN) _____ (SECRETARY) _____

APPROVAL OF THE BOARD OF SUPERVISORS OF FALLS TOWNSHIP
THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS APPROVED BY RESOLUTION OF THE BOARD OF TOWNSHIP SUPERVISORS OF FALLS TOWNSHIP THIS _____ DAY OF _____, 20____.

(CHAIRMAN) _____ (SECRETARY) _____

REVIEWED BY THE TOWNSHIP ENGINEER, FALLS TOWNSHIP
THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE FALLS TOWNSHIP ENGINEER _____, P.E., ON THIS _____ DAY OF _____, 20____.

(TOWNSHIP ENGINEER) _____

CERTIFICATION OF REVIEW BY THE BUCKS COUNTY PLANNING COMMISSION
THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE BUCKS COUNTY PLANNING COMMISSION ON THIS _____ DAY OF _____, 20____.

BCPC # _____

CERTIFICATION FOR RECORDING
THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS RECORDED IN THE OFFICE OF RECORDER OF DEEDS FOR BUCKS COUNTY, AT DOYLESTOWN, PENNSYLVANIA, THIS _____ DAY OF _____, 20____.

BY: _____
RECORDER OF DEEDS

PROFESSIONAL ENGINEER'S CERTIFICATION
I, KRISTIN R. HOLMES, A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS PLAN MEETS THE REQUIREMENTS OF ALL ORDINANCES AFFECTING THIS SUBDIVISION AND LAND DEVELOPMENT, INCLUDING THE AMENDED ZONING ORDINANCE OF THE TOWNSHIP OF FALLS IN WHICH THIS SUBDIVISION OR LAND DEVELOPMENT IS LOCATED NOT WITHSTANDING THE ZONING VARIANCES AND OTHER WAIVERS GRANTED BY FALLS TOWNSHIP.

OWNER'S CERTIFICATION OF INTENT
WE, ROBERT & ELIZABETH MARQUIS, HEREBY CERTIFY THAT WE HAVE LAID OUT UPON OUR LAND SITUATED IN THE TOWNSHIP OF FALLS, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLAN WHICH IS INTENDED TO BE FORTHWITH RECORDED.

WITNESS OUR HAND AND SEAL THIS _____ DAY OF _____, 20____.

ROBERT MARQUIS _____ ELIZABETH MARQUIS _____

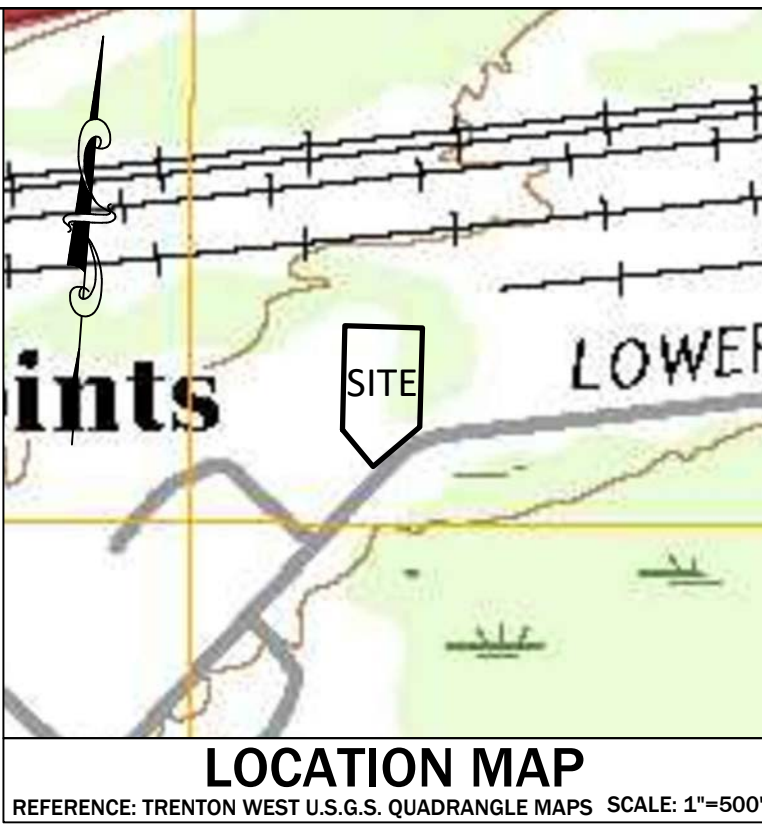
COMMONWEALTH OF PENNSYLVANIA:
COUNTY OF _____, 20____, BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED ROBERT MARQUIS, WHO ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF LOTS AND PROPERTY SHOWN THERETO SITUATED IN THE TOWNSHIP OF FALLS, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, AND DESIRED THAT THIS PLAN BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20____.

COMMONWEALTH OF PENNSYLVANIA:
COUNTY OF _____, 20____, BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED ELIZABETH MARQUIS, WHO ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF LOTS AND PROPERTY SHOWN THERETO SITUATED IN THE TOWNSHIP OF FALLS, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, AND DESIRED THAT THIS PLAN BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20____.

NOTARY PUBLIC (SEAL)
MY COMMISSION EXPIRES: _____



Holmes Cunningham LLC
409 E. Butler Ave. Unit 5
Doylestown, PA 18901
(215) 586-3330
www.hcengineering.net

Holmes Cunningham ENGINEERING

REVISIONS

Date	Description
7/31/2020	Revised per Township Engineer comments

261 LOWER MORRISVILLE ROAD
TMP# 13-028-019
FALLS TOWNSHIP, BUCKS COUNTY, PA

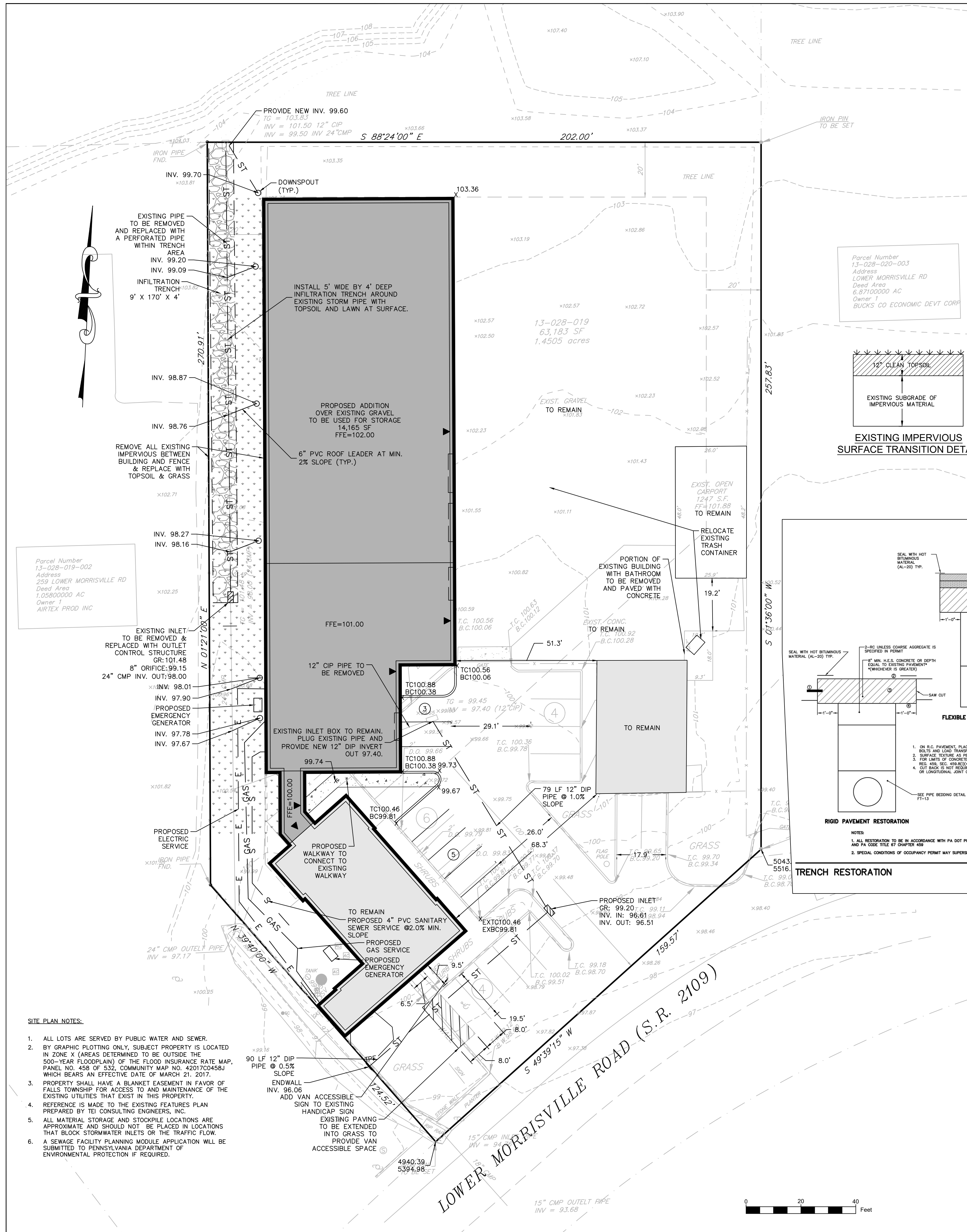
RECORD SITE PLAN

PROFESSIONAL ENGINEER
KRISTIN R. HOLMES, P.E.
PA PE073604

File No. 1485
1485 C1.0 Record.DWG

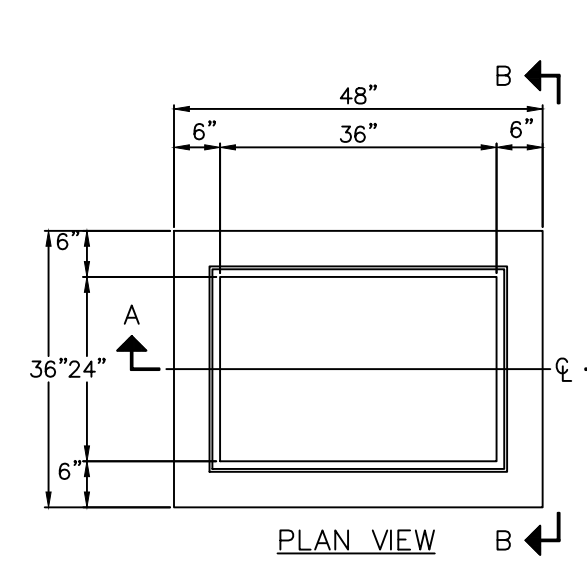
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Date 4/24/2020
Scale 1"=20'
Designed KH
Sheet 3 of 11

Drawing No. **C1.0**

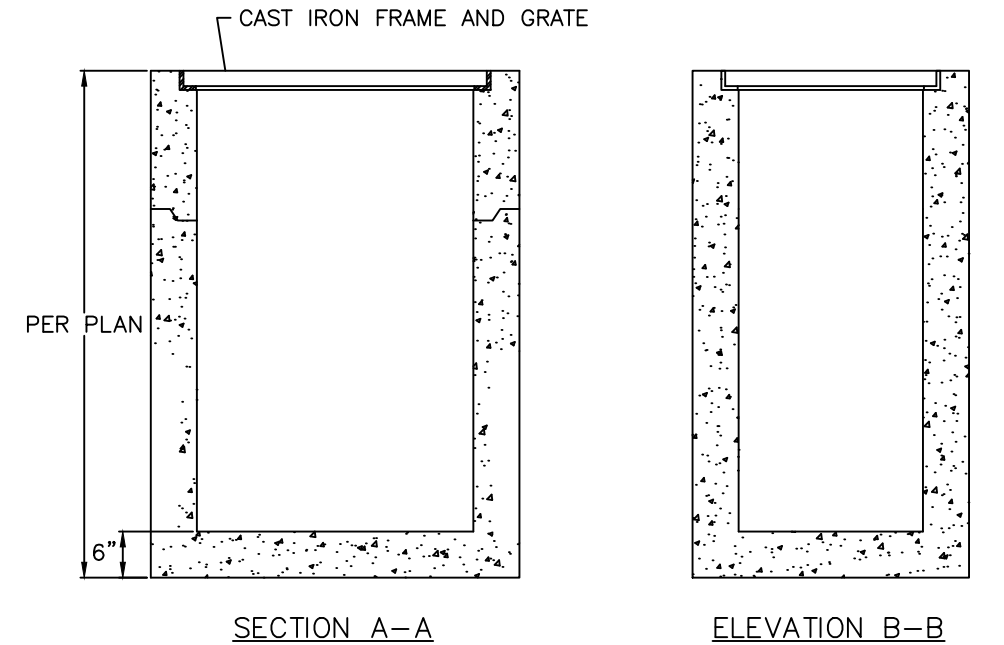


SOIL TYPES, LIMITATION AND RESOLUTION					
SYM	NAME	Hydric (Y/N)	Depth to Bedrock (in.)	Depth to Water Table (in.)	HSG
UrUB	Urban Land, 0 to 8 percent slopes	N	N/A	N/A	D
Ua	Udorthents, gravelly	N	N/A	N/A	D

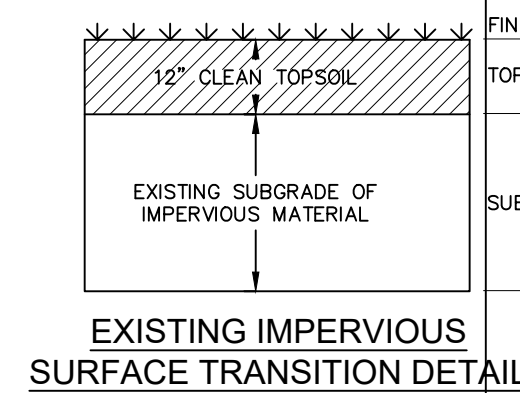
Resolution to Limitations
 1. For areas where seasonal high water table is a limitation, ponded water shall be pumped through a "dirt bag"
 2. For areas where shallow depth to bedrock is a limitation, contractor shall determine whether rock is ripplable. If rock is not ripplable, blasting will be required. All blasting shall meet all local, county, state, and federal regulations.



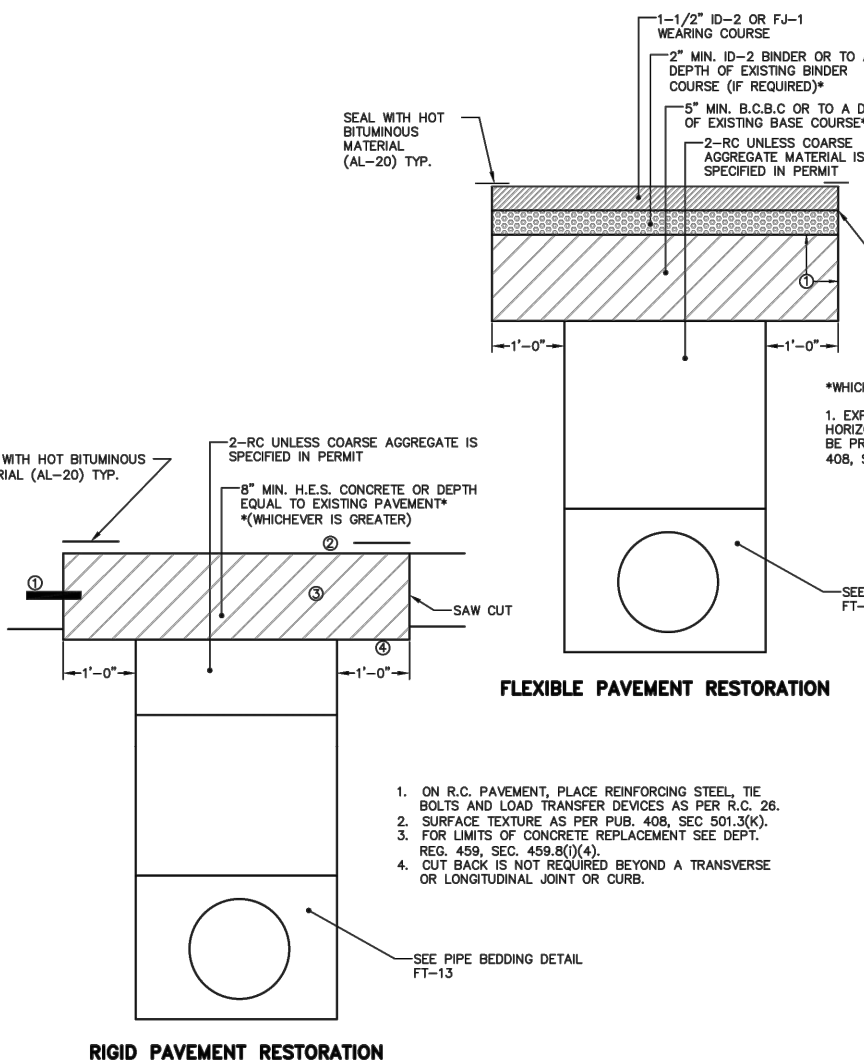
- NOTES:
- CONCRETE INLET AND TOP UNITS SHALL BE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M) RC-34M, "INLETS, CONCRETE TOP UNITS CAST-IN-PLACE AND PREGAST".
 - STEPS SHALL BE PROVIDED WHENEVER STRUCTURE EXCEEDS 4 FEET IN DEPTH.
 - STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB 172M), RC-39M.
 - STEP AND STEP INSTALLATION SHALL MEET ALL REQUIREMENTS OF ASTM C 478 AND C 497 FOR DIMENSIONS, LOAD RATING AND PULLOUT RESISTANCE.
 - PROVIDE STRUCTURAL STEEL GRATE - BICYCLE SAFE, AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB 1172M) RC-34M, "INLET GRATES".
 - THE CONTRACTOR SHALL PROVIDE CUT SHEETS TO ENGINEER TO REVIEW PRIOR TO CONSTRUCTION.



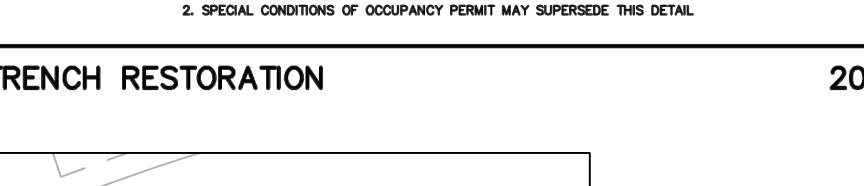
PRECAST CONCRETE STORM INLET



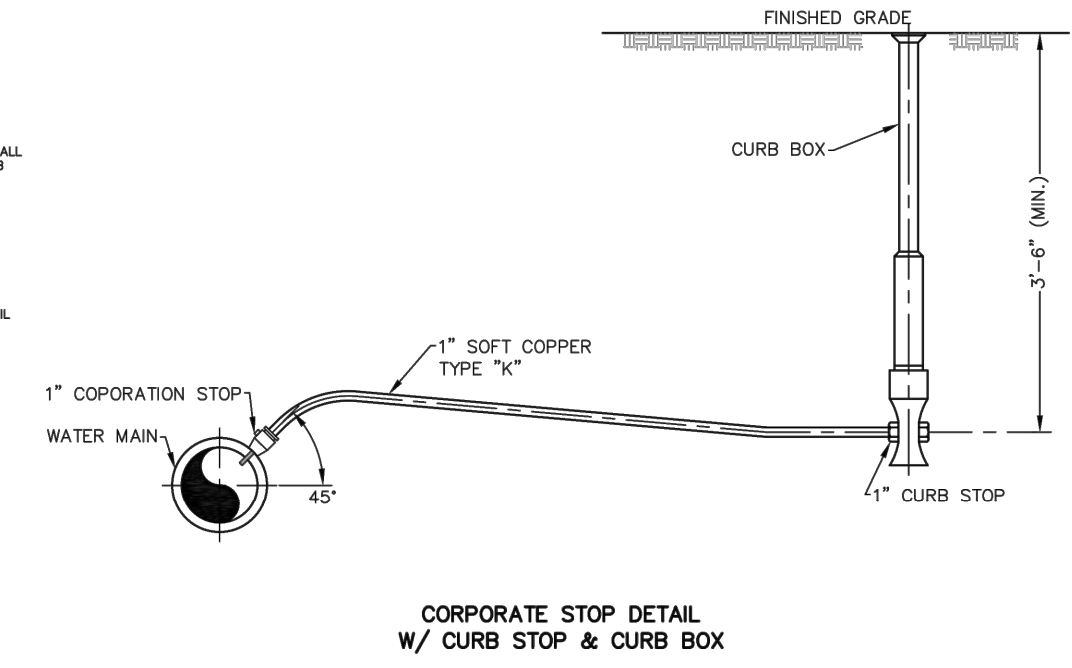
EXISTING IMPERVIOUS SURFACE TRANSITION DETAIL



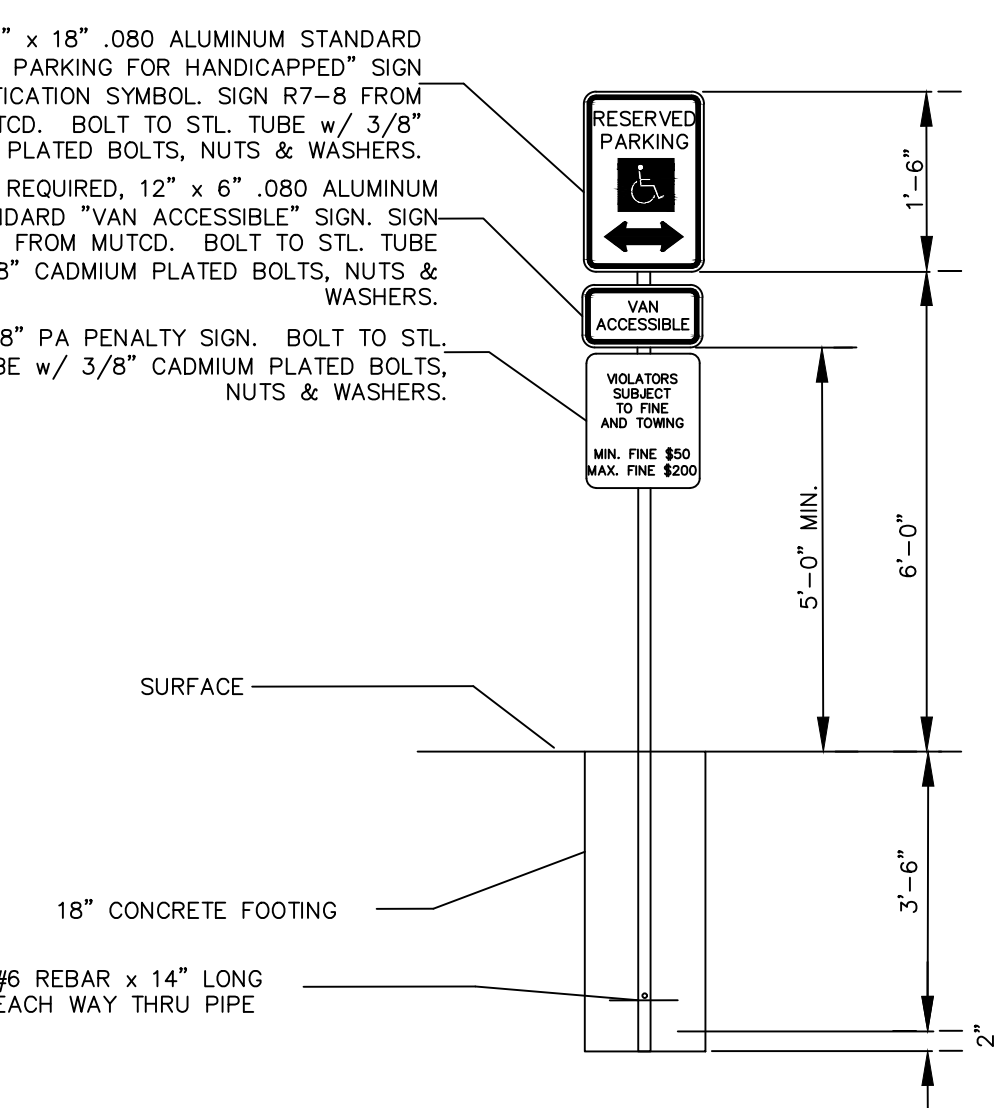
FLEXIBLE PAVEMENT RESTORATION



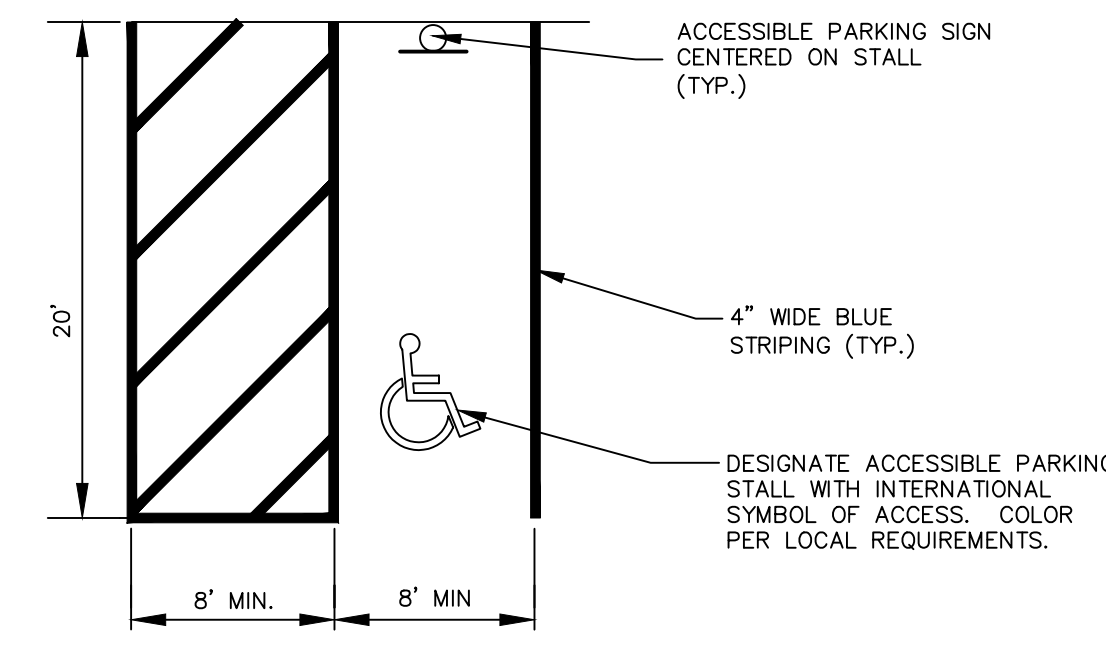
RIGID PAVEMENT RESTORATION



CONCRETE SIDEWALK

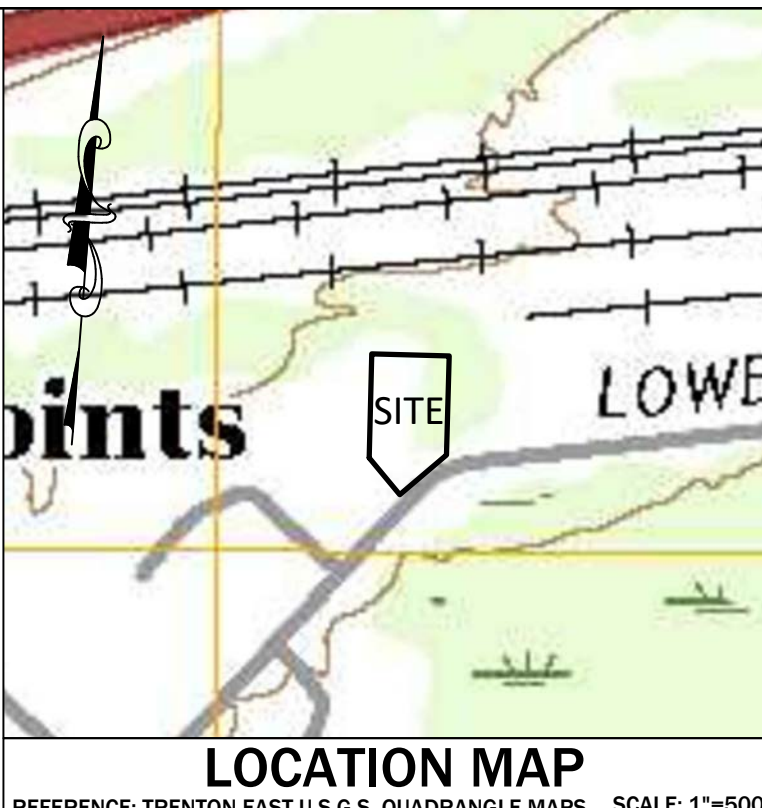


ACCESSIBLE PARKING STALL SIGN



ACCESSIBLE PARKING STALL STRIPING

- NOTES:
- ACCESSIBLE PARKING SPACES SHALL BE AT LEAST 96 INCHES WIDE. TWO ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS. PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE. PARKING SPACES AND ACCESS SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS.
 - PARKING SPACES FOR VANS, ACCESSIBLE SERVING THEM, AND VEHICULAR ROUTES FROM AN ENTRANCE TO THE VAN PARKING SPACES, AND FROM THE VAN PARKING SPACES TO A VEHICULAR EXIT SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF 98 INCHES MINIMUM.
 - CONTRACTOR SHALL REFER TO THE LATEST ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES TO ENSURE THAT DETAILS ARE CURRENT AT THE TIME OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF DISCREPANCIES ARE FOUND PRIOR TO COMMENCEMENT OF WORK.



LOCATION MAP
 REFERENCE: TRENTON EAST U.S.G.S. QUADRANGLE MAPS SCALE: 1"=500'

OWNER/APPLICANT
 ROBERT & ELIZABETH MARQUIS
 7219 NORTH RADCLIFFE STREET
 BRISTOL, PA 19007

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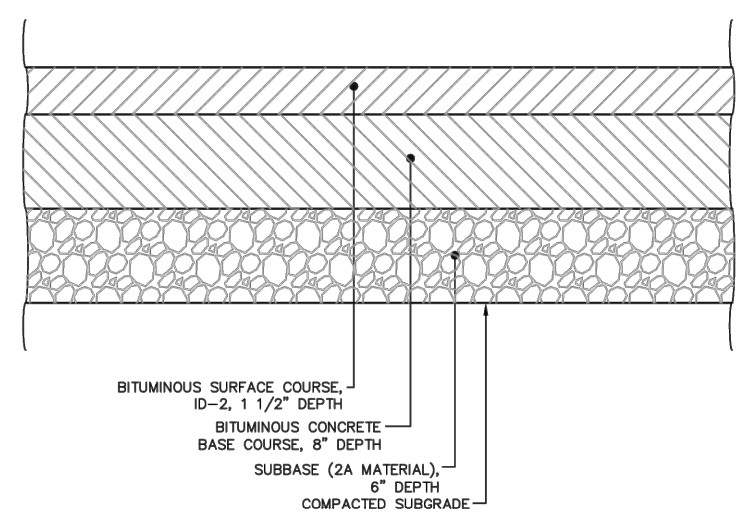
REVISIONS	Description	Date
1	Revised per Township Engineer comments	7/31/2020

261 LOWER MORRISVILLE ROAD
 TMP# 13-028-019
 FALLS TOWNSHIP, BUCKS COUNTY, PA
 CONSTRUCTION IMPROVEMENT PLAN

KRISTIN R. HOLMES, P.E.
 PA PE073604

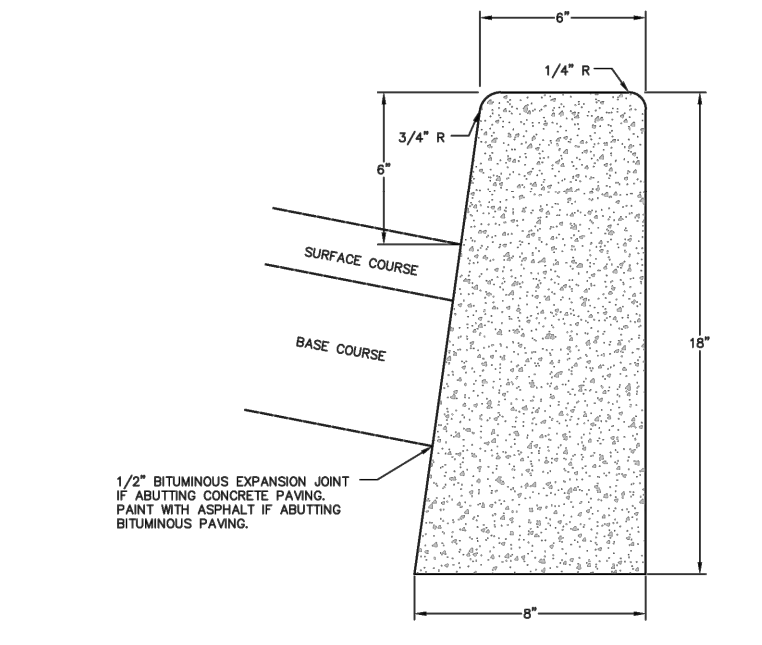
File No.	1485_C1.1 Site.DWG
HCE Job	1485
Date	4/24/2020
Scale	1"=20'
Designed	KH
Sheet	4 of 11

Drawing No.
C1.1



HEAVY DUTY PAVING FOR PARKING LOTS IN COMMERCIAL & INDUSTRIAL AREAS

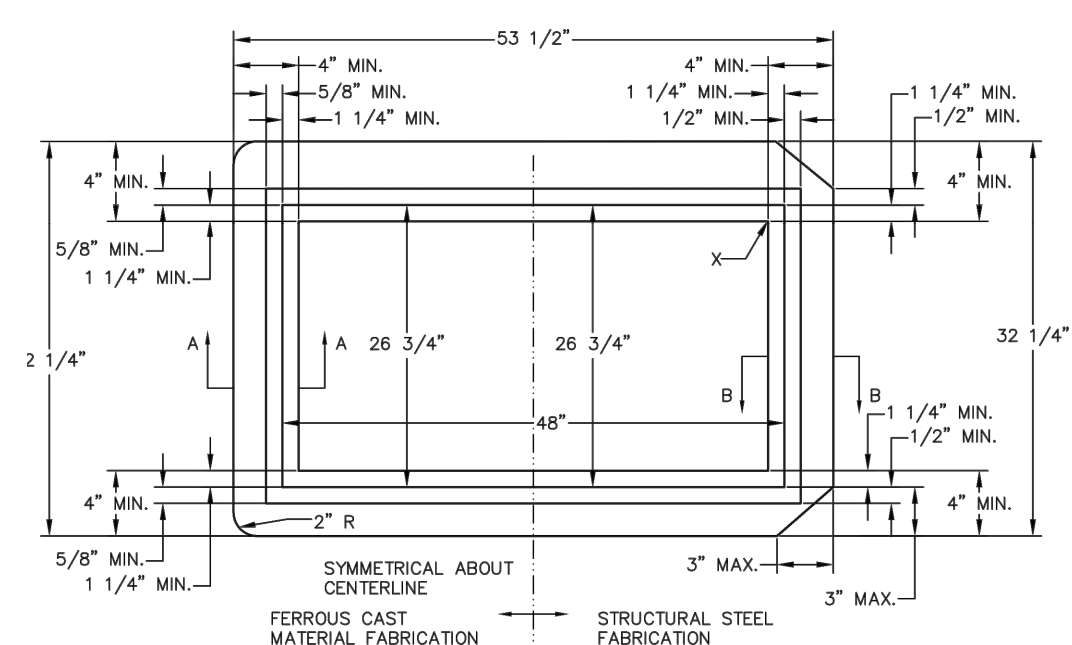
REQUIREMENTS FOR CONCRETE PAVING FOR COMMERCIAL AND INDUSTRIAL AREAS WILL BE DETERMINED BY THE TOWNSHIP ENGINEER BASED ON SUBMITTALS.



TYPICAL SECTIONS - STANDARD CURB

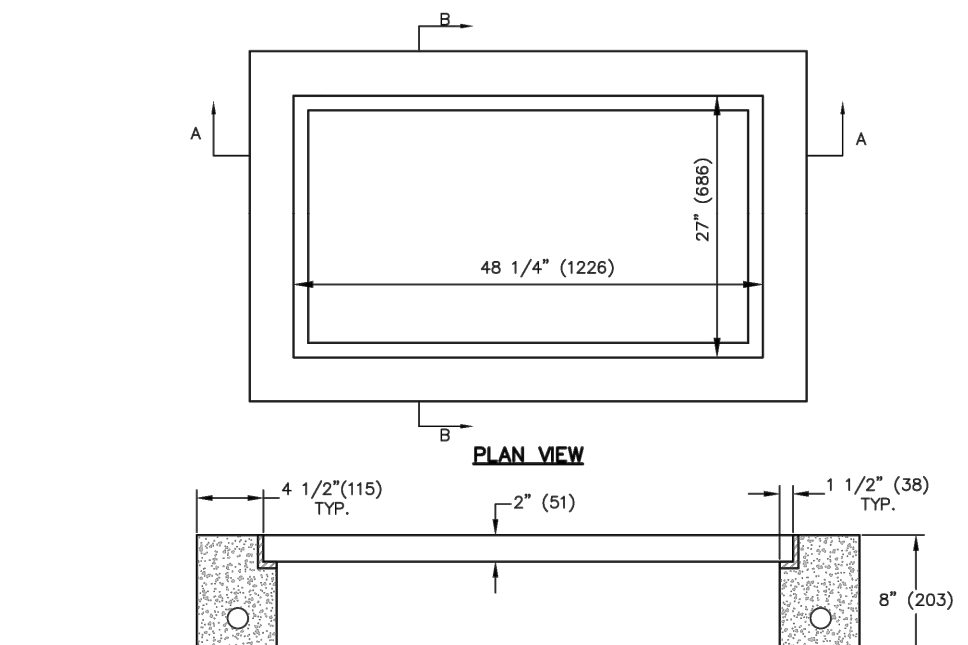
NOTES:
1. PROVIDE MATERIAL AND CONSTRUCTION METHODS MEETING THE REQUIREMENTS OF PENNDOT SPECIFICATIONS, PUBLICATION 408.
2. INSTALL 1/2\"/>

CONCRETE CURB 2001 FT-8



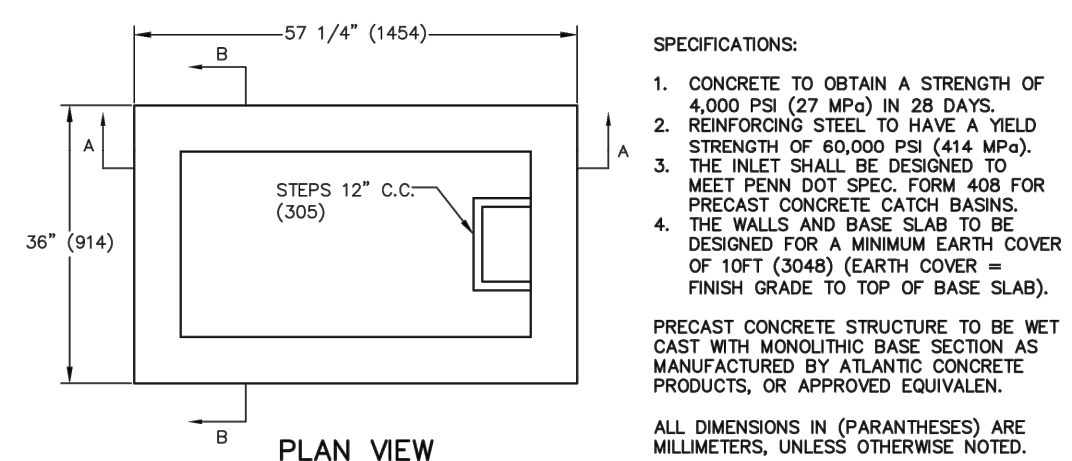
TYPE M INLET FRAME 2001 FT-20

NOTES:
1. THIS STANDARD DEPICTS THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGEABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION OR MANUFACTURING. ONLY ITEMS SUPPLIED BY A MANUFACTURER LISTED IN PENNDOT BULLETIN 19 WILL BE PERMITTED.
2. PROVIDE EITHER GRAY, MALLEABLE, OR DUCTILE IRON CASTINGS OR STRUCTURAL STEEL FRAMES.
3. WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 408.



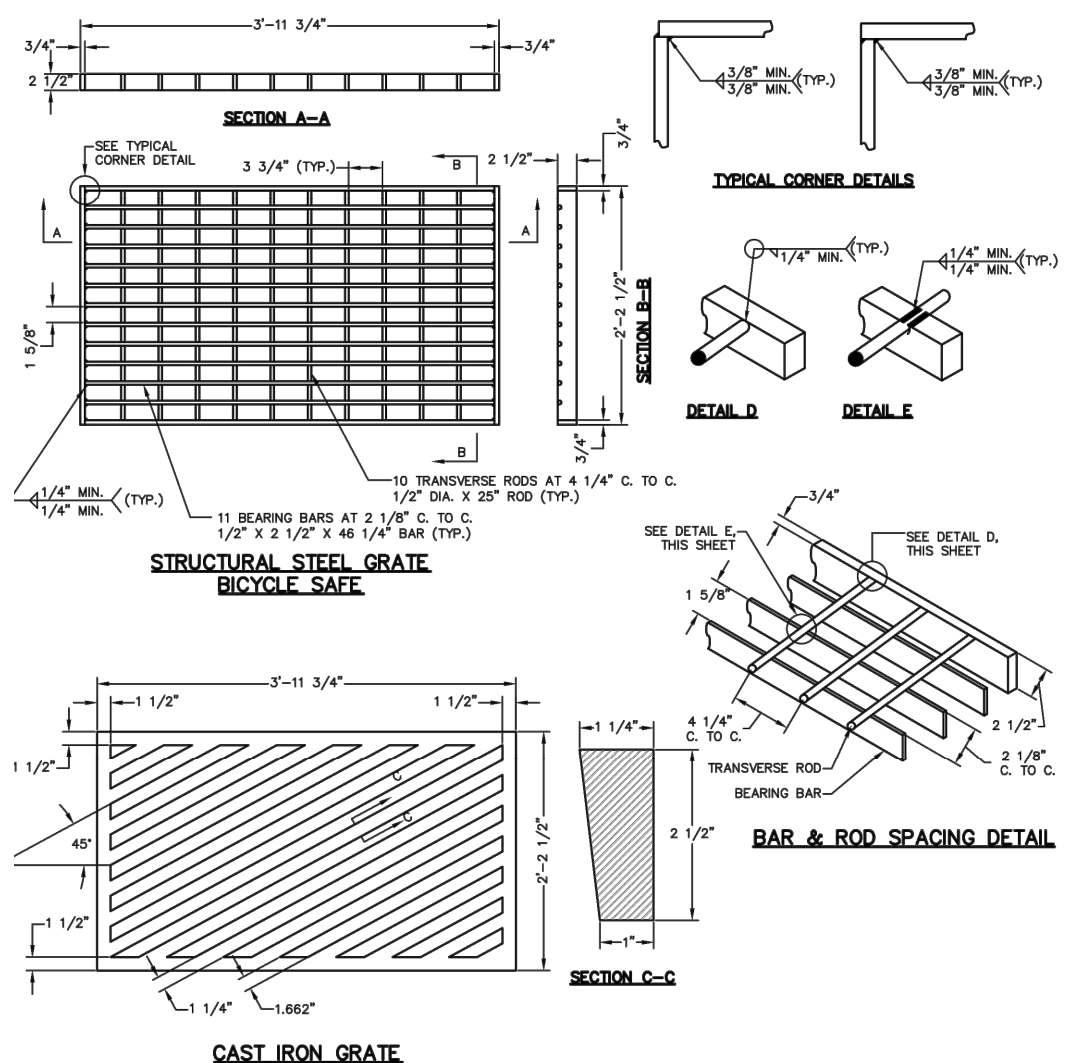
PRECAST CONCRETE INLET, TYPE M 2001 FT-21

SPECIFICATIONS:
1. CONCRETE TO OBTAIN A STRENGTH OF 4,000 PSI (27 MPa) IN 28 DAYS.
2. REINFORCING STEEL TO HAVE A YIELD STRENGTH OF 60,000 PSI (414 MPa).
3. THE INLET SHALL BE DESIGNED TO MEET PENNDOT SPEC FORM 408 FOR PRECAST CONCRETE CATCH BASINS. PRECAST CONCRETE STRUCTURE TO BE WET CAST WITH MONOLITHIC BASE SECTION AS MANUFACTURED BY ATLANTIC CONCRETE PRODUCTS, OR APPROVED EQUAL. ALL DIMENSIONS IN (PARENTHESES) ARE MILLIMETERS, UNLESS OTHERWISE NOTED.



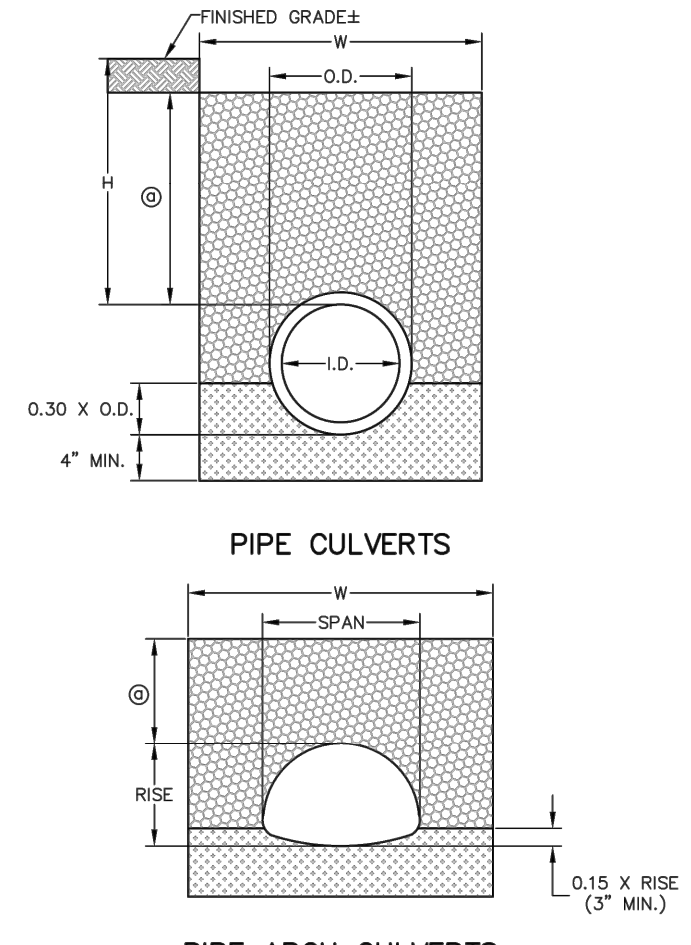
PRECAST CONCRETE INLET, TYPE M 2001 FT-22

SPECIFICATIONS:
1. CONCRETE TO OBTAIN A STRENGTH OF 4,000 PSI (27 MPa) IN 28 DAYS.
2. REINFORCING STEEL TO HAVE A YIELD STRENGTH OF 60,000 PSI (414 MPa).
3. THE INLET SHALL BE DESIGNED TO MEET PENNDOT SPEC FORM 408 FOR PRECAST CONCRETE CATCH BASINS.
4. THE WALLS AND BASE SLAB TO BE DESIGNED FOR A MINIMUM EARTH COVER OF 10 FT (3048) EARTH COVER = FINISH GRADE TO TOP OF BASE SLAB).
PRECAST CONCRETE STRUCTURE TO BE WET CAST WITH MONOLITHIC BASE SECTION AS MANUFACTURED BY ATLANTIC CONCRETE PRODUCTS, OR APPROVED EQUIVALENT.
ALL DIMENSIONS IN (PARENTHESES) ARE MILLIMETERS, UNLESS OTHERWISE NOTED.



STRUCTURAL STEEL AND CAST IRON GRATE 2001 FT-22

NOTES:
1. ONLY GRATES SUPPLIED BY A MANUFACTURER LISTED IN PENNDOT BULLETIN 19 SHALL BE PERMITTED.
2. WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 408.
3. PROVIDE TRANSVERSE BARS MEETING THE REQUIREMENTS OF PENNDOT SPEC FORM 408.
4. FABRICATE SLOTS BY BURNING, DRILLING, SHEARING OR PUNCHING. HAVE THE BOTTOM OF ALL BURNED OR DRILLED SLOTS CONFORM TO THE SHAPE OF THE ROD.



BEDDING AND BACKFILL DETAILS FOR PIPE CULVERTS AND PIPE ARCH CULVERTS 2001 FT-13

LEGEND:
FINE AGGREGATE FOR BEDDING
COARSE AGGREGATE FOR PIPE TRENCH BACKFILL

NOTES:
L.D. = NOMINAL INSIDE DIAMETER OF PIPE
O.D. = OUTSIDE DIAMETER OF PIPE BARREL OR SHELL
H.D. = HUB DIAMETER, OUTSIDE DIAMETER OF PIPE AT BELL OR BEND
H = HEIGHT OF PIPE OVER TOP OF PIPE
W = TRENCH WIDTH
17\"/>

Holmes Cunningham LLC
409 E. Butler Ave., Unit 5
Doylestown, PA 18901
(215) 586-3330
www.hcengineering.net

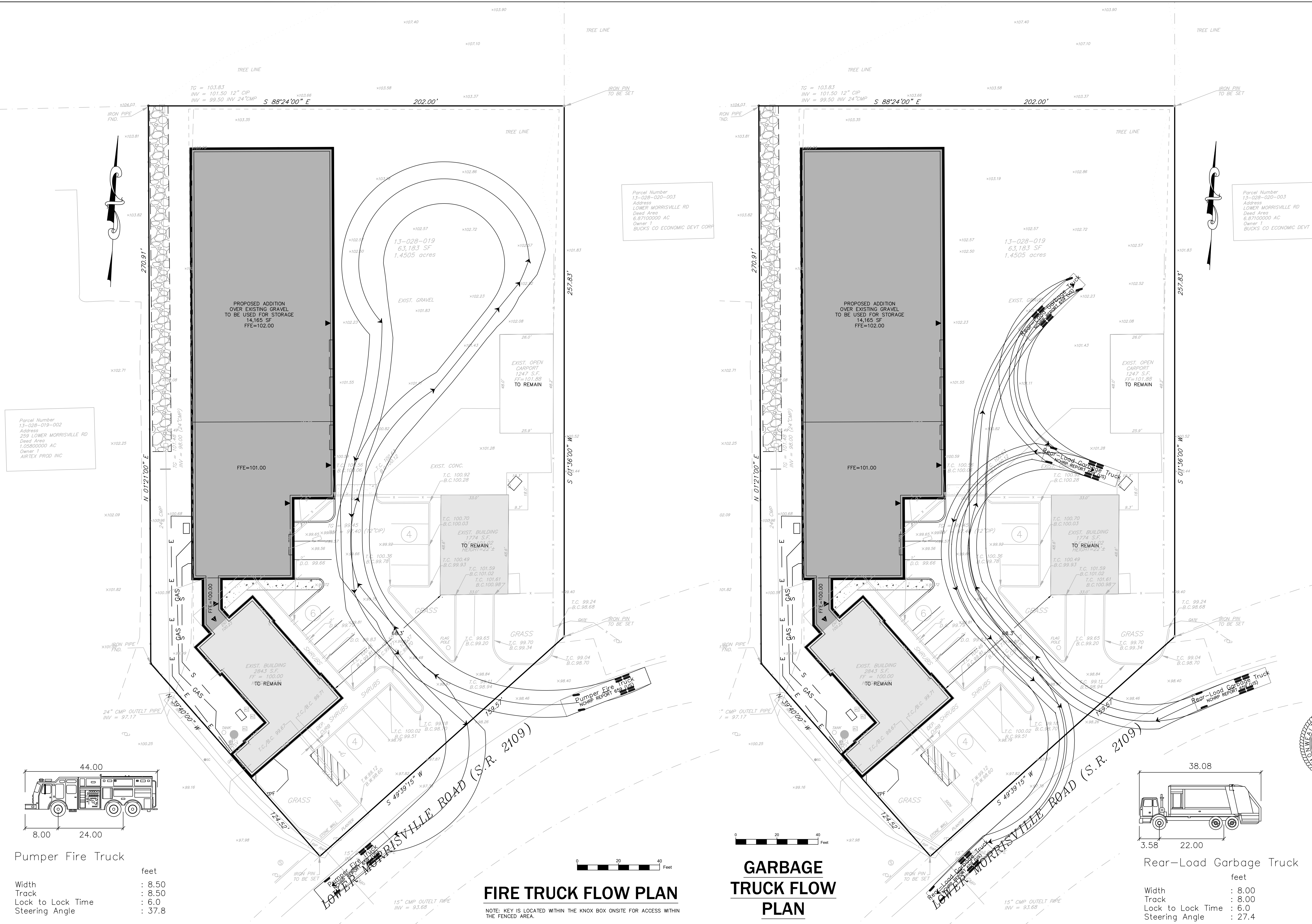
REVISIONS	Description	Date
1	Revised per Township Engineer comments	7/31/2020

261 LOWER MORRISVILLE ROAD
TMP# 13-028-019
FALLS TOWNSHIP, BUCKS COUNTY, PA

CONSTRUCTION IMPROVEMENT PLAN

KRISTIN R. HOLMES, P.E.
PA PE073604

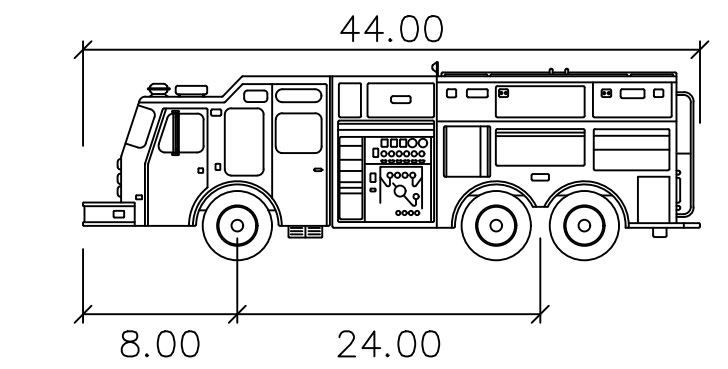
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Date	4/24/2020	Designed	KH
Sheet	5	of	11
Drawing No.	C1.2		



Parcel Number
13-028-019-002
Address
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Dead Area
1.05800000 AC
Owner 1
ARTEX PROD INC

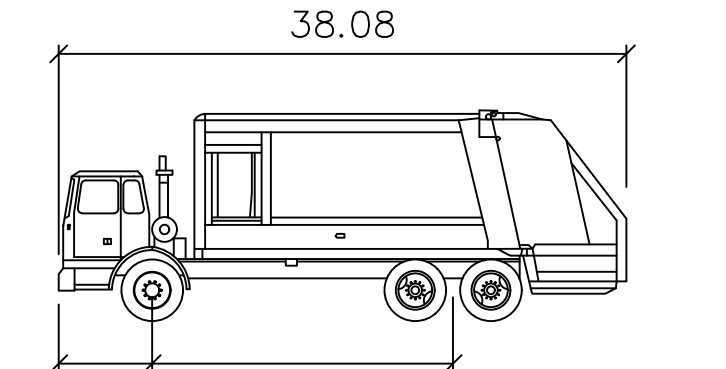
Parcel Number
13-028-020-003
Address
LOWER MORRISVILLE RD
Dead Area
6.87100000 AC
Owner 1
BUCKS CO ECONOMIC DEVT CORP

Parcel Number
13-028-020-003
Address
LOWER MORRISVILLE RD
Dead Area
6.87100000 AC
Owner 1
BUCKS CO ECONOMIC DEVT CORP



Pumper Fire Truck

Width : 8.50
Track : 8.50
Lock to Lock Time : 6.0
Steering Angle : 37.8



Rear-Load Garbage Truck

Width : 8.00
Track : 8.00
Lock to Lock Time : 6.0
Steering Angle : 27.4

FIRE TRUCK FLOW PLAN

NOTE: KEY IS LOCATED WITHIN THE KNOX BOX ONSITE FOR ACCESS WITHIN THE FENCED AREA.

GARBAGE TRUCK FLOW PLAN

Holmes Cunningham LLC
409 E. Butler Ave. Unit 5
Doylestown, PA 18901
(215) 586-3330
www.hcengineering.net

REVISIONS	Description	Date
1	Revised per Township Engineer comments	7/31/2020

CALL BEFORE YOU DIG !!!
THIS IS A CONSTRUCTION PHASE AND NOT A UTILITY LOCATION REPORT.
TO WORKING DRAWINGS AND PERMITS
- STP & CALL
Pennsylvania One
Call System, Inc.
1-800-942-1976

261 LOWER MORRISVILLE ROAD
TMP# 13-028-019
FALLS TOWNSHIP, BUCKS COUNTY, PA

TRAFFIC CIRCULATION PLAN

KRISTIN R. HOLMES, P.E.
PA PE073604


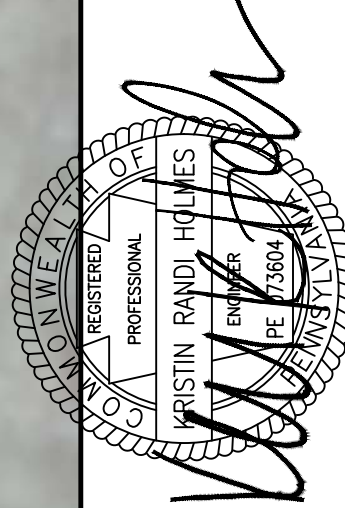
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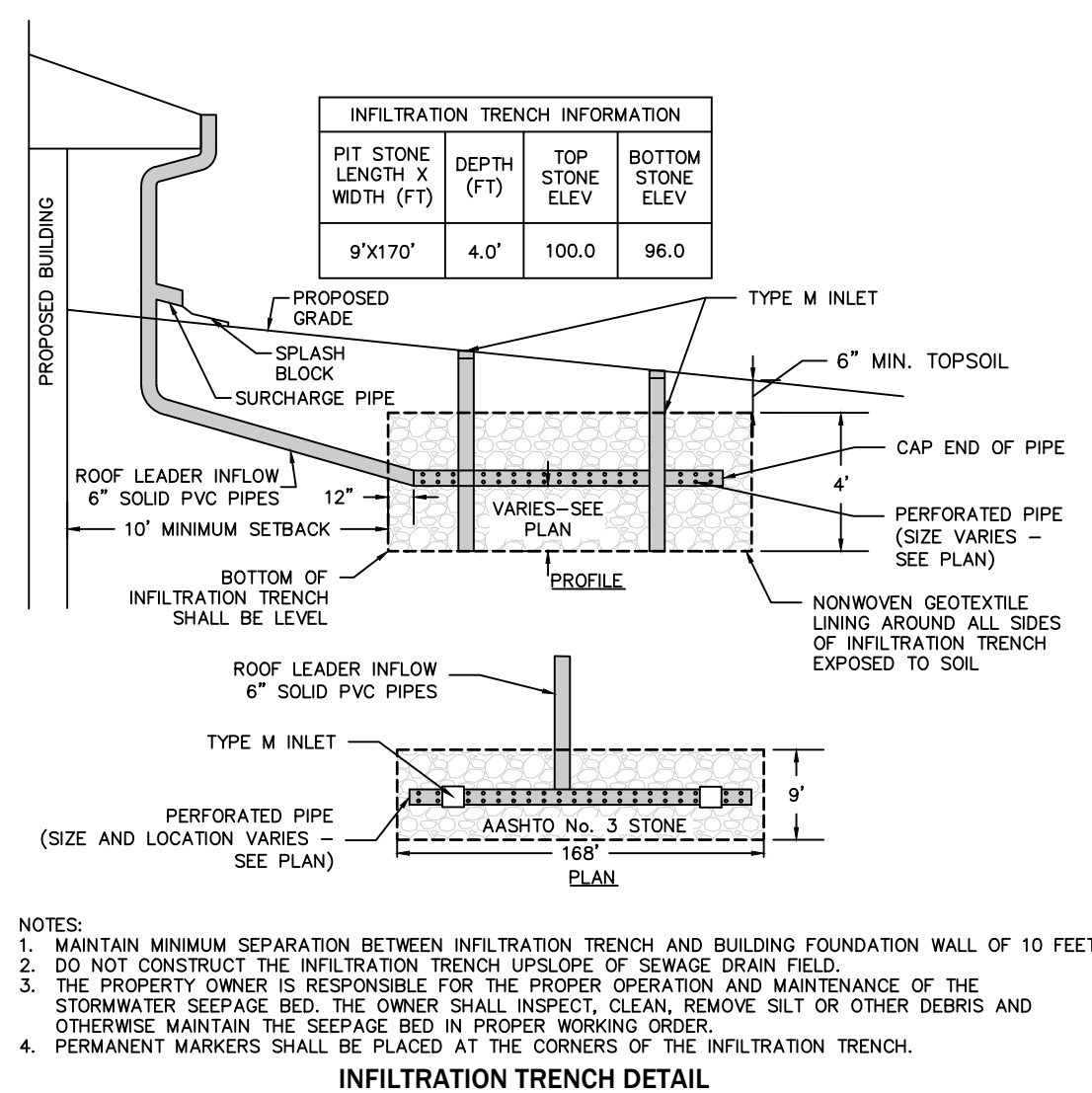
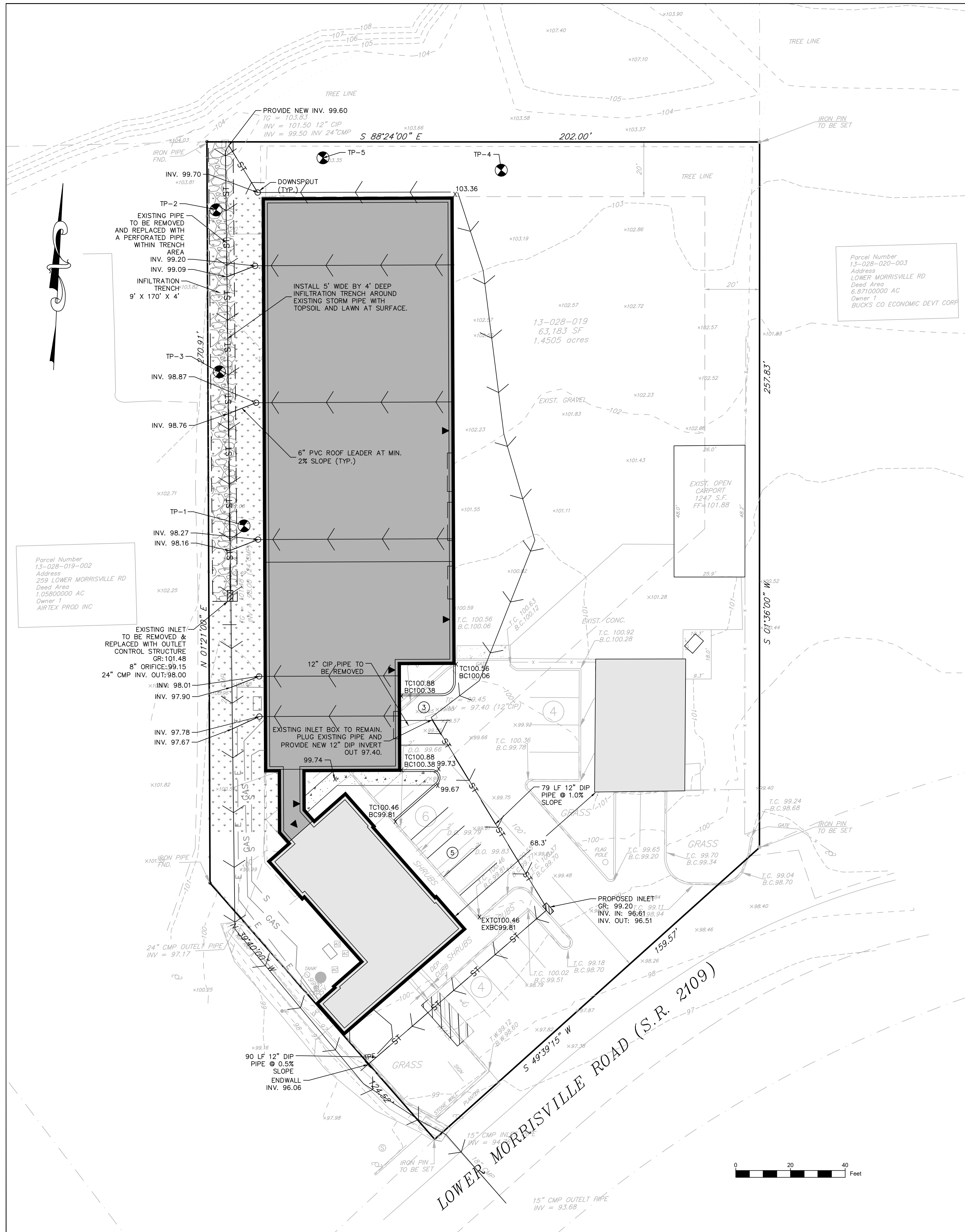
HCE Job	1485	Scale	1"=20'	Designed	KH	Sheet	6 of 11
Date	4/24/2020						

Drawing No.
C2.0



Parcel
 13-028-019
 Address
 261 Lower Morrisville Road
 19000-0000
 Owner
 APREX

Holmes Cunningham LLC 409 E. Butler Ave. Unit 5 Doylestown, PA 18901 (215) 586-3330 www.hcengineering.net	
	
REVISIONS Description Date Revised per Township Engineer comments 7/31/2020	CALL BEFORE YOU DIG !! THIS IS A PRELIMINARY PLAN FOR THE CONSTRUCTION PHASE AND IS NOT TO BE USED FOR PERMITS. STOP & CALL PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-486-1776 UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES PRIOR TO ANY EXCAVATION.
261 LOWER MORRISVILLE ROAD TMP# 13-028-019 FALLS TOWNSHIP, BUCKS COUNTY, PA SIGHT DISTANCE PLAN	
 KRISTIN R. HOLMES, P.E. PA PE073604	
File No. 1485_C2.0.DWG	HCE Job 1485 Date 4/24/2020 Scale 1"=30' Designed KH Sheet 7 of 11
Drawing No. C2.1	



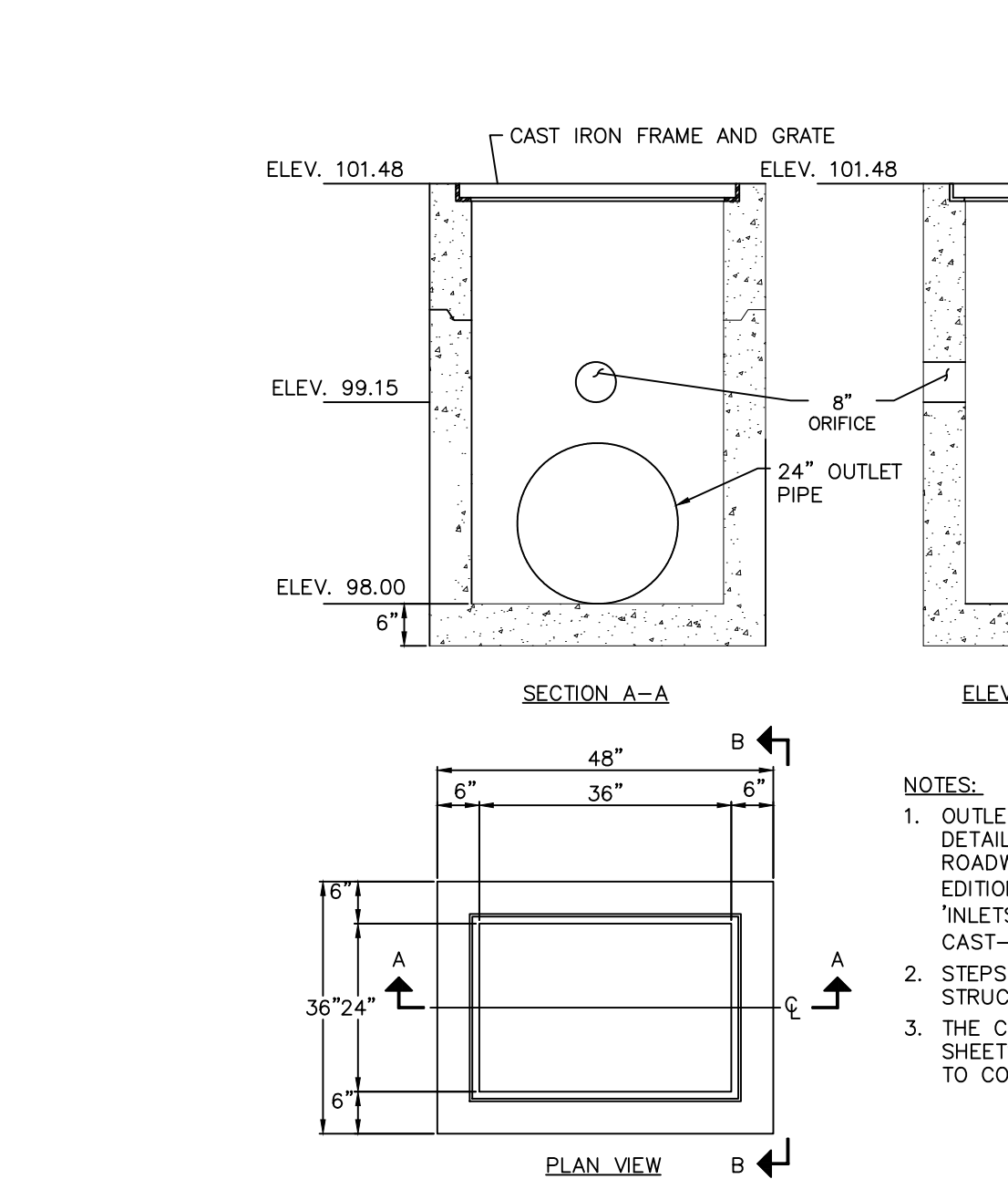
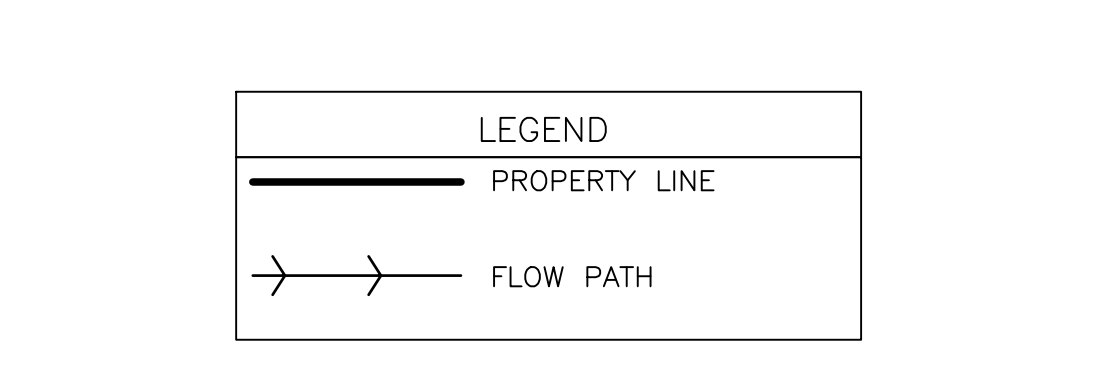
INfiltration TRENCH INFORMATION

PIT LENGTH X WIDTH (FT)	DEPTH (FT)	TOP STONE ELEV.	BOTTOM STONE ELEV.
9'x170'	4.0'	100.0	96.0

NOTES:
 1. MAINTAIN MINIMUM SEPARATION BETWEEN INFILTRATION TRENCH AND BUILDING FOUNDATION WALL OF 10 FEET.
 2. DO NOT CONSTRUCT THE INFILTRATION TRENCH UPSLOPE OF SEWAGE DRAIN FIELD.
 3. THE PROPERTY OWNER IS RESPONSIBLE FOR THE PROPER OPERATION AND MAINTENANCE OF THE STORMWATER SEEPAGE BED. THE OWNER SHALL INSPECT, CLEAN, REMOVE SILT OR OTHER DEBRIS AND OTHERWISE MAINTAIN THE SEEPAGE BED IN PROPER WORKING ORDER.
 4. PERMANENT MARKERS SHALL BE PLACED AT THE CORNERS OF THE INFILTRATION TRENCH.

BMP MAINTENANCE PLAN
 INDIVIDUAL LOT PROPERTY OWNERS ARE RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER CONVEYANCE SYSTEM, AND ALL OTHER PROPOSED BMP'S ON THEIR LOT.

- STORMWATER CONVEYANCE SYSTEM**
 - CATCH BASINS, MANHOLES AND PIPES TO BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST ANNUALLY AS WELL AS AFTER EVERY STORM EXCEEDING 1-INCH OF RAINFALL.
 - ALL STRUCTURAL COMPONENTS MUST BE INSPECTED FOR CRACKING, SUBSIDENCE, BREACHING, WEARING, AND DETERIORATION AT LEAST ANNUALLY.
- INFILTRATION TRENCH**
 - INSPECT INFILTRATION TRENCH AT LEAST FOUR TIMES A YEAR, AS WELL AS AFTER EVERY STORM EXCEEDING 1 INCH.
 - DISPOSE OF SEDIMENT, DEBRIS/TRASH, AND ANY OTHER WASTE MATERIAL REMOVED FROM A DRY WELL AT SUITABLE DISPOSAL/RECYCLING SITES AND IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL WASTE REGULATIONS.
 - EVALUATE THE DRAIN-DOWN TIME OF THE PIT TO ENSURE THE MAXIMUM TIME OF 72 HOURS IS NOT BEING EXCEEDED. IF DRAIN-DOWN TIMES ARE EXCEEDING THE MAXIMUM, DRAIN THE DRY WELL VIA PUMPING AND CLEAN OUT PERFORATED PIPING, IF INCLUDED. IF SLOW DRAINAGE PERSISTS, THE SYSTEM MAY NEED REPLACING.
 - REGULARLY CLEAN OUT OUTLETERS AND ENSURE PROPER CONNECTIONS TO FACILITATE THE EFFECTIVENESS OF THE DRY WELL.
 - REPLACE FILTER SCREEN THAT INTERCEPTS ROOF RUNOFF AS NECESSARY.
 - IF AN INTERMEDIATE SUMP BOX EXISTS, CLEAN IT OUT AT LEAST ONCE PER YEAR.



NOTES:
 1. OUTLET STRUCTURES SHALL BE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M) RC-34M, "INLETS, CONCRETE TOP UNITS CAST-IN-PLACE AND PRECAST."
 2. STEPS SHALL BE PROVIDED WHENEVER STRUCTURE EXCEEDS 4 FEET IN DEPTH.
 3. THE CONTRACTOR SHALL PROVIDE OUT SHEETS TO ENGINEER TO REVIEW PRIOR TO CONSTRUCTION.

CONCRETE END WALLS 2001 FT-29

PRECAST CONCRETE STRUCTURE TO BE WET CAST AS MANUFACTURED BY ATLANTIC CONCRETE PRODUCTS, OR APPROVED EQUAL.
 CONCRETE TO OBTAIN A STRENGTH OF 4,000 PSI (27 mPA) IN 28 DAYS. REINFORCING STEEL TO HAVE A YIELD STRENGTH OF 60,000 PSI (414MPa)

PLAN NOTES:
 1. PLAN PURPOSE IS TO SHOW THE ROUTE OF STORMWATER LEAVING THE SITE.

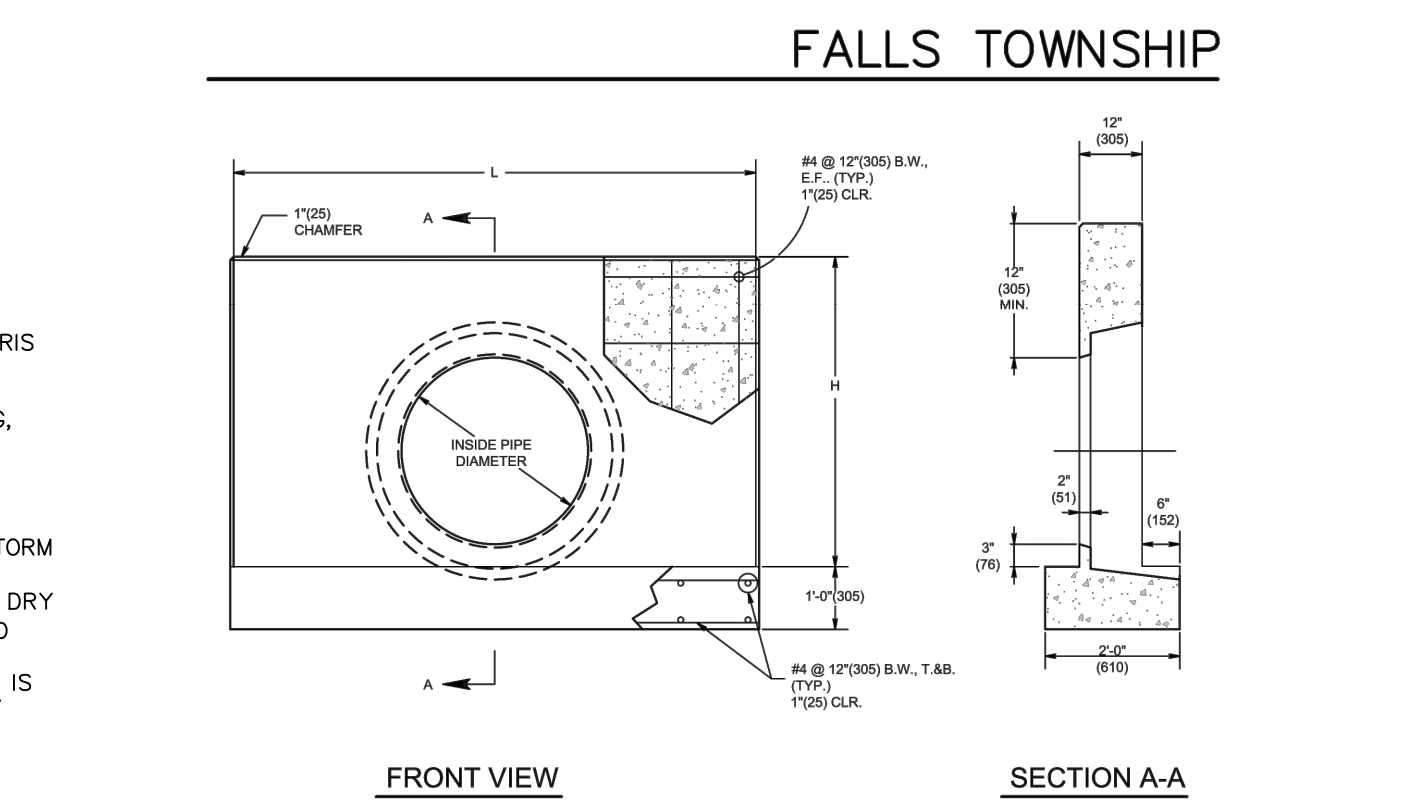
CONSTRUCTION SEQUENCE FOR PCSM BMP

SITE SPECIFIC CONSTRUCTION SEQUENCE

- REFER TO C3.0 FOR SOIL EROSION AND SEDIMENT CONTROL CONSTRUCTION SEQUENCE.
- ONCE ALL UPSTREAM MEASURES FOR EACH BMP HAVE BEEN STABILIZED ON EACH LOT, THE INDIVIDUAL BMP FOR THAT LOT MAY BE CONSTRUCTED PER THE SEQUENCES IDENTIFIED BELOW.

INFILTRATION TRENCH

- PROTECT INFILTRATION AREA FROM COMPACTION PRIOR TO INSTALLATION WITH TEMPORARY CONSTRUCTION FENCE AS SHOWN ON THE PLANS.
- IF POSSIBLE, INSTALL INFILTRATION TRENCH DURING LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY.
- INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AS PER THE PENNSYLVANIA EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (MARCH 2000, OR LATEST EDITION).
- EXCAVATE TRENCH BOTTOM TO A UNIFORM, LEVEL UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE TO THE GREATEST EXTENT POSSIBLE. EXCAVATION SHOULD BE PERFORMED WITH THE LIGHTEST PRACTICAL EQUIPMENT. EXCAVATION EQUIPMENT SHOULD BE PLACED OUTSIDE THE LIMITS OF THE TRENCH.
- WHERE SOIL SURROUNDS TRENCH WRAP WITH NONWOVEN GEOTEXTILE. (IF SEDIMENT AND/OR DEBRIS HAS ACCUMULATED IN TRENCH BOTTOM, REMOVE PRIOR TO GEOTEXTILE PLACEMENT.) GEOTEXTILE ROLLS SHOULD OVERLAP BY A MINIMUM OF 24 INCHES WITHIN THE TRENCH. FOLD BACK AND SECURE EXCESS GEOTEXTILE DURING STONE PLACEMENT.
- INSTALL CONTINUOUSLY PERFORATED PIPE, OBSERVATION WELLS, AND ALL OTHER TRENCH STRUCTURES. CONNECT ROOF LEADERS TO STRUCTURES AS INDICATED ON PLANS.
- PLACE UNIFORMLY GRADED, CLEAN-WASHED AGGREGATE IN 6-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS.
- FOLD AND SECURE NONWOVEN GEOTEXTILE OVER TRENCH, WITH MINIMUM OVERLAP OF 12-INCHES.
- PLACE 12-INCH LIFT OF APPROVED TOPSOIL OVER TRENCH, AS INDICATED ON PLANS.
- SEED AND STABILIZE TOPSOIL.
- REMOVE ROOF LEADER AND POSITION OVER SPLASHBOARD.
- DO NOT REMOVE EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.



INSIDE PIPE DIA. IN./(mm)	WEIGHT LB./(kg)	L IN./(mm)	H IN./(mm)
12-15 (305-381)	3375(1531)	60(1524)	30(762)
18-21 (457-533)	3750(1701)	60(1524)	36(914)
24-27 (610-686)	5775(2619)	60(1524)	42(1067)
30-33 (762-838)	7200(3266)	108(2743)	48(1219)
36(914)	7900(3583)	108(2743)	57(1448)
42(1067)	9360(4255)	126(3201)	66(1676)

CONCRETE END WALLS 2001 FT-29

PRECAST CONCRETE STRUCTURE TO BE WET CAST AS MANUFACTURED BY ATLANTIC CONCRETE PRODUCTS, OR APPROVED EQUAL.
 CONCRETE TO OBTAIN A STRENGTH OF 4,000 PSI (27 mPA) IN 28 DAYS. REINFORCING STEEL TO HAVE A YIELD STRENGTH OF 60,000 PSI (414MPa)

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 Doylestown, PA 18901
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 www.hcengineering.net

Holmes Cunningham ENGINEERING

REVISIONS

Date	Description
7/31/2020	Revised per Township Engineer comments

261 LOWER MORRISVILLE ROAD
 TMP# 13-028-019
 FALLS TOWNSHIP, BUCKS COUNTY, PA

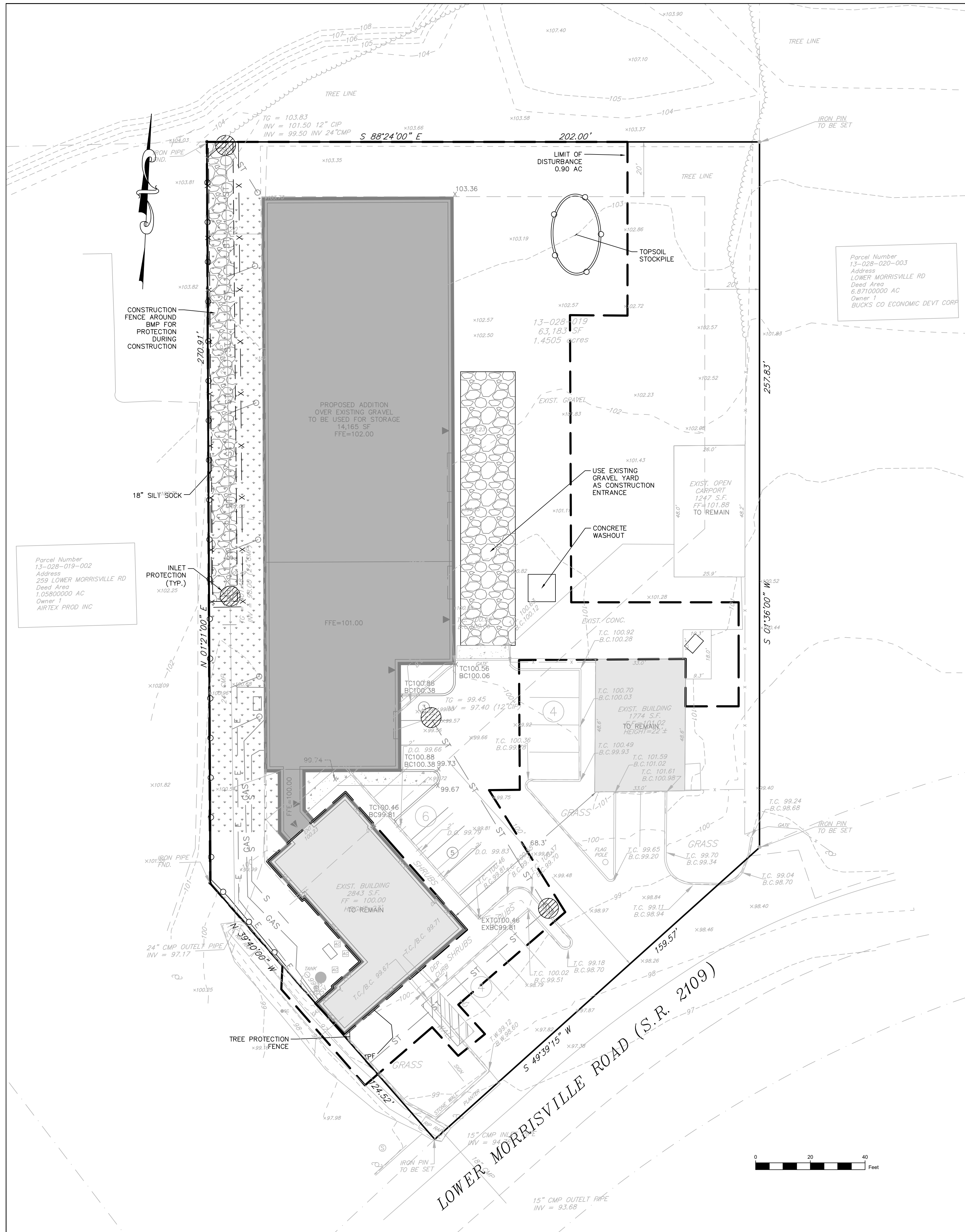
STORMWATER FLOW PATH PLAN

KRISTIN R. HOLMES, P.E.
 PA PE073604

File No.
 1485_C3.0_StormFlow.DWG

HCE Job 1485
Date 4/24/2020
Scale 1"=20'
Designed KH
Sheet 8 of 11

Drawing No.
C3.0



SEQUENCE OF CONSTRUCTION

NOTE: SITE DEVELOPMENT OPERATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GENERAL SEQUENCE OF OPERATIONS. THE CONTRACTOR MAY DEVIATE FROM THE STAGING OF PERMANENT SITE IMPROVEMENT CONSTRUCTION ITEMS, WITH APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR. DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENT CONTROL MEASURES SHOULD NOT OCCUR WITHOUT APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR AND SITE ENGINEER.

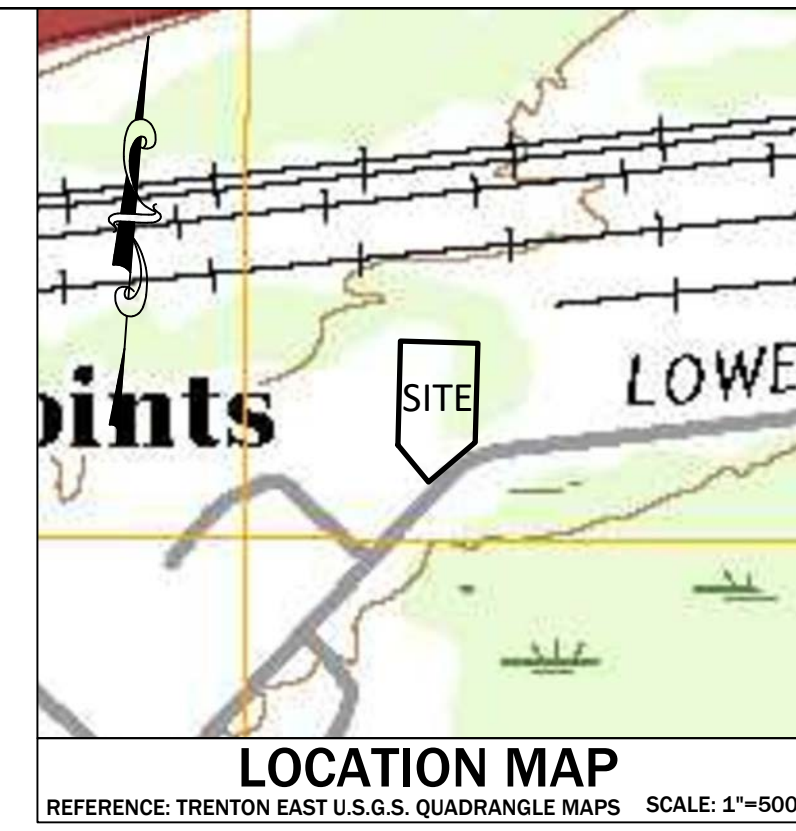
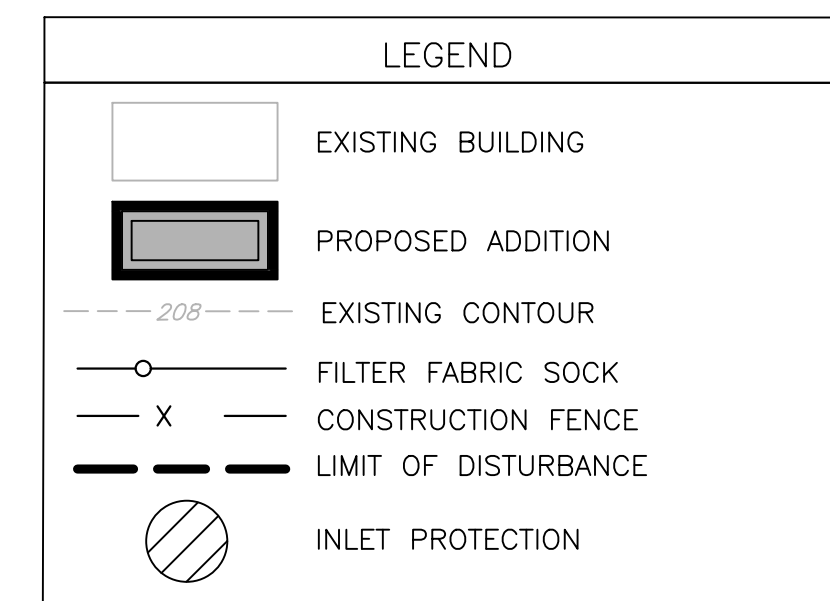
- CONTACT THE BUCKS COUNTY CONSERVATION DISTRICT (215-345-7577), FALLS TOWNSHIP AND FALLS TWP. ENGINEER AT LEAST THREE (3) WORKING DAYS PRIOR TO SITE DISTURBANCE.
- EACH STAGE OF THE SEQUENCE OF CONSTRUCTION MUST BE COMPLETED PRIOR TO INITIATION OF THE NEXT STAGE OF THE SEQUENCE OF CONSTRUCTION. CONSTRUCTION MAY OVERLAP INTO A SUBSEQUENT PHASE AS LONG AS ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED IN THE PREVIOUS PHASE.
- INSTALL CONSTRUCTION ENTRANCE AT SITE ACCESS, CONSTRUCTION FENCE AND SILT SOCK WHERE SHOWN ON THE PLAN.
- STRIP TOPSOIL AND STOCKPILE WHERE SHOWN ON PLAN. ALL STRIPPED TOPSOIL STOCKPILES SHALL HAVE TEMPORARY SEEDING INSTALLED. ROUGH GRADE SITE, PARKING AND BUILDING PADS. INSTALL TEMPORARY EROSION CONTROL BLANKETS AND ROCK FILTERS.
- CONSTRUCT ADDITION.
- INSTALL ALL PROPOSED UTILITIES STARTING AT THE DOWNSTREAM END AND WORKING UPSTREAM.
- INSTALL CURB, SUBBASE AND BASE COURSE FOR THE DRIVEWAY.
- COMPLETE FINAL GRADING AFTER THE ADDITION IS COMPLETED AND APPLY PERMANENT SEEDING MIXTURE AND INSTALL ALL REQUIRED PLANTINGS.
- INSTALL INFILTRATION TRENCH ONCE UPSLOPE AREAS ARE STABILIZED.
- FLUSH ALL AFFECTED STORM DRAINAGE PIPES OF ACCUMULATED SILT.
- UPON COMPLETE STABILIZATION OF SITE, REMOVE EROSION CONTROL DEVICES, THE SITE SHALL BE CONSIDERED STABILIZED WHEN THE PERMANENT VEGETATION HAS PROVIDED A 70% GROUND COVER.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT OR ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY.

SOIL TYPES, LIMITATION AND RESOLUTION					
SYM	NAME	Hydric (Y/N)	Depth to Bedrock (in.)	Depth to Water Table (in.)	HSG
Ur/B	Urban Land, 0 to 8 percent slopes	N	N/A	N/A	D
Ua	Udorthents, gravelly	N	N/A	N/A	D
Resolution to Limitations	1. For areas where seasonal high water table is a limitation, ponded water shall be pumped through a "dirt bag" 2. For areas where shallow depth to bedrock is a limitation, contractor shall determine whether rock is ripplable. If rock is not ripplable, blasting will be required. All blasting shall meet all local, county, state, and federal regulations.				

LIMIT OF DISTURBANCE = 0.90 ACRES

GENERAL NOTES

- SITE DISTURBANCE SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- UNDER PENNSYLVANIA LAW, THE CONTRACTOR IS REQUIRED TO NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1778 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.
- THERE ARE NO HO OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA.
- THERE ARE NO RIPARIAN AREAS OR BUFFERS IDENTIFIED WITHIN THE PROJECT AREA OR OUTSIDE THE LIMIT OF DISTURBANCE. THEREFORE, RIPARIAN BUFFER OBLIGATIONS DO NOT APPLY TO THIS PROJECT.
- THERE ARE NO INFILTRATION BMPs LOCATED OUTSIDE PROPOSED GRADING AREAS.
- THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL.



OWNER/APPLICANT
 ROBERT & ELIZABETH MARQUIS
 7219 NORTH RADCLIFFE STREET
 BRISTOL, PA 19007

Holmes Cunningham LLC
 409 E. Butler Ave., Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date

261 LOWER MORRISVILLE ROAD
 TMP# 13-028-019
 FALLS TOWNSHIP, BUCKS COUNTY, PA

EROSION AND SEDIMENT CONTROL PLAN

KRISTIN R. HOLMES, P.E.
 PA PE073604

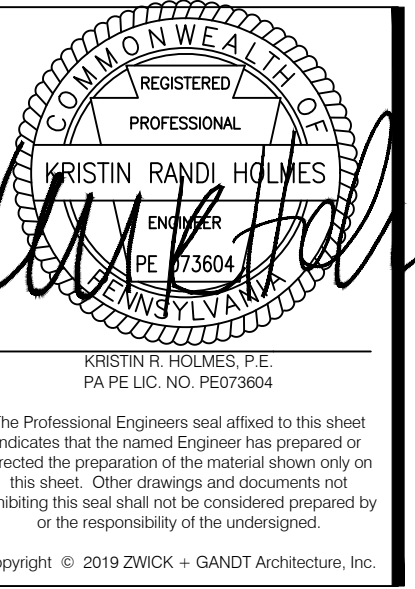
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HCE Job	1485
Date	4/24/2020
Scale	1"=20'
Designed	KH
Sheet	10 of 11
Drawing No.	C5.0

PRELIMINARY & FINAL LAND DEVELOPMENT PLANS

FOR

ALRO STEEL

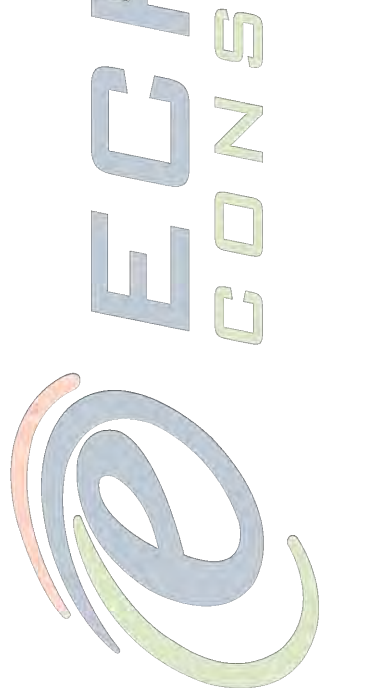
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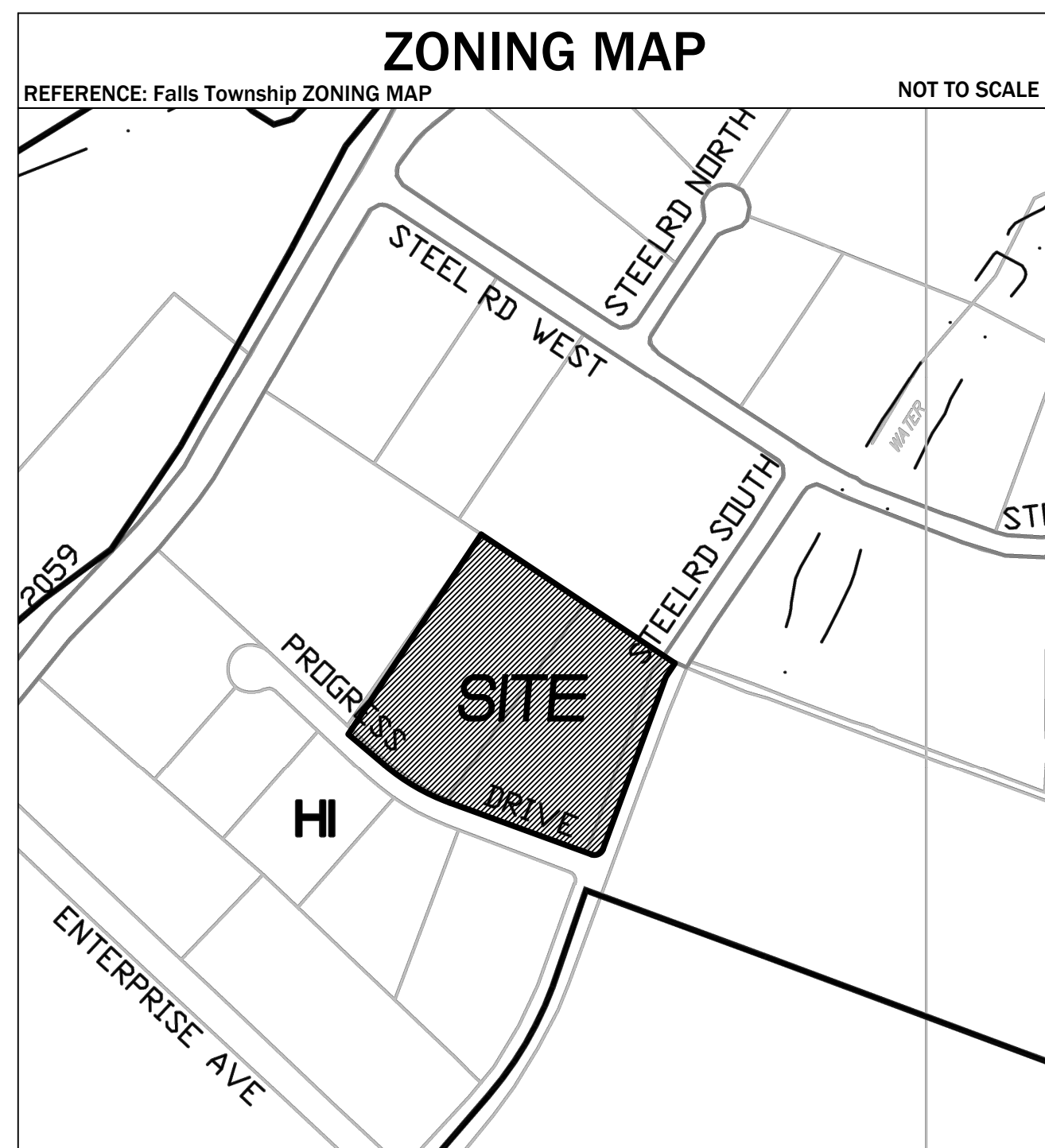
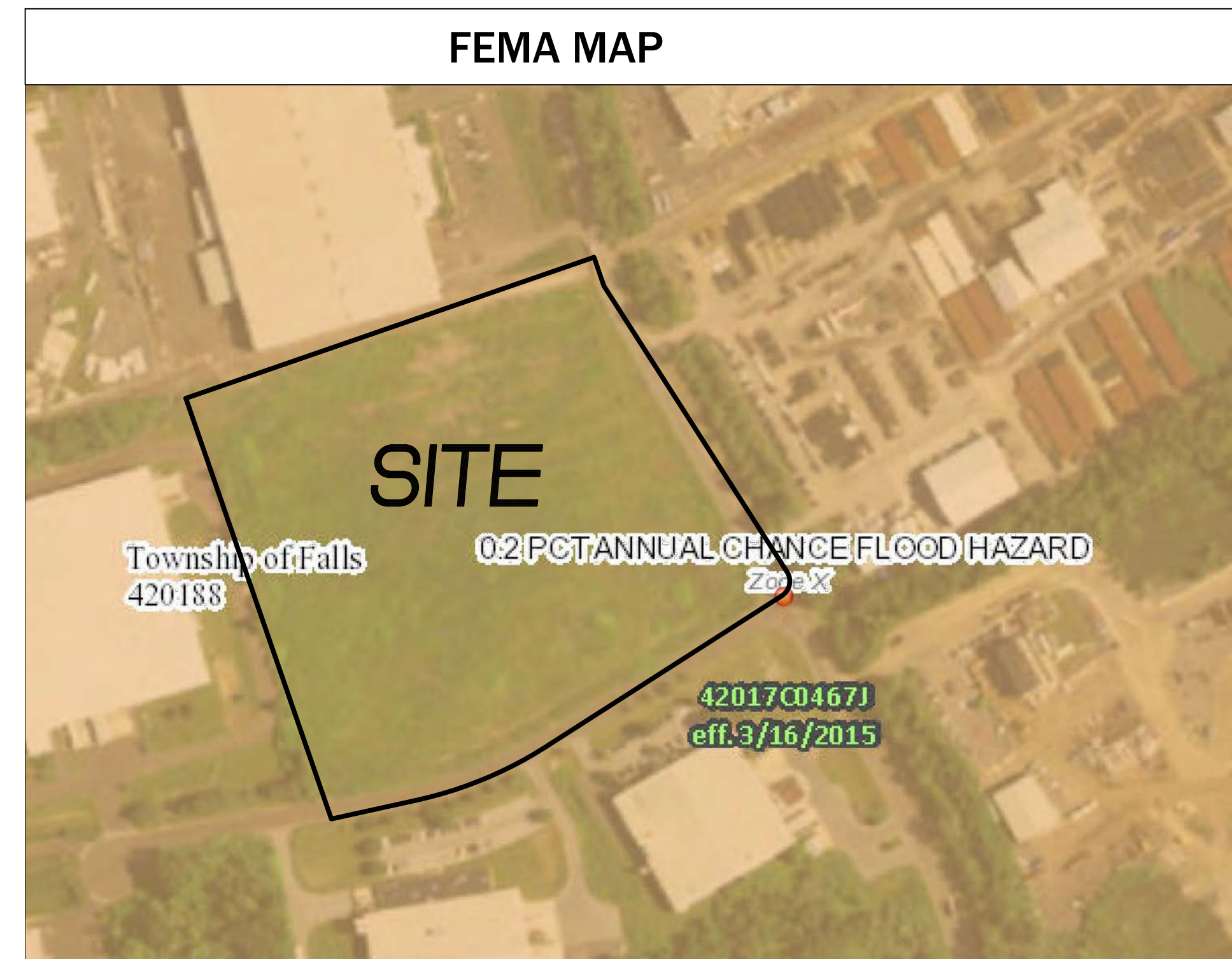
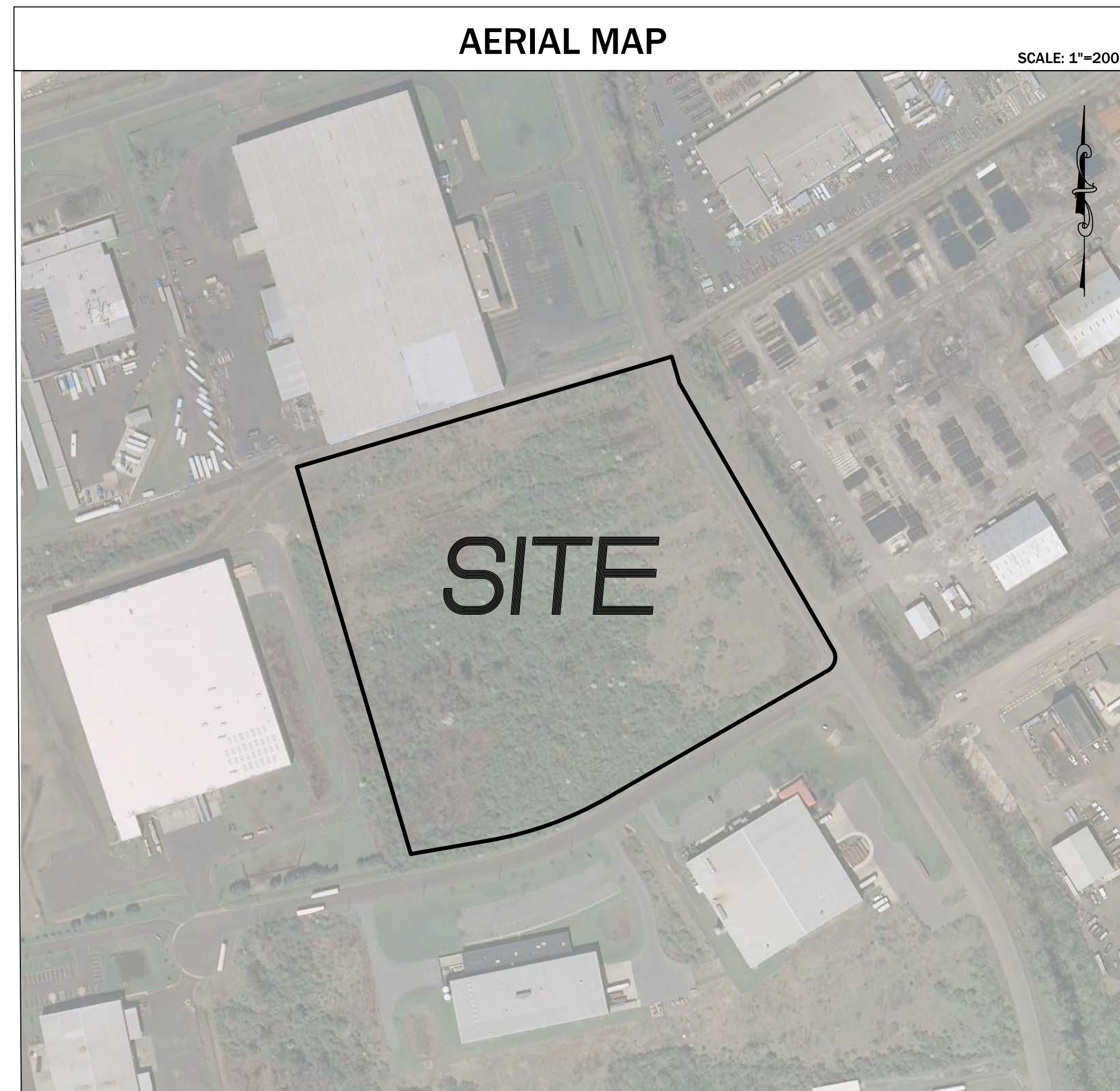
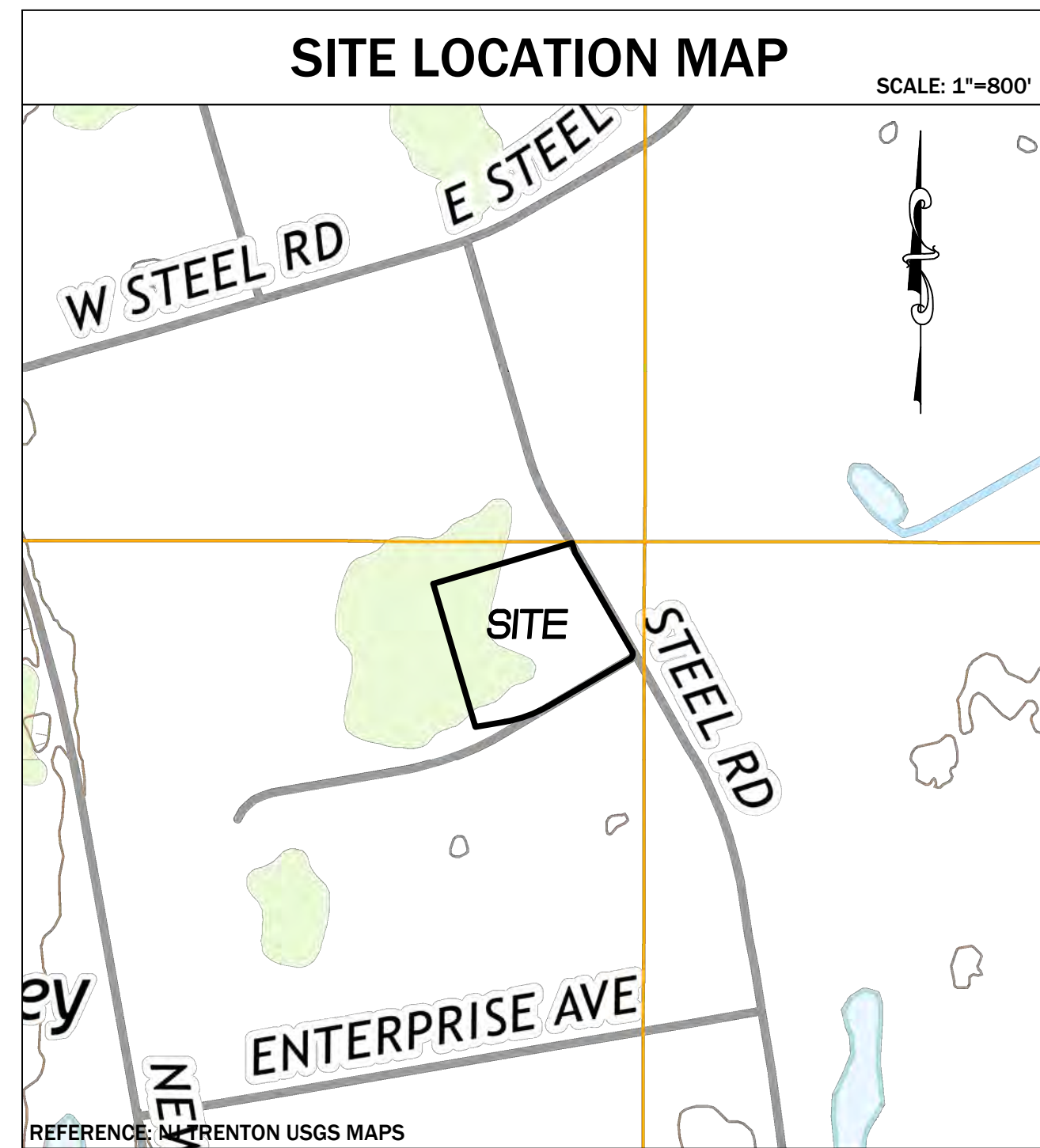
ARCHITECT:
ZWICK + GANDT
ARCHITECTURE, INC.
9109 Watson Road, Ste. 110
Saint Louis, MO 63126
info@zgar-ch-stl.com
ph: 314-962-9292

STRUCTURAL:
ALPER AUDI, INC.
STRUCTURAL ENGINEERS
1804 Borman Circle Drive,
St. Louis, MO 63146
ph: +1-314-432-8600

CIVIL
HOLMES CUNNINGHAM ENGINEERING
409 E. BUTLER AVE, UNIT 5
DOYLESTOWN, PA 18901
ph: +1-215-586-3330



Alro Steel
PROGRESS DRIVE AND SOUTH STEEL ROAD
MORRISVILLE, PA 19067
TP# 13-047-166-001 & 13-047-166-002



CONTACTS

Assistant Township Manager / Chief Code Enforcement Officer / Zoning Officer
Falls Township
Matthew Takita
557 Lincoln Highway,
Fairless Hills, PA 19030
215-949-9000 x 251

Falls Township Public Works Department
Jason Lawson, Director
557 Lincoln Highway,
Fairless Hills, PA 19030
215-949-9000 x280

Township of Falls Authority
Timothy Hartman, Executive Director
557 Lincoln Highway
Fairless Hills, PA 19030
215-946-6062

Morrisville Municipal Authority
John Warena, Executive Director
35 Union Street
Morrisville, PA 19067
215-295-8181

Bucks County Planning Commission
1260 Almshouse Road,
Doylestown, PA 18901
215-345-3400

Bucks County Conservation District
1456 Ferry Road, #704
Doylestown, PA 18901
215-345-7577

PECO Energy Distribution Headquarters
2301 Market Street
PO Box 8699
Philadelphia, PA 19101
215-841-4000

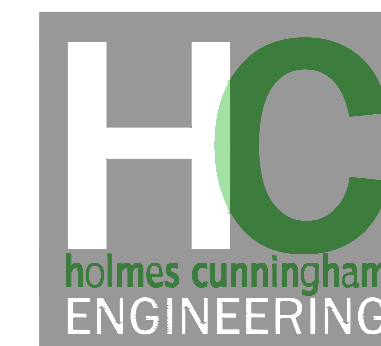
Comcast Cable Inc.
55 Industrial Drive
Ivlyland, PA 18974
1-800-263-9463

Verizon Pennsylvania Inc.
900 Race Street, 6th Floor
Philadelphia, PA 19107
215-591-6448

OWNER & APPLICANT:

ALRO STEEL
3100 E. HIGH STREET
JACKSON, MI 49203
517-787-5500

PREPARED BY:



HOLMES CUNNINGHAM LLC
409 EAST BUTLER AVENUE
UNIT 5
DOYLESTOWN, PA 18901
(215) 586-3330

DRAWING LIST

SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	LAST REVISED DATE
1	C0.0	COVER SHEET	8/5/2020
2	C0.1	EXISTING RESOURCE & SITE ANALYSIS MAP	8/5/2020
3	C1.0	RECORD PLAN - FULL BUILD	8/5/2020
4	C1.1	SITE PLAN - PHASE 1	8/5/2020
5	C1.2	SITE PLAN - PHASE 2	8/5/2020
6	C1.3	SITE PLAN - PHASE 3	8/5/2020
7	C2.0	GRADING & UTILITY PLAN - PHASE 1	8/5/2020
8	C2.1	GRADING & UTILITY PLAN - PHASE 2	8/5/2020
9	C2.2	GRADING & UTILITY PLAN - PHASE 3	8/5/2020
10	C2.3	CONSTRUCTION DETAILS	8/5/2020
11	C2.4	CONSTRUCTION DETAILS	8/5/2020
12	C3.0	EROSION & SEDIMENT CONTROL PLAN - PHASE 1	8/5/2020
13	C3.1	EROSION & SEDIMENT CONTROL PLAN - PHASE 2	8/5/2020
14	C3.2	EROSION & SEDIMENT CONTROL PLAN - PHASE 3	8/5/2020
15	C3.3	EROSION & SEDIMENT CONTROL DETAILS	8/5/2020
16	C3.4	EROSION & SEDIMENT CONTROL DETAILS	8/5/2020
17	C4.0	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	8/5/2020
18	C4.1	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS	8/5/2020
19	C5.0	LANDSCAPE PLAN	8/5/2020
20	C5.1	LIGHTING PLAN - PHASE 1	8/5/2020
21	C5.2	LIGHTING PLAN - PHASE 2	8/5/2020
22	C5.3	LIGHTING PLAN - PHASE 3	8/5/2020
23	C5.4	LIGHTING DETAILS	8/5/2020
24	C6.0	FIRE TRUCK CIRCULATION PLAN	8/5/2020
25	C6.1	WB67 TRUCK CIRCULATION PLAN	8/5/2020

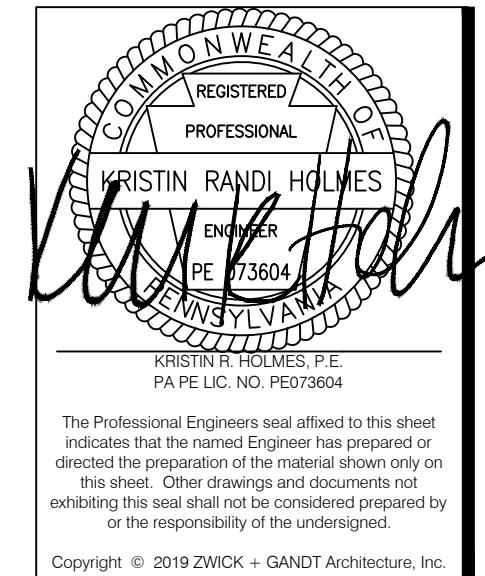
SHEET 1 OF 25

1	PROGRESS PLAN	3/16/20
2	LAND DEVELOPMENT SUBMISSION	3/24/20
3	BUILDING REVISIONS	5/11/20
4	BUILDING REVISIONS PROGRESS SET	6/22/20
5	LAND DEVELOPMENT SUBMISSION	6/4/20
6	LAND DEVELOPMENT PROGRESS SET	7/13/20
7	LAND DEVELOPMENT SUBMISSION	8/5/20

PROJECT NUMBER: 190-46.00 / HCE 1469

COVER SHEET

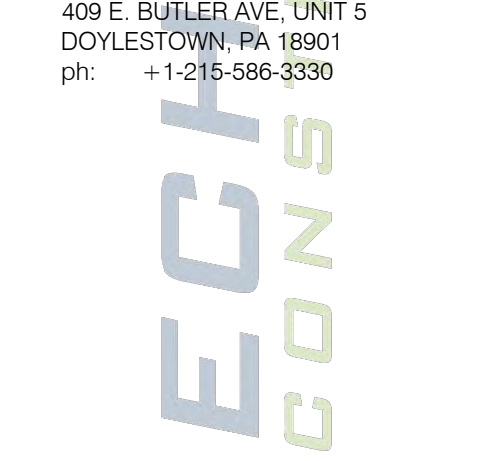
CO.0



ARCHITECT:
ZWICK + GANDT
 ARCHITECTURE, INC.
 9109 Watson Road, Ste. 110
 Saint Louis, MO 63126
 info@zgarch-stl.com
 ph: 314-962-9292

STRUCTURAL:
ALPER AUDI, INC.
 STRUCTURAL ENGINEERS
 1804 Borman Circle Drive,
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 ph: +1-314-432-8600

CIVIL:
HOLMES
CUNNINGHAM
ENGINEERING
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 ph: +1-215-586-3390



Airo Steel
 PROGRESS DRIVE AND SOUTH STEEL ROAD
 MORRISVILLE, PA 19067
 TP# 13-047-166-001 & 13-047-166-002

PROGRESS PLAN	3/16/20
1	PROGRESS PLAN 3/16/20
2	LAND DEVELOPMENT SUBMISSION 3/24/20
3	BUILDING REVISIONS 5/11/20
4	BUILDING REVISIONS PROGRESS SET 6/22/20
5	LAND DEVELOPMENT RESUBMISSION 6/4/20
6	LAND DEVELOPMENT PROGRESS SET 7/13/20
7	LAND DEVELOPMENT RESUBMISSION 8/5/20

PROJECT NUMBER: 190-46.00 / HCE 1469
EXISTING RESOURCE
& SITE ANALYSIS
MAP

CO.1

DEMOLITION NOTES:

- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL INSPECT THE SITE THOROUGHLY AND FIELD VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND LATERALS, UNDERGROUND ELECTRIC, TELEPHONE, VAULTS, GAS, WATER MAINS, ETC. ARE APPROXIMATE AND MUST BE FIELD VERIFIED. OTHER UTILITIES MAY ALSO EXIST. ALL CONTRACTORS USING THESE PLANS FOR DEMOLITION SHALL CONFIRM ALL UTILITIES IN THE FIELD FOR EXACT LOCATIONS, SIZES, MATERIALS, AND ELEVATIONS.
- THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL PROVISIONS OF FALLS TOWNSHIP, AND OTHER JURISDICTIONAL AGENCIES.
- THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL OFFSITE PROPERTY AND STRUCTURES FROM ANY AND ALL DAMAGE DURING THE DEMOLITION OPERATION. THE CONTRACTOR SHALL USE ANY NECESSARY PROTECTION SCREENS, PLATFORMS, BRACING, UNDERPINNING, ETC. TO PROTECT OFFSITE PROPERTY. ANY OFFSITE DAMAGE CAUSED BY THE CONTRACTOR OR HIS AGENTS SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS INCLUDING, BUT NOT LIMITED TO, SIDEWALK/STREET CLOSING AND DEMOLITION.
- DEMO CONTRACTOR SHALL COORDINATE DECOMMISSIONING AND REMOVAL OF UTILITY LINES WITH UTILITY CONTRACTOR AS TO LOCATION AND CONDITION OF CAPPING. THE ACCESS SHALL REMAIN OPEN AND OPERATIONAL AT ALL TIMES.
- ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN, FENCING, TREES, ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED & DISPOSED OF OFF SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE, STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
- THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
- ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE ANY ROAD RIGHT OF WAY DURING CONSTRUCTION.
- CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC.
- PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
- SHOULD REMOVAL AND/OR RELOCATION ACTIVITIES DAMAGE FENCING, LIGHTING AND/OR STORM INLET STRUCTURES, THEN THE CONTRACTOR SHALL PROVIDE NEW MATERIALS / STRUCTURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS EXCEPT FOR MATERIALS DESIGNED TO BE RELOCATED ON THIS PLAN, ALL OTHER CONSTRUCTION MATERIALS SHALL BE NEW.

GENERAL NOTES:

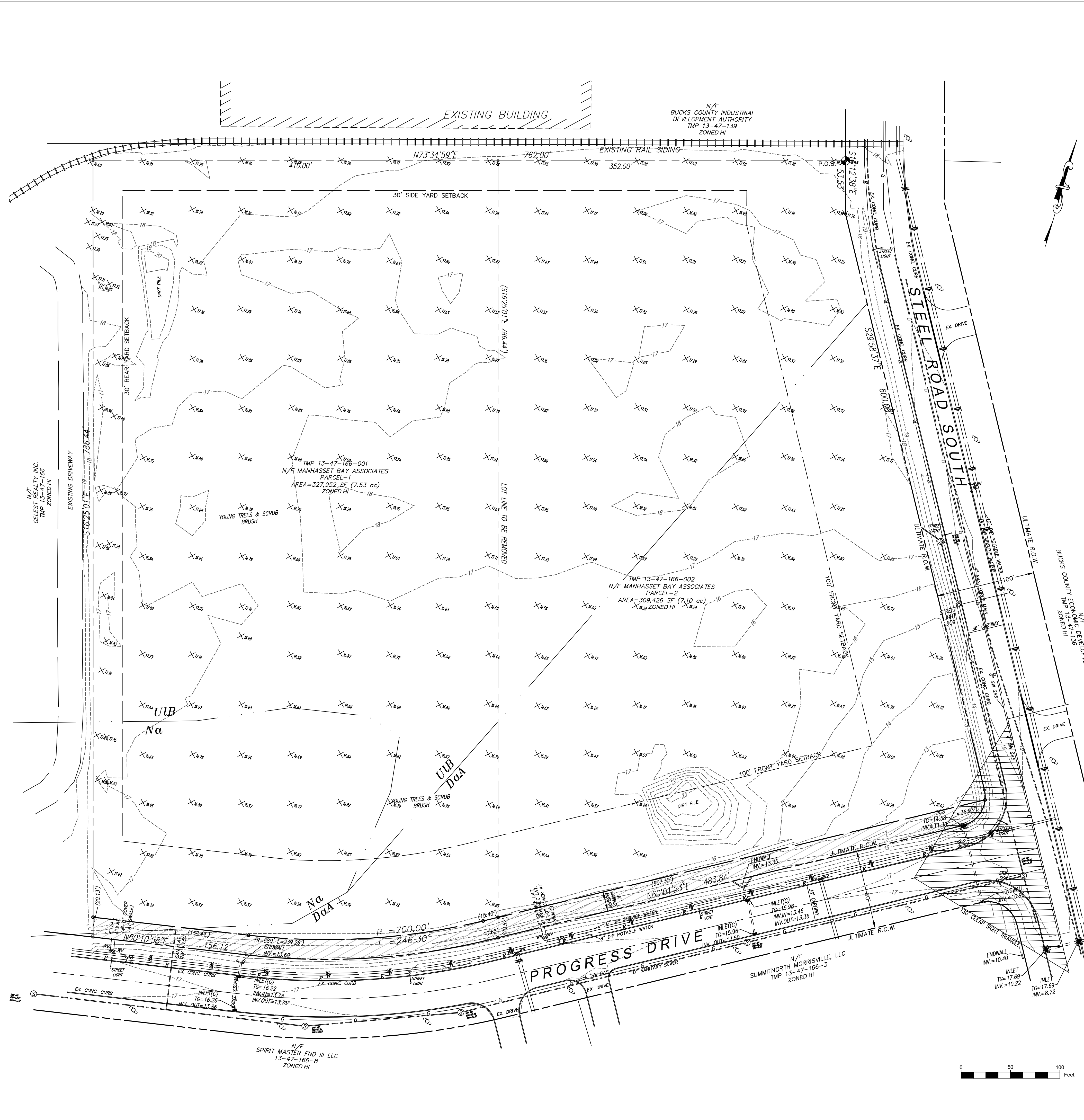
- SUBJECT PROPERTY BEING PART OF BUCKS COUNTY TAX MAP PARCEL NUMBERS 13-47-166-001 & 13-47-166-002 CONTAINING 14.632 ACRES OF LAND MORE OR LESS.
- THE PLAN IS BASED ON A BOUNDARY & TOPOGRAPHIC SURVEY PLAN PREPARED BY R. L. SHOWALTER & ASSOCIATES, INC., DATED OCTOBER 16, 2019.
- LOCATIONS OF EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKOUTS BY UTILITY COMPANIES AND/OR ABOVEGROUND OBSERVATION. NO EXCAVATIONS HAVE BEEN PERFORMED TO LOCATE EXISTING UNDERGROUND UTILITIES. ALL UTILITIES SHOWN HEREON SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES BE ENCOUNTERED WHICH ARE NOT SHOWN ON THESE DRAWINGS, BOTH ACTIVE AND ABANDONED. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES AND FACILITIES AT THE TIME OF FIELD SURVEY SHALL BE CONSIDERED TO BE TRUE AND ACCURATE. THE COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES AND FEATURES IS NOT GUARANTEED BY R. L. SHOWALTER & ASSOCIATES, INC.
- ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO THE START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF PL852, NO. 287, DEC. 10, 1974 AS LAST AMENDED ON MAR. 29, 2007, PENNSYLVANIA ACT 181.

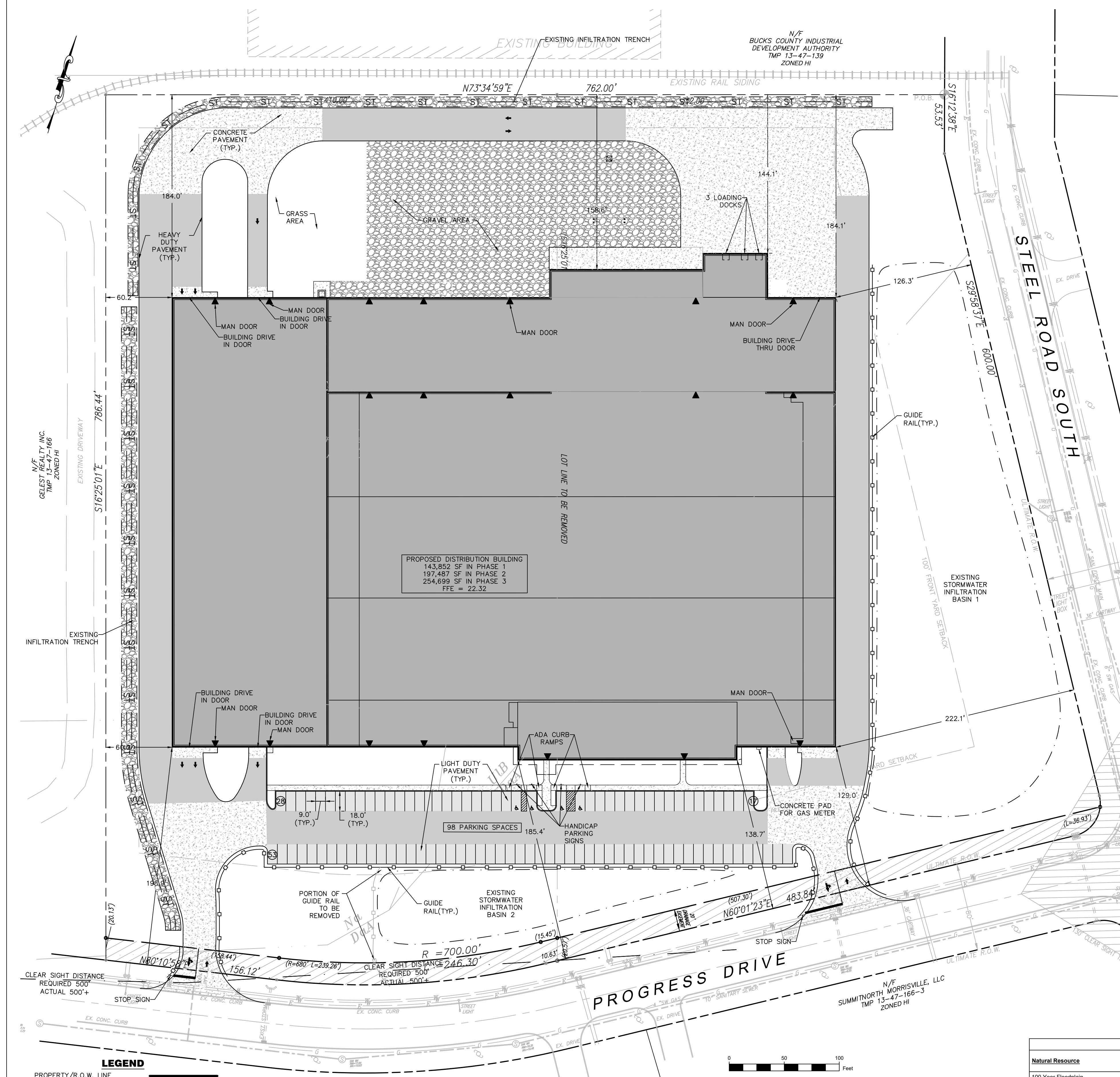
LEGEND

- CONTOUR --- 185 ---
- SPOT ELEVATION 185.2 x
- TOP/BOTTOM CURB x TC 154.75
BC 154.25
- CURB LINE
- PROPERTY
- R.O.W. LINE
- STORM SEWER
Ex.Storm MH Ex.Inlet
- SANITARY SEWER
Ex.San MH
- WATER MAIN
- WATER SERVICE
- FIRE HYDRANT
- UTILITY POLE, OVERHEAD ELECTRIC
ONE POLE
- UNDERGROUND TELEPHONE/CABLE
UGT
- GAS MAIN, VALVE
G
- GAS SERVICE
GS
- TRAFFIC SIGNAGE

Natural Resource	Protection Ratio	Acres of Land in Resource	Acres of Resource Protection Area	Proposed Resource Protection Land (ACL)	Acres of Resource Protection Area	Proposed Resource Protection Land (ACL)
100 Year Floodplain	1.00	0.00	0.00	0.00	0.00	0.00
Wetlands	1.00	0.00	0.00	0.00	0.00	0.00
Wetlands Margin	0.80	0.00	0.00	0.00	0.00	0.00
Lakes and Ponds	1.00	0.00	0.00	0.00	0.00	0.00
Lakes and Ponds Shoreline	0.80	0.00	0.00	0.00	0.00	0.00
Watercourse	1.00	0.00	0.00	0.00	0.00	0.00
Steep Slopes (15-25%)	0.70	0.00	0.00	0.00	0.00	0.00
Steep Slopes (more than 25%)	0.85	0.00	0.00	0.00	0.00	0.00
Woodlands - Environmentally Sensitive	0.80	0.00	0.00	0.00	0.00	0.00
Other Woodlands	0.50	0.00	0.00	0.00	0.00	0.00
TOTALS		0.00	0.00	0.00	0.00	0.00

Percent of Base Site Area Classified as Resource Protection Land: 0%





ZONING TABLE			
HI Heavy Industrial District			
Item	Required / Permitted	Proposed Phase 3	Ordinance Section
District Requirements			
Uses	Industrial and Manufacturing, Distribution and Warehousing	Distribution and Warehousing	209-29.B
Max. Building Height	80 FT	< 80 FT	209-29.F
Min. Tract Area	0.5 AC	14.63 AC	209-29.G, 209 Attachment 7
Min. Lot Area for Each Principal Building	0.5 AC	14.63 AC	209-29.G, 209 Attachment 7
Min. Lot Frontage	100 FT	687 FT	209-29.G, 209 Attachment 7
Min. Lot Width	100 FT	687 FT	209-29.G, 209 Attachment 7
Min. Lot Depth	200 FT	762 FT	209-29.G, 209 Attachment 7
Min. Front Yard Setback	100 FT	129 FT	209-29.G, 209 Attachment 7
Min. Side Yard Setback (Each)	30 FT	147.5 FT	209-29.G, 209 Attachment 7
Min. Rear Yard Setback	30 FT	60.2 FT	209-29.G, 209 Attachment 7
Max. Building Coverage (1)	40%	40.0%	209-29.G, 209 Attachment 7
Max. Impervious Surface	50%	67.0% (V)	209-29.G, 209 Attachment 7
Min. Street Line Parking & Loading Setback	30 FT	35.2 FT	209-29.H(1)
Min. Lot Line Parking & Loading Setback	12 FT	35.2 FT	209-29.H(1)
Min. Off-Street Parking	See Table	209-29.I, 209-42.H(2)	
General Requirements			
Max. Number of Access Points per Street Frontage	2	2	209-42.E
Min. Access Drive Centerline Separation	65 FT	581 FT	209-42.E
Max. Access Drive Lanes of Traffic	4	2	209-42.E
Max. Access Drive Width (excluding radius)	30 FT	30 FT	209-42.E
Notes			
(1) Maximum building coverage figures are intended to include the area occupied by buildings, utility structures, fixed equipment not under cover, storage tanks, sheds and accessory structures.			
(V) Variance granted at Zoning Hearing Board held on December 10, 2019.			

LOT CALCULATIONS		
	SF	AC
Gross Combined Lot Area	637,379	14.63
Street Right-of-Way Area	0	0.00
Lot Area	637,379	14.63
IMPERVIOUS COVERAGE CALCULATIONS - Phase 3		
Items	SF	AC
Building	254,699	5.85
Asphalt Pavement	78,576	1.80
Concrete Pavement	56,214	1.29
Gravel	34,165	0.78
Concrete Walkways, Pads	3,390	0.08
Total Impervious	427,044	
Impervious Coverage		67.0%
Building Coverage		40.0%

- WAIVERS REQUESTED**
- SALDO SECTION 191-37.G - WAIVER FROM PROVIDING CURBED RAISED PLANTING BEDS WITH PLANTINGS FOR PARKING AREAS EXCEEDING 20 SPACES AND TO PERMIT ROWS OF PARKING EXCEEDING 20 PARKING SPACES.
 - SALDO SECTION 191-36.D - WAIVER FROM PROVIDING CURBING ON THE PRIVATE DRIVEWAYS OF THE PROJECT.
 - SALDO SECTION 191-78.(C)(2) - PARTIAL WAIVER FROM PROVIDING EXISTING FEATURES WITHIN 200 FEET OF THE PROPERTY.

- SITE PLAN NOTES:**
- SUBJECT PROPERTY BEING PART OF BUCKS COUNTY TAX MAP PARCEL NUMBERS 13-47-166-001 & 13-47-166-002 CONTAINING 14.63 ACRES OF LAND MORE OR LESS.
 - THE PLAN IS BASED ON A BOUNDARY & TOPOGRAPHIC SURVEY PLAN PREPARED BY R.L. SHOWALTER & ASSOCIATES, INC., DATED OCTOBER 16, 2019.
 - THE SUBJECT PROPERTY IS ENTIRELY WITHIN FLOOD ZONE "X" - I.E. AREA OF 500 YEAR FLOOD PLAN AS SHOWN ON THE F.E.M.A. FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR BUCKS COUNTY, MAP NO. 420770458L, PANEL 458 OF 532, BEARING AN EFFECTIVE DATE OF MARCH 21, 2017.
 - THE PROPERTY IS SERVED BY U.S. STEEL SEWER AND WATER.
 - ALL STORMWATER AND DRAINAGE FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED, OR MODIFIED WITHOUT PRIOR APPROVAL FROM FALLS TOWNSHIP. ALL COSTS ASSOCIATED WITH MAINTENANCE AND REPAIRS OF THE STORMWATER FACILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE INDIVIDUAL PROPERTY OWNER OF LOT.
 - VERTICAL DATUM IS NAVD88. ELEVATIONS ON THE SUBJECT PROPERTY ARE ABOVE BASE FLOOD ELEVATION.
 - TRASH COLLECTION AREAS ARE LOCATED WITHIN THE BUILDING.

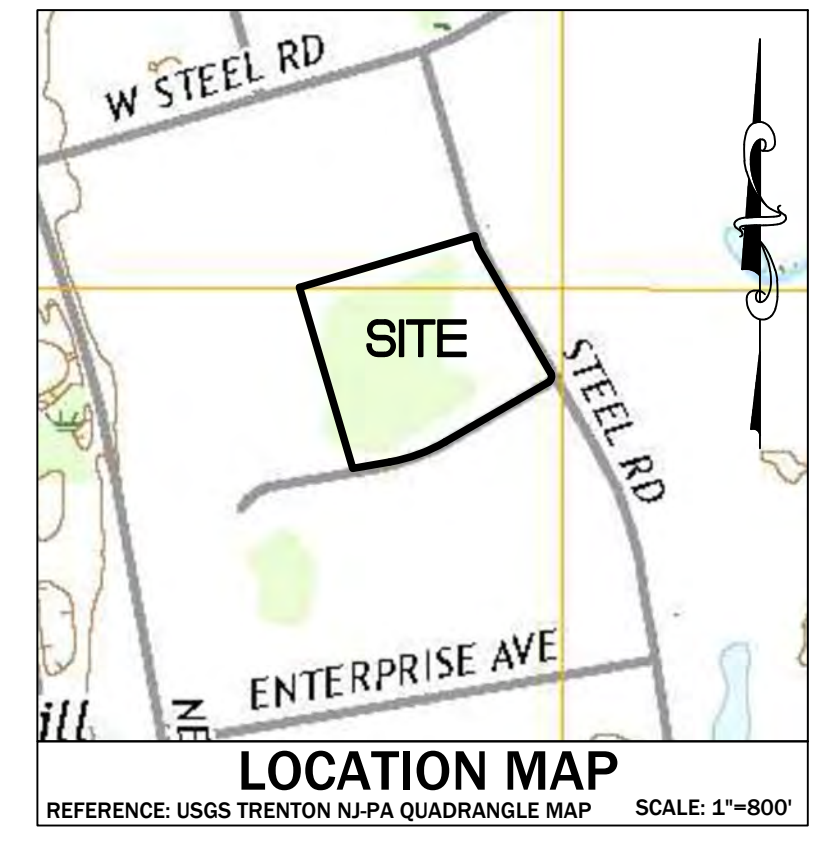
Protected Site Area						
Natural Resource	Protection Ratio	Acres of Land in Resource	Acres of Resource Protection Area	Proposed Resource Protection Land (AC)	Acres of Resource Protection Area	Proposed Resource Protection Land (AC)
100 Year Floodplain	1.00	0.00	0.00	0.00	0.00	0.00
Wetlands	1.00	0.00	0.00	0.00	0.00	0.00
Wetlands Margin	0.80	0.00	0.00	0.00	0.00	0.00
Lakes and Ponds	1.00	0.00	0.00	0.00	0.00	0.00
Lakes and Ponds Shoreline	0.80	0.00	0.00	0.00	0.00	0.00
Watercourse	1.00	0.00	0.00	0.00	0.00	0.00
Steep Slopes (15-25%)	0.70	0.00	0.00	0.00	0.00	0.00
Steep Slopes (more than 25%)	0.85	0.00	0.00	0.00	0.00	0.00
Woodlands - Environmentally Sensitive Woodlands	0.80	0.00	0.00	0.00	0.00	0.00
Other Woodlands	0.50	0.00	0.00	0.00	0.00	0.00
TOTALS		0.00	0.00	0.00	0.00	0.00
Percent of Base Site Area Classified as Resource Protection Land				0%	0%	

Site Area Calculations					
	TMP 13-47-166-001		TMP 13-47-166-002		Combined Tract
	Area (SF)	Area (AC)	Area (SF)	Area (AC)	Area (SF)
Gross Site Area	327,953	7.529	309,428	7.103	637,379
Existing Streets Rights-of-Way	0	0.000	0	0.000	0
Existing Utility Rights-of-Way or Easements	8,282	0.190	10,041	0.231	18,303
Land without Development Opportunities due to Restrictions	0	0.000	0	0.000	0
Base Site Area	319,671	7.339	299,385	6.873	619,078

PARKING CALCULATIONS								
Use	Requirement	Option 1			Option 2		Required	Provided Using Option 1
		Employee Count	Manager Count	Vehicle Count	Manufacturing Area	Office Area		
Industrial - Phase 1	1.25 spaces per employee on the major shift + 2 spaces per managerial personnel + 1 space for each business related vehicle on premises	40	6	5	147,309	10,619	67	322
Industrial - Phase 2	OR	8	2	1	188,872	10,619	15	401
Industrial - Phase 3	1 space per 500 SF manufacturing area + 1 space per 400 SF office area	8	2	1	244,080	10,619	15	515

LEGEND

- PROPERTY/R.O.W. LINE
- ADJOINING PROPERTY LINE
- EXISTING BUILDING LINE
- PROPOSED MONUMENT
- CONCRETE WALK/APRON
- PROPOSED EDGE OF PAVEMENT
- PROPOSED BUILDING
- STONE LAYDOWN AREA
- LIGHT DUTY ASPHALT
- HEAVY DUTY ASPHALT



OWNER AND APPLICANT:
ALRO STEEL
3100 E. HIGH STREET
JACKSON, MI 49203

RECOMMENDED FOR APPROVAL BY THE FALLS TOWNSHIP PLANNING COMMISSION THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE FALLS TOWNSHIP PLANNING COMMISSION ON THIS ____ DAY OF ____.

____ (CHAIRMAN)

____ (SECRETARY)

APPROVAL OF THE BOARD OF SUPERVISORS OF FALLS TOWNSHIP THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS APPROVED BY RESOLUTION OF THE BOARD OF TOWNSHIP SUPERVISORS OF FALLS TOWNSHIP THIS ____ DAY OF ____.

____ (CHAIRMAN)

____ (SECRETARY)

REVIEWED BY THE TOWNSHIP ENGINEER, FALLS TOWNSHIP THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE FALLS TOWNSHIP ENGINEER ____ P.E., ON THIS ____ DAY OF ____ 20____.

____ P.E. (TOWNSHIP ENGINEER)

CERTIFICATION OF REVIEW BY THE BUCKS COUNTY PLANNING COMMISSION THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE BUCKS COUNTY PLANNING COMMISSION ON THIS ____ DAY OF ____.

____ BPC # 11138-A

CERTIFICATION FOR RECORDING

THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS RECORDED IN THE OFFICE OF RECORDER OF DEEDS FOR BUCKS COUNTY, PENNSYLVANIA, THIS ____ DAY OF ____ 2019.

INSTRUMENT NUMBER: _____

BY: _____
RECORDER OF DEEDS

PROFESSIONAL ENGINEERS CERTIFICATION

I, KRISTIN R. HOLMES, A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS PLAN MEETS THE REQUIREMENTS OF ALL ORDINANCES AFFECTING THIS SUBDIVISION AND LAND DEVELOPMENT, INCLUDING THE AMENDED ZONING ORDINANCE OF THE TOWNSHIP OF FALLS IN WHICH THIS SUBDIVISION OR LAND DEVELOPMENT IS LOCATED NOT WITHSTANDING THE ZONING AND OTHER WAIVERS GRANTED BY FALLS TOWNSHIP.

KRISTIN R. HOLMES, P.E.
PENNSYLVANIA LICENSE NO. PE073604

OWNER'S CERTIFICATION OF INTENT

I, _____ HEREBY CERTIFY THAT I HAVE LAID OUT UPON OUR LAND SITUATED IN THE TOWNSHIP OF FALLS, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLAN WHICH IS INTENDED TO BE FORTHWITH RECORDED.

WITNESS OUR HAND AND SEAL THIS ____ DAY OF ____ 20____.

____ NOTARY PUBLIC & SEAL

MY COMMISSION EXPIRES: _____

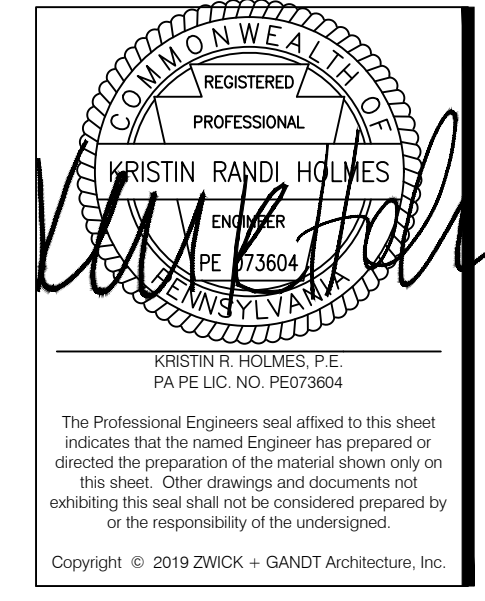
COMMONWEALTH OF PENNSYLVANIA:

COUNTY OF _____

ON THE ____ DAY OF ____ 20____

BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED _____ WHO ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF LOTS AND PROPERTY SHOWN THERETO SITUATED IN THE TOWNSHIP OF FALLS, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, AND DESIRED THAT THIS PLAN BE RECORDED ACCORDING TO LAW.

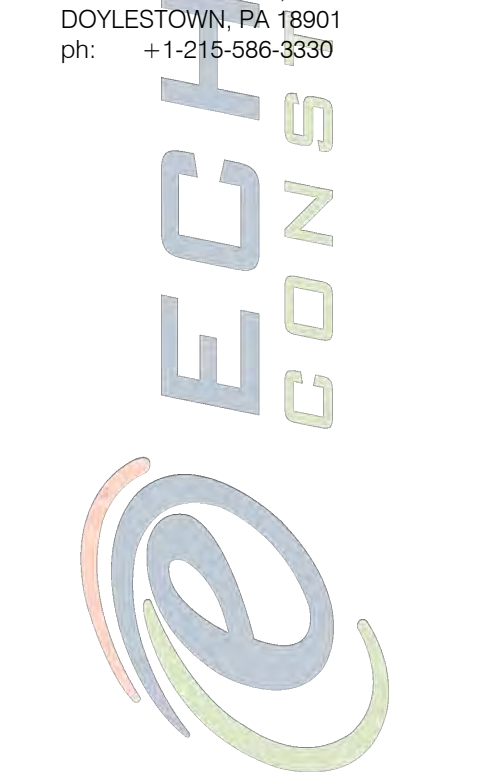
WITNESS MY HAND AND NOTARIAL SEAL THIS ____ DAY OF ____ 20____.



ARCHITECT:
ZWICK + GANDT
ARCHITECTURE, INC.
9109 Watson Road, Ste. 110
Saint Louis, MO 63126
info@zgwarch-stl.com
ph: 314-962-9292

STRUCTURAL:
ALPER AUDI, INC.
STRUCTURAL ENGINEERS
1804 Borman Circle Drive,
St. Louis, MO 63146
ph: +1-314-432-8600

CIVIL
HOLMES CUNNINGHAM ENGINEERING
409 E. BUTLER AVE, UNIT 5
DOYLESTOWN, PA 18901
ph: +1-215-586-3390



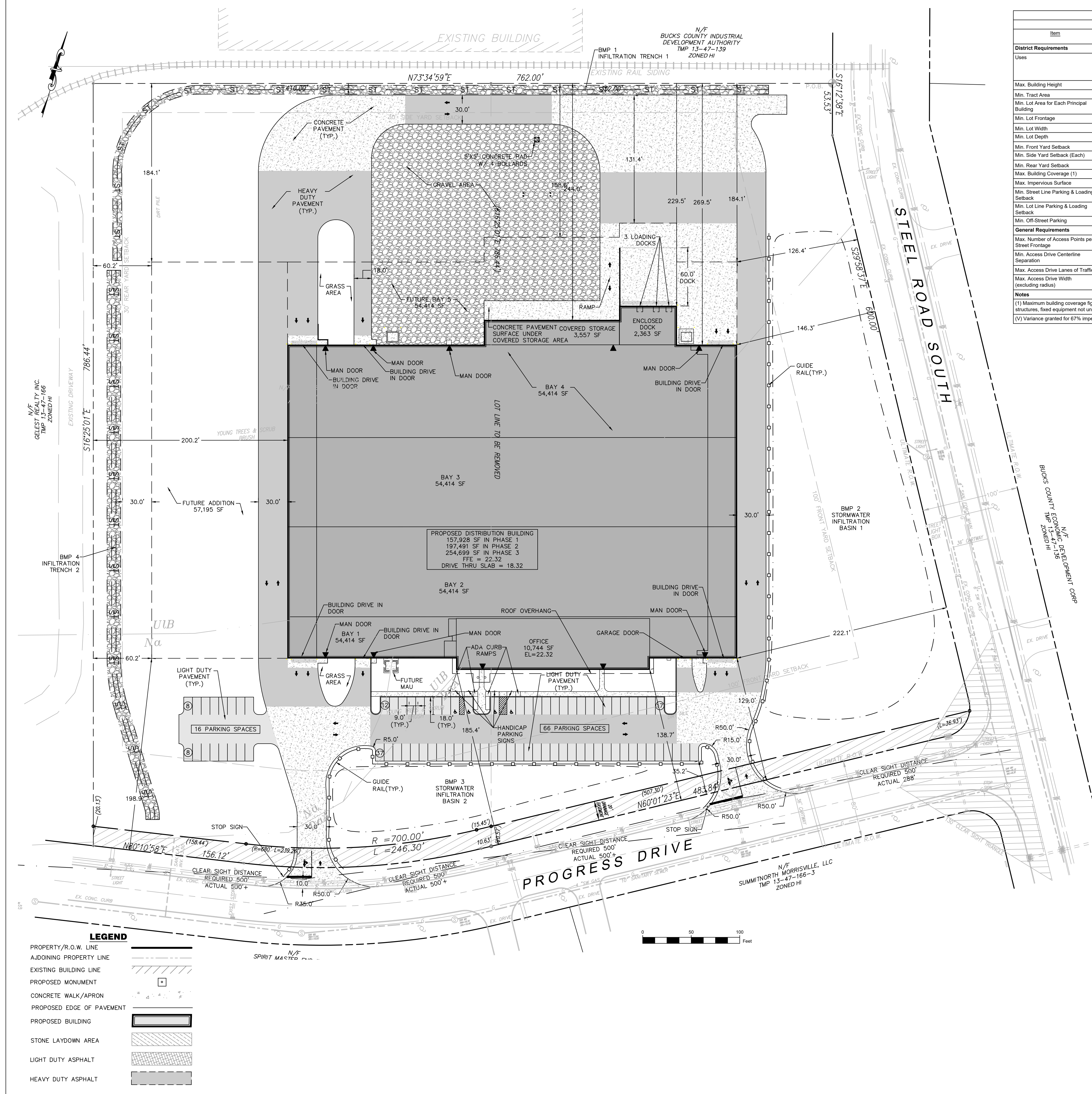
Alro Steel
PROGRESS DRIVE AND SOUTH STEEL ROAD
MORRISVILLE, PA 19067
TP# 13-047-166-001 & 13-047-166-002

1	PROGRESS PLAN	3/16/20
2	LAND DEVELOPMENT SUBMISSION	3/24/20
3	BUILDING REVISIONS	5/11/20
4	BUILDING REVISIONS PROGRESS SET	6/22/20
5	LAND DEVELOPMENT RESUBMISSION	6/4/20
6	LAND DEVELOPMENT PROGRESS SET	7/13/20
7	LAND DEVELOPMENT RESUBMISSION	8/5/20

PROJECT NUMBER: 190-46 00 / HCE 1469

RECORD PLAN - FULL BUILD

C1.0



ZONING TABLE
HI Heavy Industrial District

Item	Required / Permitted	Proposed Phase 1	Ordinance Section
District Requirements			
Uses	Industrial and Manufacturing, Distribution and Warehousing	Distribution and Warehousing	209-29.B
Max. Building Height	80 FT	< 80 FT	209-29.F
Min. Tract Area	0.5 AC	14.63 AC	209-29.G, 209 Attachment 7
Min. Lot Area for Each Principal Building	0.5 AC	14.63 AC	209-29.G, 209 Attachment 7
Min. Lot Frontage	100 FT	687 FT	209-29.G, 209 Attachment 7
Min. Lot Width	100 FT	687 FT	209-29.G, 209 Attachment 7
Min. Lot Depth	200 FT	762 FT	209-29.G, 209 Attachment 7
Min. Front Yard Setback	100 FT	129 FT	209-29.G, 209 Attachment 7
Min. Side Yard Setback (Each)	30 FT	229.5 FT	209-29.G, 209 Attachment 7
Min. Rear Yard Setback	30 FT	200.2 FT	209-29.G, 209 Attachment 7
Max. Building Coverage (1)	40%	24.8%	209-29.G, 209 Attachment 7
Max. Impervious Surface	50%	55.5% (V)	209-29.G, 209 Attachment 7
Min. Street Line Parking & Loading Setback	30 FT	35.2 FT	209-29.H(1)
Min. Lot Line Parking & Loading Setback	12 FT	35.2 FT	209-29.H(1)
Min. Off-Street Parking	See Table		209-29.I, 209-42.H(2)
General Requirements			
Max. Number of Access Points per Street Frontage	2	2	209-42.E
Min. Access Drive Centerline Separation	65 FT	581 FT	209-42.E
Max. Access Drive Lanes of Traffic (excluding radius)	4	2	209-42.E
Max. Access Drive Width	30 FT	30 FT	209-42.E
Notes			
(1) Maximum building coverage figures are intended to include the area occupied by buildings, utility structures, fixed equipment not under cover, storage tanks, sheds and accessory structures.			
(V) Variance granted for 67% impervious at Zoning Hearing Board held on December 10, 2019.			

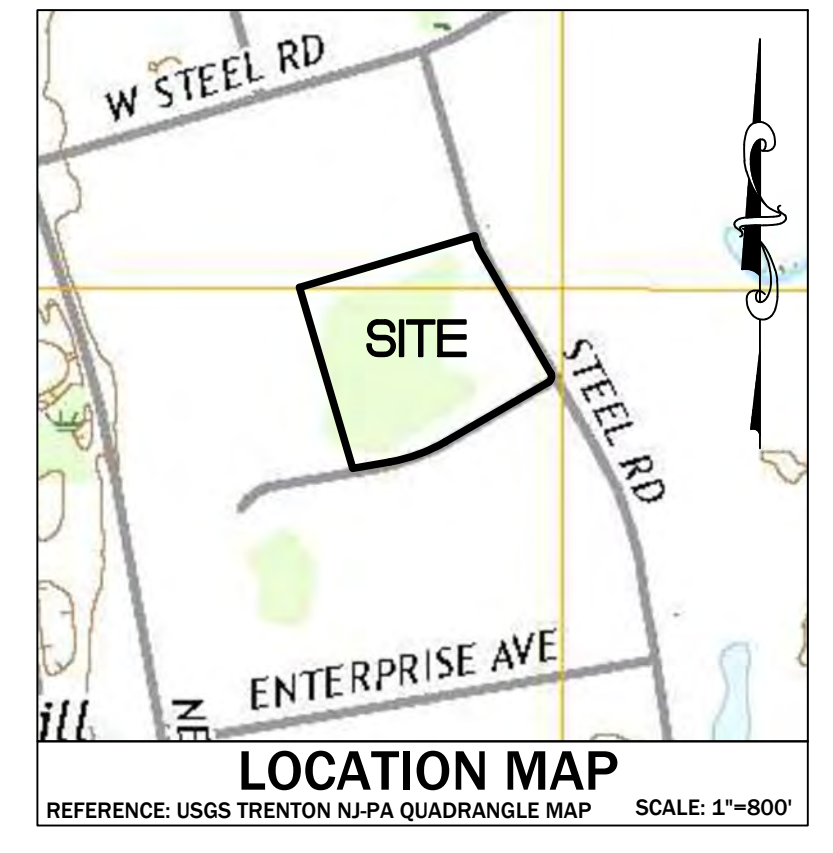
LOT CALCULATIONS

	SF	AC
Gross Combined Lot Area	637,379	14.63
Street Right-of-Way Area	0	0.00
Lot Area	637,379	14.63

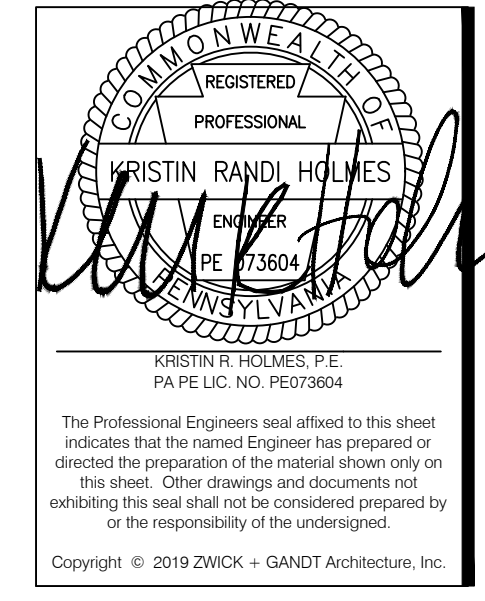
IMPERVIOUS COVERAGE CALCULATIONS - Phase 1

Items	SF	AC
Building	157,928	3.63
Asphalt Pavement	84,144	1.93
Concrete Pavement	61,922	1.42
Gravel	46,907	1.08
Concrete Walkways, Pads	2,547	0.06
Total Impervious	353,448	
Impervious Coverage		55.5%
Building Coverage		24.8%

- SITE PLAN NOTES:**
- SUBJECT PROPERTY BEING PART OF BUCKS COUNTY TAX MAP PARCEL NUMBERS 13-47-166-001 & 13-47-166-002 CONTAINING 14.63 ACRES OF LAND MORE OR LESS.
 - THE PLAN IS BASED ON A BOUNDARY & TOPOGRAPHIC SURVEY PLAN PREPARED BY R.L. SHOWALTER & ASSOCIATES, INC., DATED OCTOBER 16, 2019.
 - THE SUBJECT PROPERTY IS ENTIRELY WITHIN FLOOD ZONE "X" - I.E., AREA OF 500 YEAR FLOOD PLAIN AS SHOWN ON THE F.E.M.A. FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR BUCKS COUNTY, MAP NO. 420170458L, PANEL 45B OF 532, BEARING AN EFFECTIVE DATE OF MARCH 21, 2017.
 - THE PROPERTY IS SERVED BY U.S. STEEL SEWER AND WATER.
 - ALL STORMWATER AND DRAINAGE FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED, OR MODIFIED WITHOUT PRIOR APPROVAL FROM FALLS TOWNSHIP. ALL COSTS ASSOCIATED WITH MAINTENANCE AND REPAIRS OF THE STORMWATER FACILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE INDIVIDUAL PROPERTY OWNER OF LOT.
 - VERTICAL DATUM IS NAVD83. ELEVATIONS ON THE SUBJECT PROPERTY ARE ABOVE BASE FLOOD ELEVATION.
 - TRASH COLLECTION AREAS ARE LOCATED WITHIN THE BUILDING.



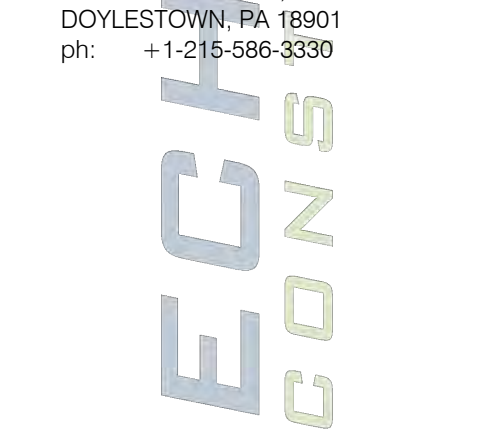
OWNER AND APPLICANT:
ALRO STEEL
3100 E. HIGH STREET
JACKSON, MI 49203



ARCHITECT:
ZWICK + GANDT
ARCHITECTURE, INC.
9109 Watson Road, Ste. 110
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STRUCTURAL:
ALPER AUDI, INC.
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CIVIL
HOLMES CUNNINGHAM ENGINEERING
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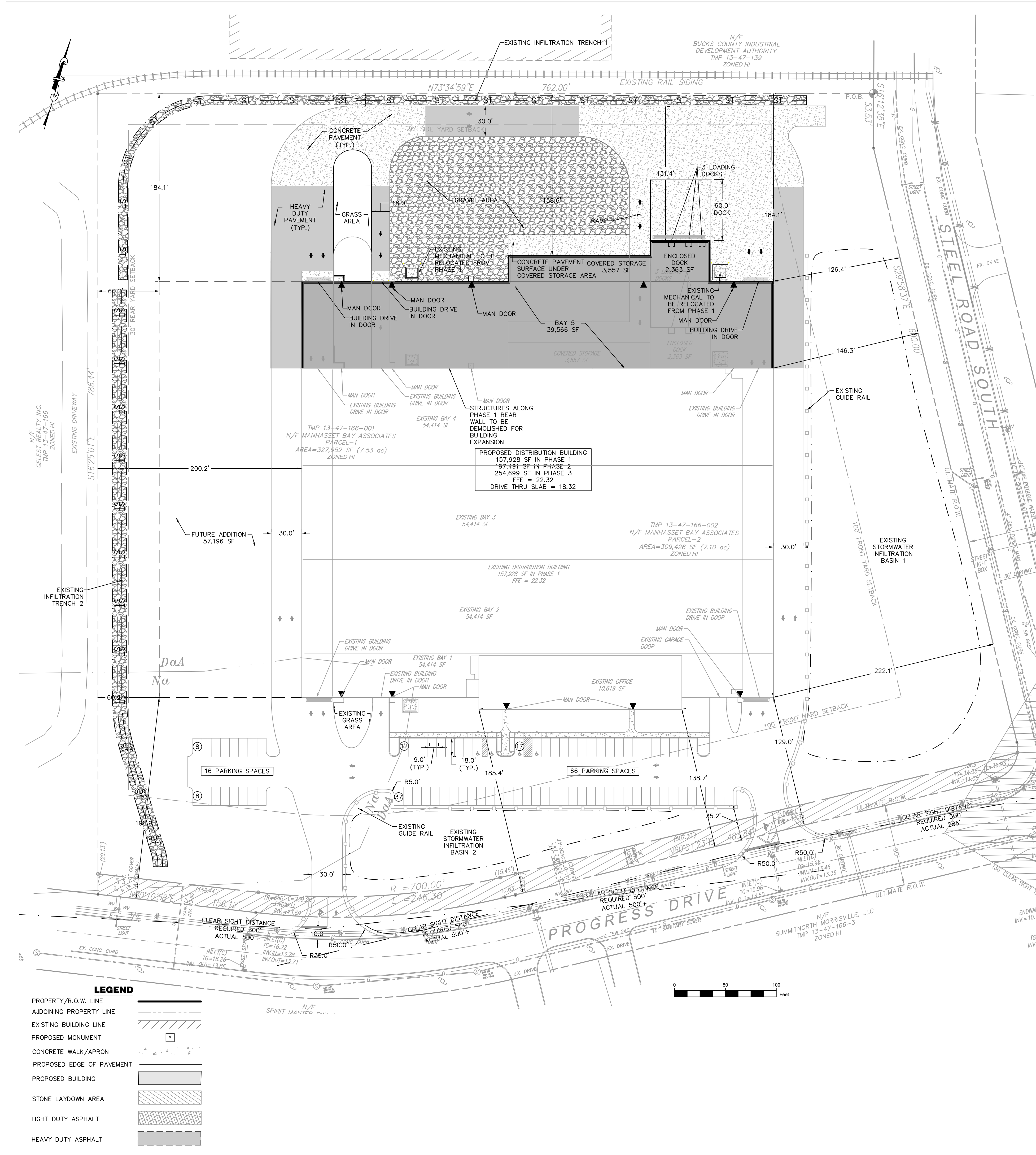
Alro Steel
PROGRESS DRIVE AND SOUTH STEEL ROAD
MORRISVILLE, PA 19067
TP# 13-047-166-001 & 13-047-166-002

NO.	DESCRIPTION	DATE
1	PROGRESS PLAN	3/16/20
2	LAND DEVELOPMENT SUBMISSION	3/24/20
3	BUILDING REVISIONS	5/11/20
4	BUILDING REVISIONS PROGRESS SET	6/22/20
5	LAND DEVELOPMENT SUBMISSION	6/4/20
6	LAND DEVELOPMENT PROGRESS SET	7/13/20
7	LAND DEVELOPMENT SUBMISSION	8/5/20

PROJECT NUMBER: 190-46.00 / HCE 1469

SITE PLAN - PHASE 1

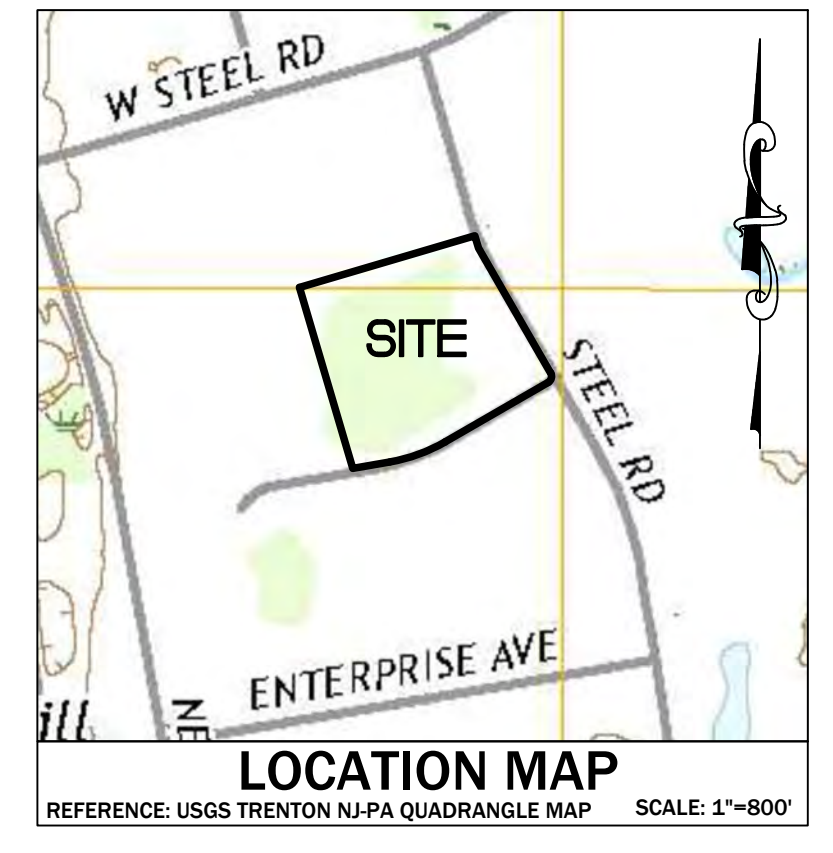
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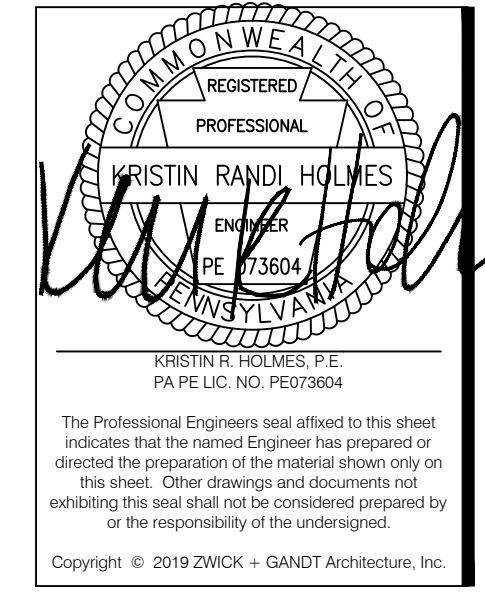
ZONING TABLE			
HI Heavy Industrial District			
Item	Required / Permitted	Proposed Phase 2	Ordinance Section
District Requirements			
Uses	Industrial and Manufacturing, Distribution and Warehousing	Distribution and Warehousing	209-29 B
Max. Building Height	80 FT	< 80 FT	209-29 F
Min. Tract Area	0.5 AC	14.63 AC	209-29 G, 209 Attachment 7
Min. Lot Area for Each Principal Building	0.5 AC	14.63 AC	209-29 G, 209 Attachment 7
Min. Lot Frontage	100 FT	687 FT	209-29 G, 209 Attachment 7
Min. Lot Width	100 FT	687 FT	209-29 G, 209 Attachment 7
Min. Lot Depth	200 FT	762 FT	209-29 G, 209 Attachment 7
Min. Front Yard Setback	100 FT	129 FT	209-29 G, 209 Attachment 7
Min. Side Yard Setback (Each)	30 FT	237.7 FT	209-29 G, 209 Attachment 7
Min. Rear Yard Setback	30 FT	60.2 FT	209-29 G, 209 Attachment 7
Max. Building Coverage (1)	40%	31.0%	209-29 G, 209 Attachment 7
Max. Impervious Surface	50%	64.2% (V)	209-29 G, 209 Attachment 7
Min. Street Line Parking & Loading Setback	30 FT	35.2 FT	209-29 H(1)
Min. Lot Line Parking & Loading Setback	12 FT	35.2 FT	209-29 H(1)
Min. Off-Street Parking	See Table	209-29 I, 209-42 H(2)	
General Requirements			
Max. Number of Access Points per Street Frontage	2	2	209-42 E
Min. Access Drive Centerline Separation	65 FT	581 FT	209-42 E
Max. Access Drive Lanes of Traffic	4	2	209-42 E
Max. Access Drive Width (excluding radius)	30 FT	30 FT	209-42 E
Notes			
(1) Maximum building coverage figures are intended to include the area occupied by buildings, utility structures, fixed equipment not under cover, storage tanks, sheds and accessory structures.			
(V) Variance granted at Zoning Hearing Board held on December 10, 2019.			

LOT CALCULATIONS		
Items	SF	AC
Gross Combined Lot Area	637,379	14.63
Street Right-of-Way Area	0	0.00
Lot Area	637,379	14.63
IMPERVIOUS COVERAGE CALCULATIONS - Phase 2		
Items	SF	AC
Building	197,491	4.53
Asphalt Pavement	66,059	1.52
Concrete Pavement	52,703	1.21
Gravel	26,795	0.62
Concrete Walkways, Pads	2,547	0.06
Total Impervious	345,595	
Impervious Coverage		54.2%
Building Coverage		31.0%

- SITE PLAN NOTES:**
- SUBJECT PROPERTY BEING PART OF BUCKS COUNTY TAX MAP PARCEL NUMBERS 13-47-166-001 & 13-47-166-002 CONTAINING 14.63 ACRES OF LAND MORE OR LESS.
 - THE PLAN IS BASED ON A BOUNDARY & TOPOGRAPHIC SURVEY PLAN PREPARED BY R.L. SHOWALTER & ASSOCIATES, INC., DATED OCTOBER 16, 2019.
 - THE SUBJECT PROPERTY IS ENTIRELY WITHIN FLOOD ZONE "X" - I.E., AREA OF 500 YEAR FLOOD PLAIN AS SHOWN ON THE F.E.M.A. FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR BUCKS COUNTY, MAP NO. 420170045B1, PANEL 45B OF 532, BEARING AN EFFECTIVE DATE OF MARCH 21, 2017.
 - THE PROPERTY IS SERVED BY U.S. STEEL SEWER AND WATER.
 - ALL STORMWATER AND DRAINAGE FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED, OR MODIFIED WITHOUT PRIOR APPROVAL FROM FALLS TOWNSHIP. ALL COSTS ASSOCIATED WITH MAINTENANCE AND REPAIRS OF THE STORMWATER FACILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE INDIVIDUAL PROPERTY OWNER OF LOT.
 - VERTICAL DATUM IS NAVD83. ELEVATIONS ON THE SUBJECT PROPERTY ARE ABOVE BASE FLOOD ELEVATION.
 - TRASH COLLECTION AREAS ARE LOCATED WITHIN THE BUILDING.



OWNER AND APPLICANT:
ALRO STEEL
3100 E. HIGH STREET
JACKSON, MI 49203



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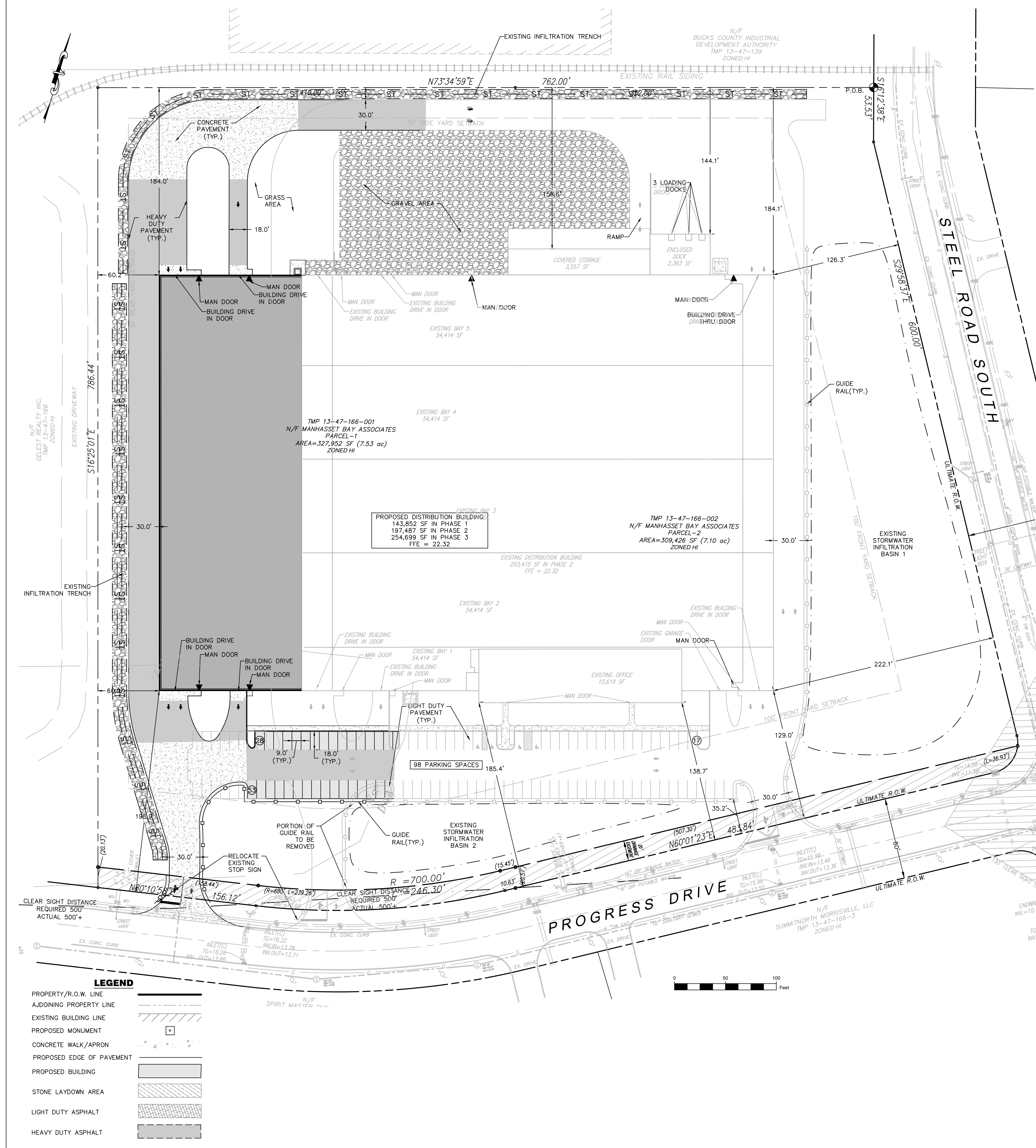
Alro Steel
PROGRESS DRIVE AND SOUTH STEEL ROAD
MORRISVILLE, PA 19067
TP# 13-047-166-001 & 13-047-166-002

NO.	DESCRIPTION	DATE
1	PROGRESS PLAN	3/16/20
2	LAND DEVELOPMENT SUBMISSION	3/24/20
3	BUILDING REVISIONS	5/11/20
4	BUILDING REVISIONS PROGRESS SET	6/22/20
5	LAND DEVELOPMENT RESUBMISSION	6/4/20
6	LAND DEVELOPMENT PROGRESS SET	7/13/20
7	LAND DEVELOPMENT RESUBMISSION	8/5/20

PROJECT NUMBER: 190-46 00 / HCE 1469

SITE PLAN - PHASE 2

C1.2



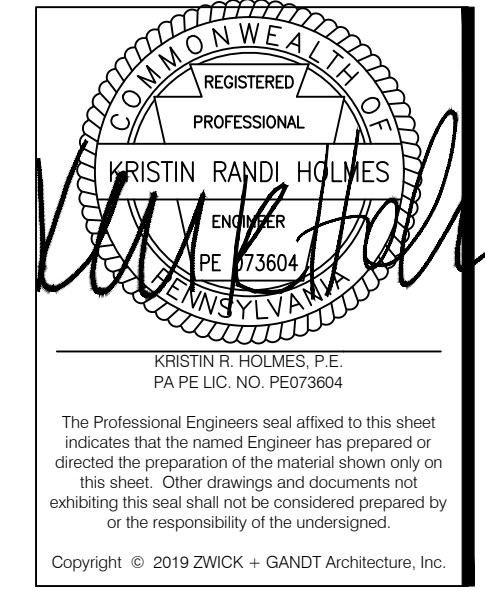
ZONING TABLE			
HI Heavy Industrial District			
Item	Required/Permitted	Proposed Phase 3	Ordinance Section
District Requirements			
Uses	Industrial and Manufacturing, Distribution and Warehousing	Distribution and Warehousing	209-29.B
Max. Building Height	80 FT	< 80 FT	209-29.F
Min. Tract Area	0.5 AC	14.63 AC	209-29.G, 209 Attachment 7
Min. Lot Area for Each Principal Building	0.5 AC	14.63 AC	209-29.G, 209 Attachment 7
Min. Lot Frontage	100 FT	687 FT	209-29.G, 209 Attachment 7
Min. Lot Width	100 FT	687 FT	209-29.G, 209 Attachment 7
Min. Lot Depth	200 FT	762 FT	209-29.G, 209 Attachment 7
Min. Front Yard Setback	100 FT	129 FT	209-29.G, 209 Attachment 7
Min. Side Yard Setback (Each)	30 FT	147.5 FT	209-29.G, 209 Attachment 7
Min. Rear Yard Setback	30 FT	60.2 FT	209-29.G, 209 Attachment 7
Max. Building Coverage (1)	40%	40.0%	209-29.G, 209 Attachment 7
Max. Impervious Surface	50%	67.0% (V)	209-29.G, 209 Attachment 7
Min. Street Line Parking & Loading Setback	30 FT	35.2 FT	209-29.H(1)
Min. Lot Line Parking & Loading Setback	12 FT	35.2 FT	209-29.H(1)
Min. Off-Street Parking	See Table	209-29.I, 209-42.H(22)	
General Requirements			
Max. Number of Access Points per Street Frontage	2	2	209-42.E
Min. Access Drive Centerline Separation	65 FT	581 FT	209-42.E
Max. Access Drive Lanes of Traffic	4	2	209-42.E
Max. Access Drive Width (excluding radius)	30 FT	30 FT	209-42.E
Notes			
(1) Maximum building coverage figures are intended to include the area occupied by buildings, utility structures, fixed equipment not under cover, storage tanks, sheds and accessory structures.			
(V) Variance granted at Zoning Hearing Board held on December 10, 2019.			

LOT CALCULATIONS		
	SF	AC
Gross Combined Lot Area	637,379	14.63
Street Right-of-Way Area	0	0.00
Lot Area	637,379	14.63
IMPERVIOUS COVERAGE CALCULATIONS - Phase 3		
Items	SF	AC
Building	254,699	5.85
Asphalt Pavement	78,576	1.80
Concrete Pavement	56,214	1.29
Gravel	34,165	0.78
Concrete Walkways, Pads	3,390	0.08
Total Impervious	427,044	
Impervious Coverage		67.0%
Building Coverage		40.0%

- SITE PLAN NOTES:**
- SUBJECT PROPERTY BEING PART OF BUCKS COUNTY TAX MAP PARCEL NUMBERS 13-47-166-001 & 13-47-166-002 CONTAINING 14.63 ACRES OF LAND, MORE OR LESS.
 - THE PLAN IS BASED ON A BOUNDARY & TOPOGRAPHIC SURVEY PLAN PREPARED BY R.L. SHOWALTER & ASSOCIATES, INC., DATED OCTOBER 16, 2019.
 - THE SUBJECT PROPERTY IS ENTIRELY WITHIN FLOOD ZONE "X" - I.E., AREA OF 500 YEAR FLOOD PLAN AS SHOWN ON THE F.E.M.A. FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR BUCKS COUNTY, MAP NO. 420170045B, PANEL 45B OF 532, BEARING AN EFFECTIVE DATE OF MARCH 21, 2017.
 - THE PROPERTY IS SERVED BY U.S. STEEL SEWER AND WATER.
 - ALL STORMWATER AND DRAINAGE FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED, OR MODIFIED WITHOUT PRIOR APPROVAL FROM FALLS TOWNSHIP. ALL COSTS ASSOCIATED WITH MAINTENANCE AND REPAIRS OF THE STORMWATER FACILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE INDIVIDUAL PROPERTY OWNER OF LOT.
 - VERTICAL DATUM IS NAVD88. ELEVATIONS ON THE SUBJECT PROPERTY ARE ABOVE BASE FLOOD ELEVATION.
 - TRASH COLLECTION AREAS ARE LOCATED WITHIN THE BUILDING.



OWNER AND APPLICANT:
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3100 E. HIGH STREET
JACKSON, MI 49203



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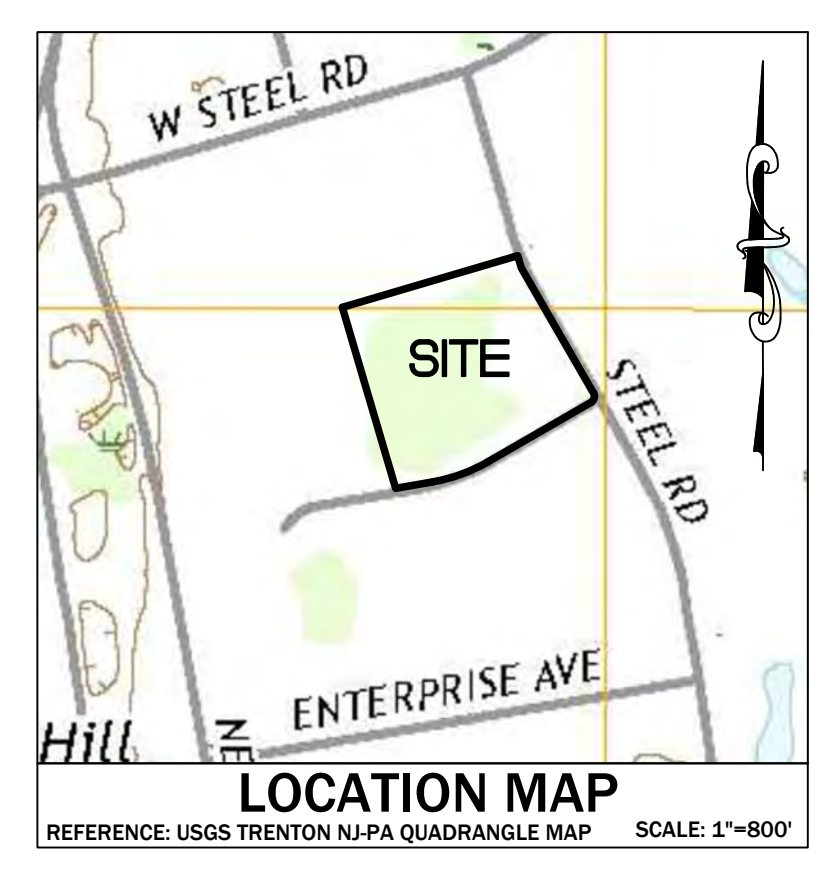
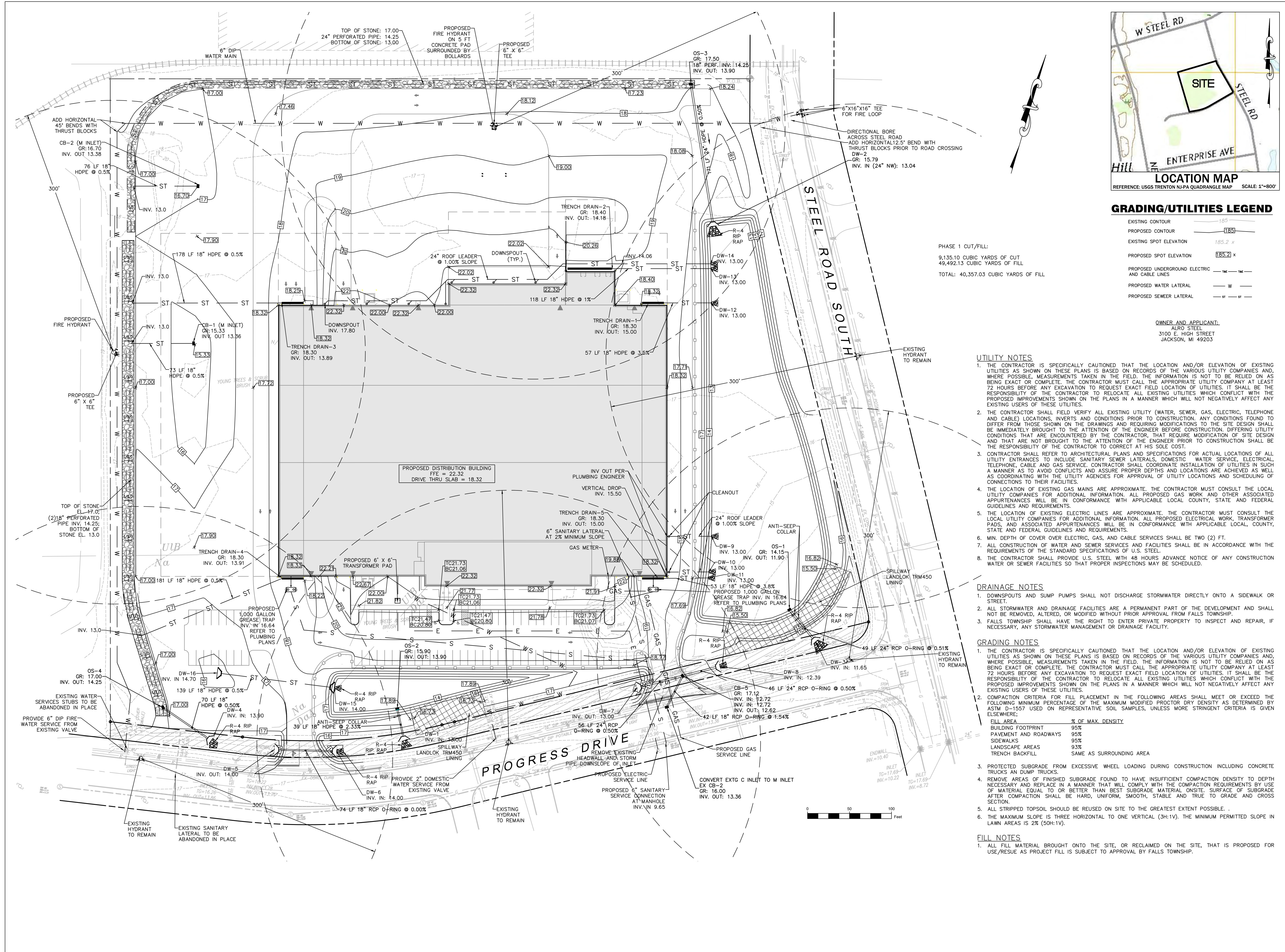
Alro Steel
PROGRESS DRIVE AND SOUTH STEEL ROAD
MORRISVILLE, PA 19067
TP# 13-047-166-001 & 13-047-166-002

NO.	DESCRIPTION	DATE
1	PROGRESS PLAN	3/6/20
2	LAND DEVELOPMENT SUBMISSION	3/24/20
3	BUILDING REVISIONS	5/11/20
4	BUILDING REVISIONS PROGRESS SET	6/22/20
5	LAND DEVELOPMENT RESUBMISSION	6/4/20
6	LAND DEVELOPMENT PROGRESS SET	7/13/20
7	LAND DEVELOPMENT RESUBMISSION	8/5/20

PROJECT NUMBER: 190-46-00 / HCE 1469

SITE PLAN - PHASE 3

C1.3



GRADING/UTILITIES LEGEND

EXISTING CONTOUR	185
PROPOSED CONTOUR	185.2
EXISTING SPOT ELEVATION	185.2 x
PROPOSED SPOT ELEVATION	185.2 x
PROPOSED UNDERGROUND ELECTRIC AND CABLE LINES	---
PROPOSED WATER LATERAL	W
PROPOSED SEWER LATERAL	ST

OWNER AND APPLICANT:
ALRO STEEL
3100 E. HIGH STREET
JACKSON, MI 49203

PHASE 1 CUT/FILL:
9,135.10 CUBIC YARDS OF CUT
49,492.13 CUBIC YARDS OF FILL
TOTAL: 40,357.03 CUBIC YARDS OF FILL

UTILITY NOTES

- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY (WATER, SEWER, GAS, ELECTRIC, TELEPHONE AND CABLE) LOCATIONS, INVERTS AND CONDITIONS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN ON THE DRAWINGS AND REQUIRING MODIFICATIONS TO THE SITE DESIGN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE CONSTRUCTION. DEFERRING UTILITY CONDITIONS THAT ARE ENCOUNTERED BY THE CONTRACTOR, THAT REQUIRE MODIFICATION OF SITE DESIGN AND THAT ARE NOT BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT AT HIS SOLE COST.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL, TELEPHONE, CABLE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS AND LOCATIONS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY AGENCIES FOR APPROVAL OF UTILITY LOCATIONS AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
- THE LOCATION OF EXISTING GAS MAINS ARE APPROXIMATE. THE CONTRACTOR MUST CONSULT THE LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION. ALL PROPOSED GAS WORK AND OTHER ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS.
- THE LOCATION OF EXISTING ELECTRIC LINES ARE APPROXIMATE. THE CONTRACTOR MUST CONSULT THE LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION. ALL PROPOSED ELECTRICAL WORK, TRANSFORMER PADS, AND ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS.
- MIN. DEPTH OF COVER OVER ELECTRIC, GAS, AND CABLE SERVICES SHALL BE TWO (2) FT.
- ALL CONSTRUCTION OF WATER AND SEWER SERVICES AND FACILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS OF U.S. STEEL.
- THE CONTRACTOR SHALL PROVIDE U.S. STEEL WITH 48 HOURS ADVANCE NOTICE OF ANY CONSTRUCTION WATER OR SEWER FACILITIES SO THAT PROPER INSPECTIONS MAY BE SCHEDULED.

DRAINAGE NOTES

- DOWNSPOUTS AND SUMP PUMPS SHALL NOT DISCHARGE STORMWATER DIRECTLY ONTO A SIDEWALK OR STREET.
- ALL STORMWATER AND DRAINAGE FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED, OR MODIFIED WITHOUT PRIOR APPROVAL FROM FALLS TOWNSHIP.
- FALLS TOWNSHIP SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT OR DRAINAGE FACILITY.

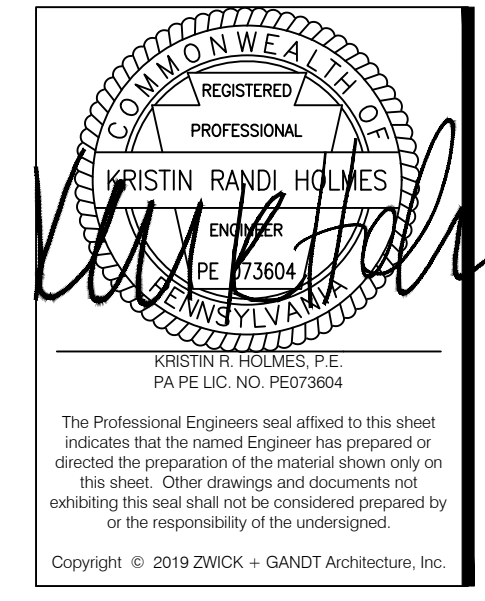
GRADING NOTES

- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES.
- COMPACTION CRITERIA FOR FILL PLACEMENT IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA IS GIVEN ELSEWHERE:

FILL AREA	% OF MAX. DENSITY
BUILDING FOOTPRINT	95%
PAVEMENT AND ROADWAYS	95%
SIDEWALKS	95%
LANDSCAPE AREAS	93%
TRENCH BACKFILL	SAME AS SURROUNDING AREA
- PROTECTED SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
- REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH THE COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THAN BEST SUBGRADE MATERIAL ONSITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE AND TRUE TO GRADE AND CROSS SECTION.
- ALL STRIPPED TOPSOIL SHOULD BE REUSED ON SITE TO THE GREATEST EXTENT POSSIBLE. THE MAXIMUM SLOPE IS THREE HORIZONTAL TO ONE VERTICAL (3H:1V). THE MINIMUM PERMITTED SLOPE IN LAWN AREAS IS 2% (50H:1V).

FILL NOTES

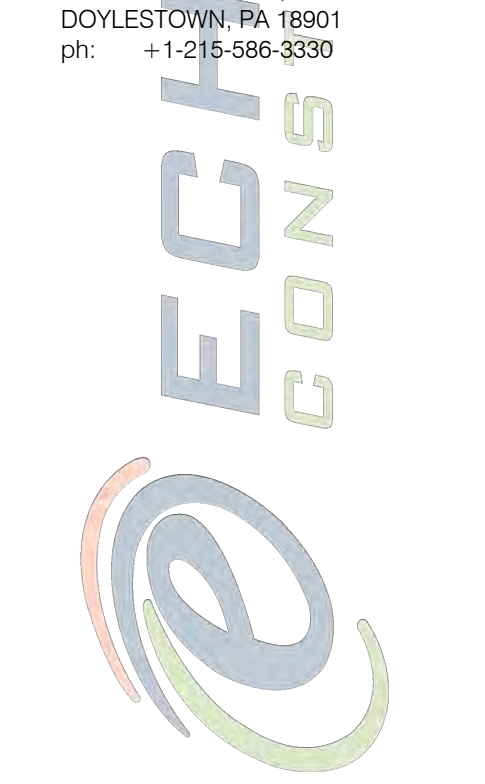
- ALL FILL MATERIAL BROUGHT ONTO THE SITE, OR RECLAIMED ON THE SITE, THAT IS PROPOSED FOR USE/RESUE AS PROJECT FILL IS SUBJECT TO APPROVAL BY FALLS TOWNSHIP.



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Alro Steel
PROGRESS DRIVE AND SOUTH STEEL ROAD
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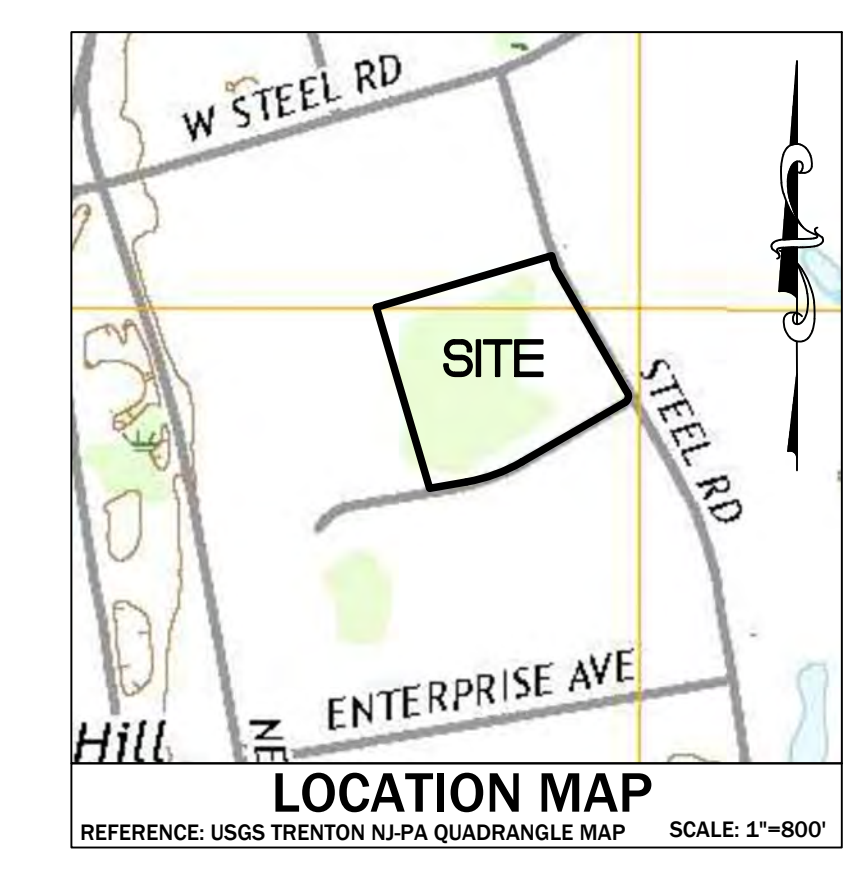
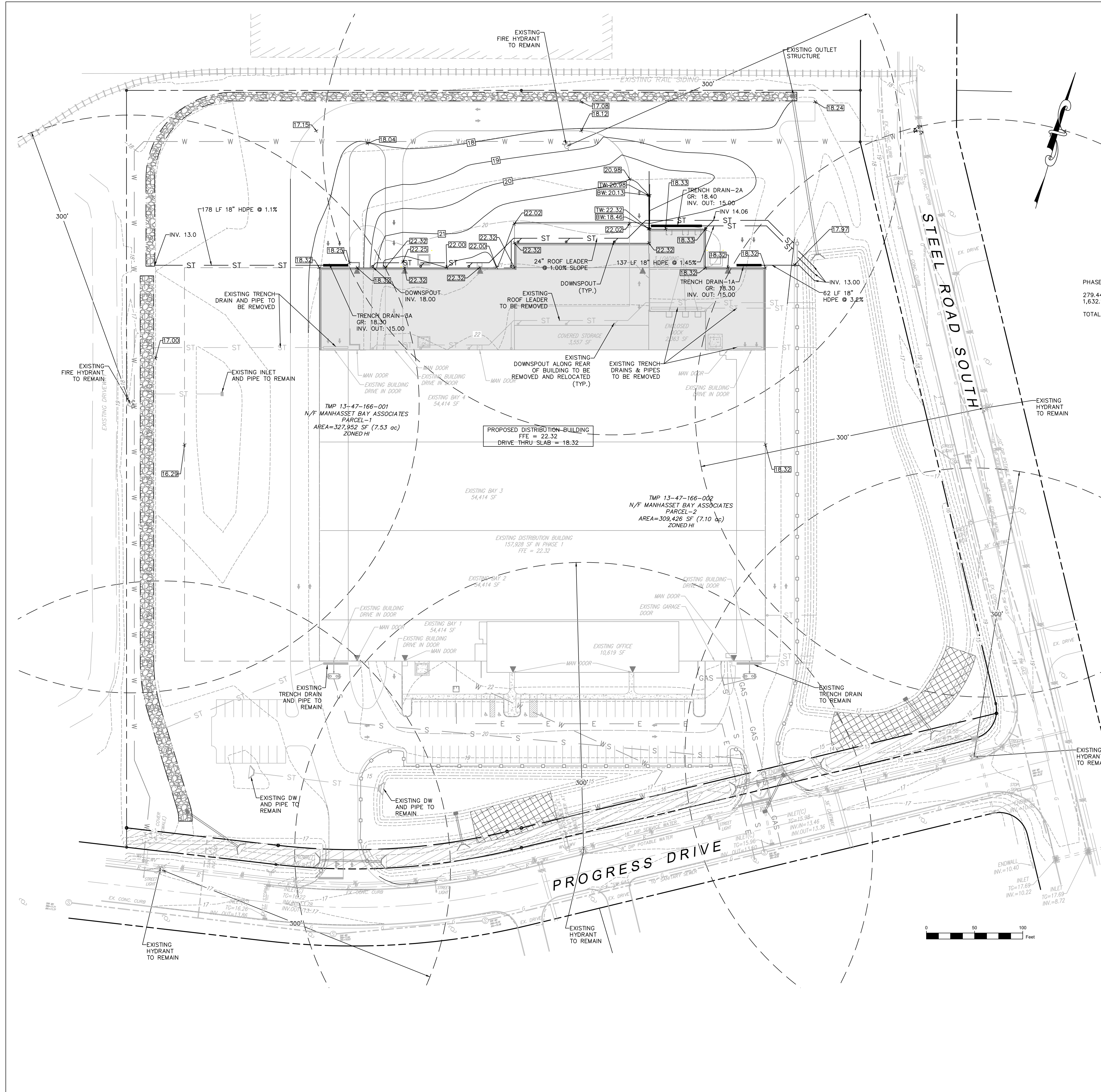
SHEET 7 OF 25

1	PROGRESS PLAN	3/6/20
2	LAND DEVELOPMENT SUBMISSION	3/24/20
3	BUILDING REVISIONS	5/11/20
4	BUILDING REVISIONS PROGRESS SET	6/22/20
5	LAND DEVELOPMENT RESUBMISSION	6/4/20
6	LAND DEVELOPMENT PROGRESS SET	7/13/20
7	LAND DEVELOPMENT RESUBMISSION	8/5/20

PROJECT NUMBER: 19046.00 / HCE 1469

**GRADING & UTILITY
PLAN - PHASE 1**

C2.0



GRADING/UTILITIES LEGEND

EXISTING CONTOUR	185
PROPOSED CONTOUR	185.2
EXISTING SPOT ELEVATION	185.2 x
PROPOSED SPOT ELEVATION	185.2 x
PROPOSED UNDERGROUND ELECTRIC AND CABLE LINES	---E---E---
PROPOSED WATER LATERAL	---W---
PROPOSED SEWER LATERAL	---S---

OWNER AND APPLICANT:
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3100 E. HIGH STREET
JACKSON, MI 49203

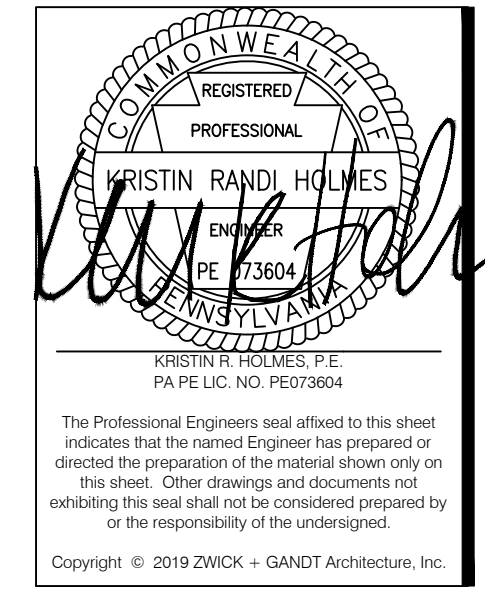
PHASE 2 CUT/FILL:
279.44 CUBIC YARDS OF CUT
1,632.15 CUBIC YARDS OF FILL
TOTAL: 1,352.71 CUBIC YARDS OF FILL

- UTILITY NOTES**
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES.
 - THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY (WATER, SEWER, GAS, ELECTRIC, TELEPHONE AND CABLE) LOCATIONS, INVERTS AND CONDITIONS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN ON THE DRAWINGS AND REQUIRING MODIFICATIONS TO THE SITE DESIGN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE CONSTRUCTION. DEFERRING UTILITY CONDITIONS THAT ARE ENCOUNTERED BY THE CONTRACTOR, THAT REQUIRE MODIFICATION OF SITE DESIGN AND THAT ARE NOT BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT AT HIS SOLE COST.
 - CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL, TELEPHONE, CABLE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS AND LOCATIONS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY AGENCIES FOR APPROVAL OF UTILITY LOCATIONS AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
 - THE LOCATION OF EXISTING GAS MAINS ARE APPROXIMATE. THE CONTRACTOR MUST CONSULT THE LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION. ALL PROPOSED GAS WORK AND OTHER ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS.
 - THE LOCATION OF EXISTING ELECTRIC LINES ARE APPROXIMATE. THE CONTRACTOR MUST CONSULT THE LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION. ALL PROPOSED ELECTRICAL WORK, TRANSFORMER PADS, AND ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS.
 - MIN. DEPTH OF COVER OVER ELECTRIC, GAS, AND CABLE SERVICES SHALL BE TWO (2) FT.
 - ALL CONSTRUCTION OF WATER AND SEWER SERVICES AND FACILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS OF U.S. STEEL.
 - THE CONTRACTOR SHALL PROVIDE U.S. STEEL WITH 48 HOURS ADVANCE NOTICE OF ANY CONSTRUCTION WATER OR SEWER FACILITIES SO THAT PROPER INSPECTIONS MAY BE SCHEDULED.

- DRAINAGE NOTES**
- DOWNSPOUTS AND SUMP PUMPS SHALL NOT DISCHARGE STORMWATER DIRECTLY ONTO A SIDEWALK OR STREET.
 - ALL STORMWATER AND DRAINAGE FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED, OR MODIFIED WITHOUT PRIOR APPROVAL FROM FALLS TOWNSHIP.
 - FALLS TOWNSHIP SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT OR DRAINAGE FACILITY.

- GRADING NOTES**
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 - COMPACTION CRITERIA FOR FILL PLACEMENT IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA IS GIVEN ELSEWHERE:
- | FILL AREA | % OF MAX. DENSITY |
|-----------------------|--------------------------|
| BUILDING FOOTPRINT | 95% |
| PAVEMENT AND ROADWAYS | 95% |
| SIDEWALKS | 95% |
| LANDSCAPE AREAS | 93% |
| TRENCH BACKFILL | SAME AS SURROUNDING AREA |
- PROTECTED SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
 - REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH THE COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THAN BEST SUBGRADE MATERIAL ON SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE AND TRUE TO GRADE AND CROSS SECTION.
 - ALL STRIPPED TOPSOIL SHOULD BE REUSED ON SITE TO THE GREATEST EXTENT POSSIBLE.
 - THE MAXIMUM SLOPE IS THREE HORIZONTAL TO ONE VERTICAL (3H:1V). THE MINIMUM PERMITTED SLOPE IN LAWN AREAS IS 2% (50H:1V).

- FILL NOTES**
- ALL FILL MATERIAL BROUGHT ONTO THE SITE, OR RECLAIMED ON THE SITE, THAT IS PROPOSED FOR USE/RESUE AS PROJECT FILL IS SUBJECT TO APPROVAL BY FALLS TOWNSHIP.



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OWNER AND APPLICANT:
ALRO STEEL
3100 E. HIGH STREET
JACKSON, MI 49203

Alro Steel
PROGRESS DRIVE AND SOUTH STEEL ROAD
MORRISVILLE, PA 19067
TP# 13-047-166-001 & 13-047-166-002

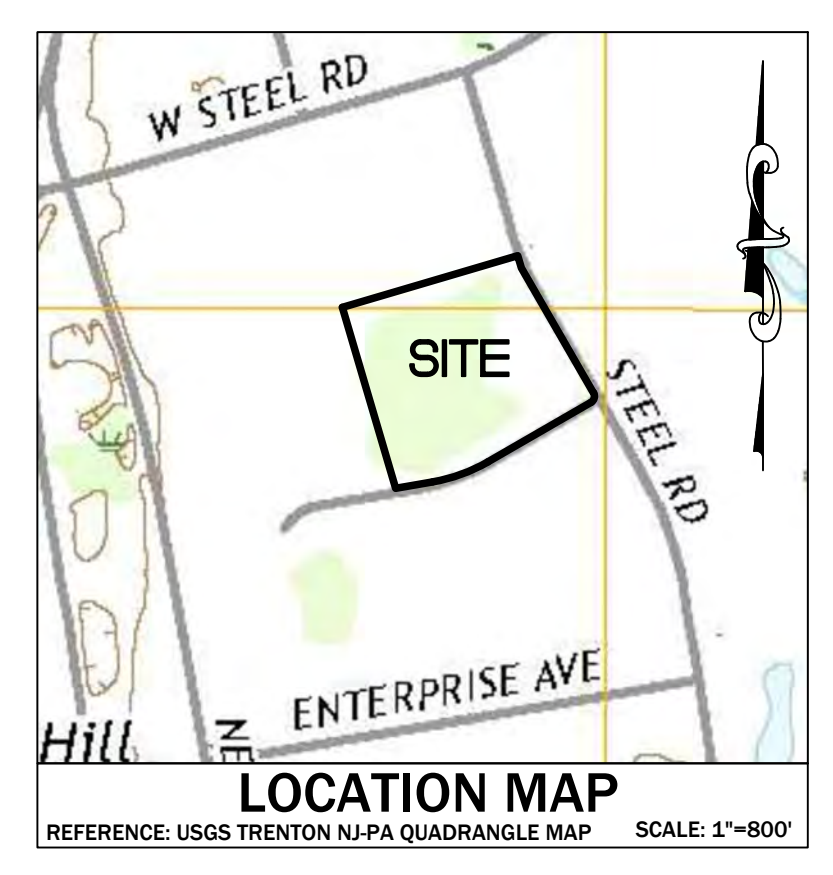
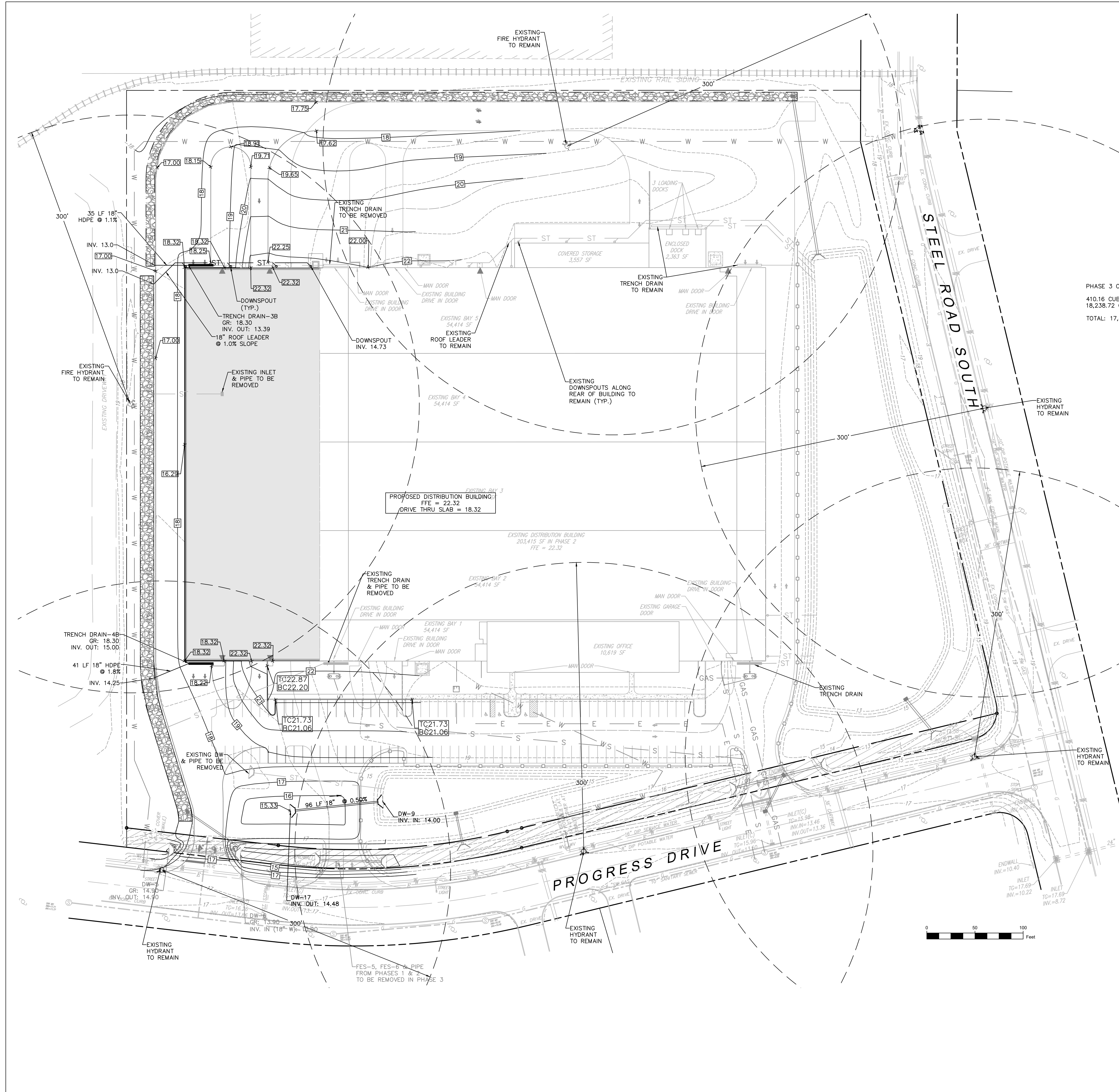
SHEET 8 OF 25

1	PROGRESS PLAN	3/16/20
2	LAND DEVELOPMENT SUBMISSION	3/24/20
3	BUILDING REVISIONS	5/11/20
4	BUILDING REVISIONS PROGRESS SET	6/22/20
5	LAND DEVELOPMENT RESUBMISSION	6/4/20
6	LAND DEVELOPMENT PROGRESS SET	7/13/20
7	LAND DEVELOPMENT RESUBMISSION	8/5/20

PROJECT NUMBER: 19046.00 / HCE 1469

**GRADING & UTILITY
PLAN - PHASE 2**

C2.1



GRADING/UTILITIES LEGEND

EXISTING CONTOUR — 185 —
 PROPOSED CONTOUR — 185 —
 EXISTING SPOT ELEVATION 185.2 x
 PROPOSED SPOT ELEVATION 185.2 x
 PROPOSED UNDERGROUND ELECTRIC AND CABLE LINES — 185 —
 PROPOSED WATER LATERAL — 185 —
 PROPOSED SEWER LATERAL — 185 —

OWNER AND APPLICANT:
 ALRO STEEL
 3100 E. HIGH STREET
 JACKSON, MI 49203

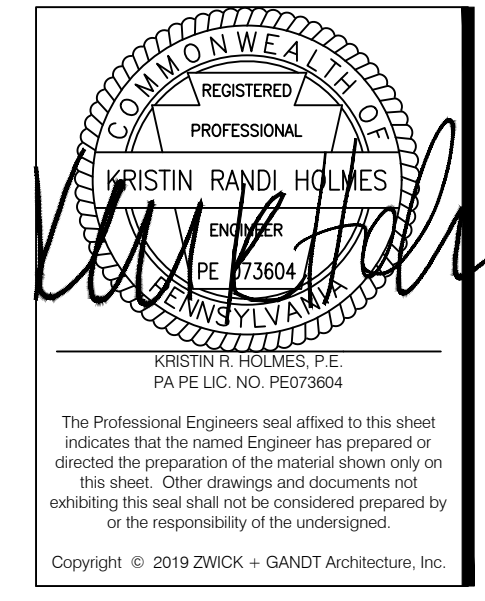
PHASE 3 CUT/FILL:
 410.16 CUBIC YARDS OF CUT
 18,238.72 CUBIC YARDS OF FILL
 TOTAL: 17,828.56 CUBIC YARDS OF FILL

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REVISIONS

NO.	DESCRIPTION	DATE
1	PROGRESS PLAN	3/16/20
2	LAND DEVELOPMENT SUBMISSION	3/24/20
3	BUILDING REVISIONS	5/11/20
4	BUILDING REVISIONS PROGRESS SET	6/22/20
5	LAND DEVELOPMENT RESUBMISSION	6/4/20
6	LAND DEVELOPMENT PROGRESS SET	7/13/20
7	LAND DEVELOPMENT RESUBMISSION	8/5/20

PROJECT NUMBER: 190-46.00 / HCE 1469

GRADING & UTILITY
PLAN - PHASE 3

C2.2

- Guide rail should only be used where the result of striking the object or leaving the roadway would be more severe than the consequences of striking the guide rail. Where the guide rail is required, the roadway should be examined to determine the feasibility of adjusting site features so that the guide rail can be eliminated.
- Height and slope of the embankment are the basic factors to determine barrier requirements. The criteria for guide rail protection on embankments are shown in Table GR1.
- Protection should be considered in sensitive areas, such as school playgrounds or reservoirs.
- Short isolated sections of guide rail should be avoided. Sections should be a minimum fifty (50) feet plus proper end treatment and any necessary transition.
- At the trailing end of guide rail, a distance of fifty (50) feet beyond the end treatment is to be kept clear of all roadside obstructions.
- Provide end treatment on both the approach and trailing ends of the guide rail on two-lane highways with two-way traffic. On four-lane divided highways, end treatments shall be used on the approach ends only, except that end treatments are required on all ends of weak post guidrail for anchoring purposes.
- Extend guide rail systems (on the approach side) beyond the required limits to prevent vehicle access behind the protective guide rail system. On two-lane highways, both ends of the guide rail are considered the approach ends. Take GR2 and Figure GR1 define the methods to determine the location of the end of guide rail systems.
- A barrier system shall be provided for permanent bodies of water, with depths greater than two (2) feet that are located within the clear zone (see Table GR4).
- Provide materials and construction methods meeting the requirement of PennDOT Specifications, Publication 408.
- Selection guidelines and criteria are as follows:
 - Weak post guide rail (2-W or 2-WC) shall be used on all classes of highways where guide rail is required, if the minimum unobstructed distance behind the guide rail is available. Weak post systems shall not be used where the fill slope is steeper than 1:1.2:1.
 - Type 2-S and 2-SG guide rail shall be used when the unobstructed distance behind the guide rail is not available to permit the use of weak post.
 - Type 2-S and 2-SG guide rail shall be used at approaches to structures.
 - Mixing of strong post and weak post systems in the same run or guide rail should be avoided.
 - Where it becomes necessary to use guide rail behind concrete curbed areas, the guide rail shall be provided so that the face of the rail element is flush with the face of the curb. Type 2-S and Type 2-SG guide rail shall be used and the height of the top of the rail shall be 27" above the gutter elevation.

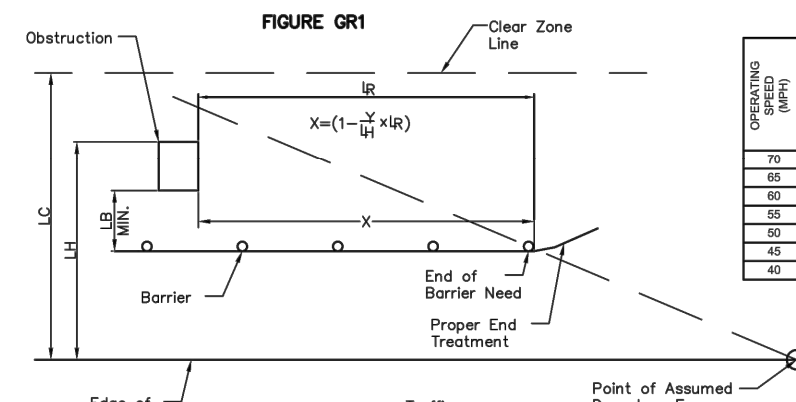


TABLE GR 2
DESIGN PARAMETERS FOR
ROADSIDE BARRIER LAYOUT
(BASED ON TRAFFIC VOLUME)

TRAFFIC VOLUME (AD) IN 24 HOURS	2000	3000	4000	5000	6000	7000	8000	9000	10000
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10

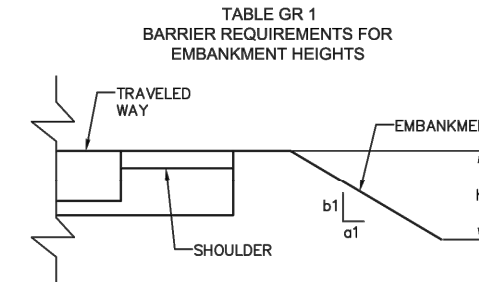


TABLE GR 3
GUIDELINE REQUIREMENTS FOR
FIXED OBJECTS WITHIN THE
CLEAR ZONE

EMPAVEMENT SLOPE (H:V)	1:1.25	1:1	3:4	2:1	1:1
EMPAVEMENT HEIGHTS (IN FEET)	4.0	6.0	9.0	17.0	17.0
EMPAVEMENT HEIGHTS (IN FEET)	2.1	3.0	4.5	8.5	8.5
EMPAVEMENT HEIGHTS (IN FEET)	2.1	3.0	4.5	8.5	8.5
EMPAVEMENT HEIGHTS (IN FEET)	2.1	3.0	4.5	8.5	8.5
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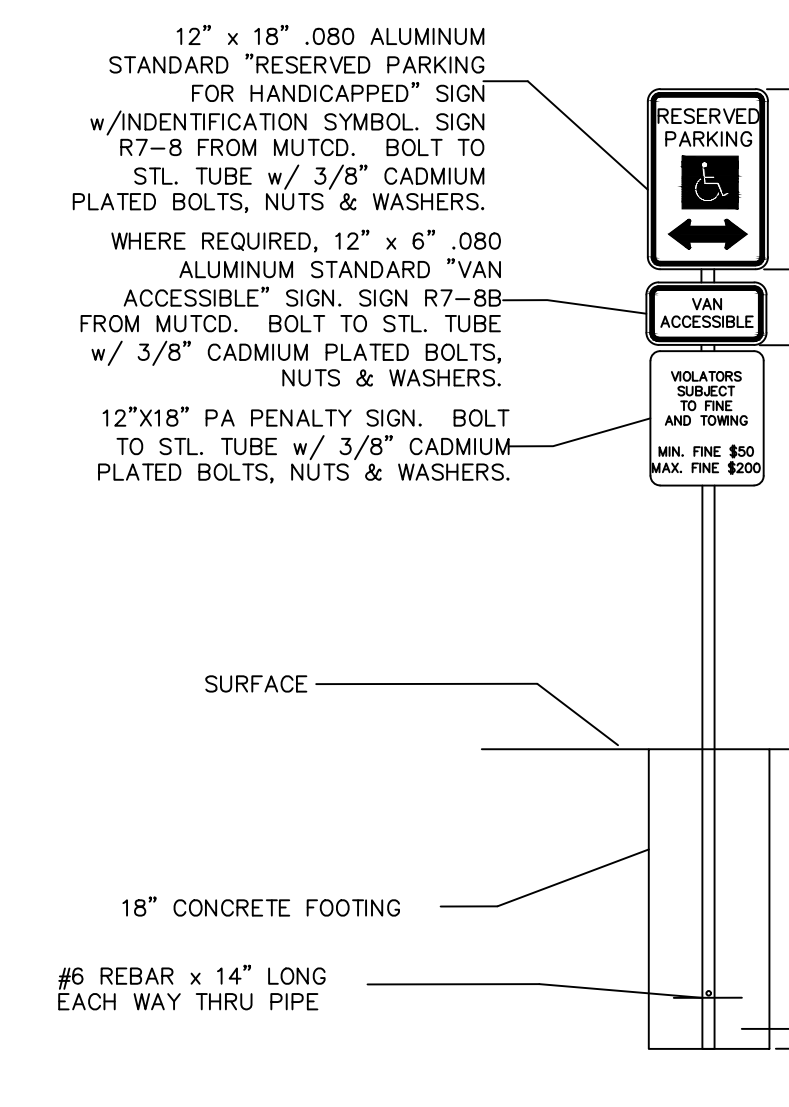
TABLE GR 4
CLEAR ZONE WIDTHS

TRAFFIC VOLUME (AD) IN 24 HOURS	2000	3000	4000	5000	6000	7000	8000	9000	10000
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10
MIN. CLEARANCE (FT.)	10	10	10	10	10	10	10	10	10

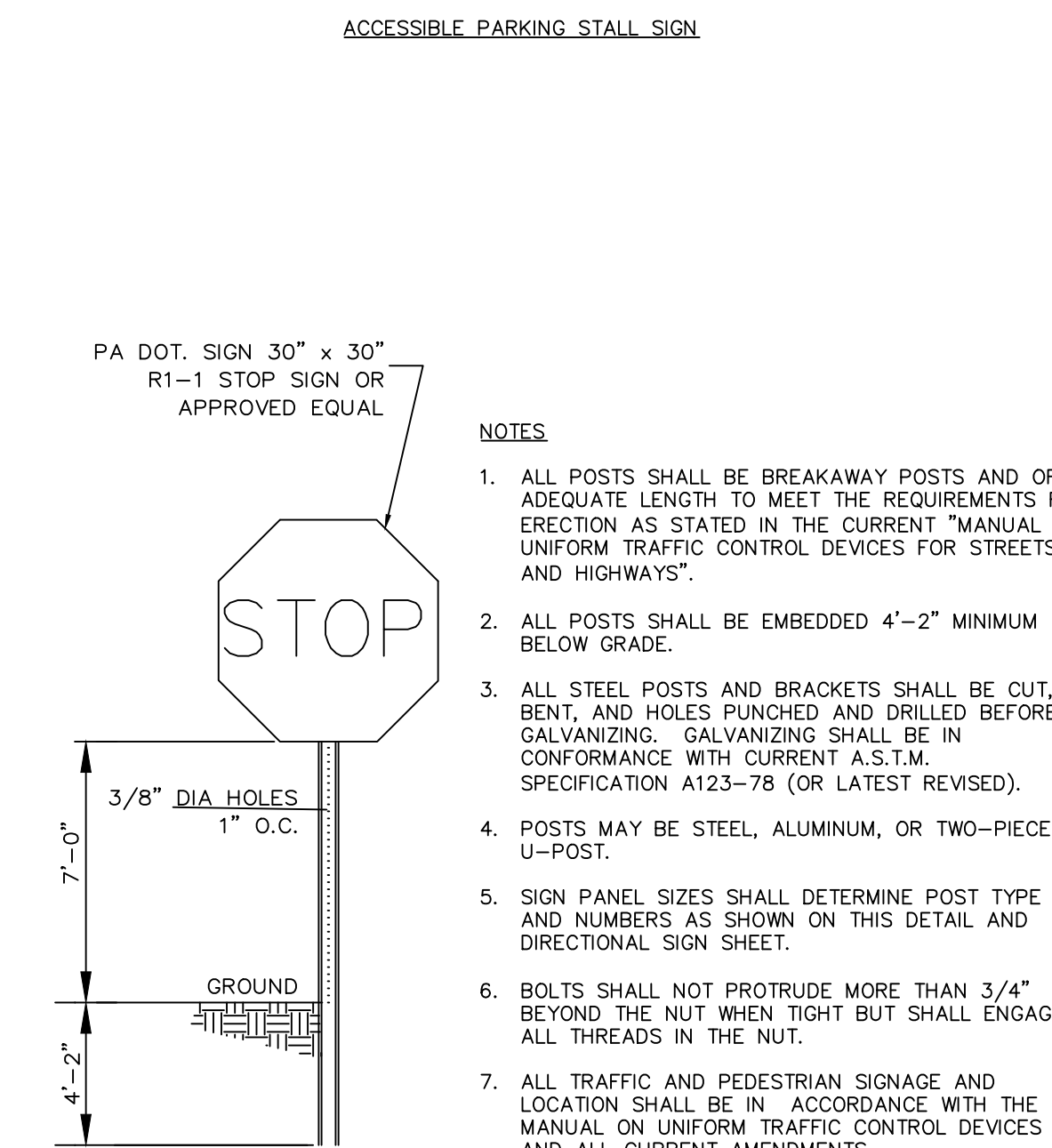
TABLE GR 5
GUIDELINE REQUIREMENTS FOR
FIXED OBJECTS WITHIN THE
CLEAR ZONE

FIXED OBJECTS WITHIN THE CLEAR ZONE	GUIDE RAIL REQUIRED
1. SIGN SUPPORT (GROUND MOUNTED)	YES
2. SIGN BRIDGE SUPPORTS	NO
3. CONCRETE BASE EXTENDING 4 INCHES OR MORE ABOVE GROUND	X
4. LIGHT POLES AND SUPPORTS OF BREAKAWAY DESIGN	X
5. BRIDGE PIERS AND ABUTMENTS AT UNDERPASSES	X
6. RETAINING WALLS AND CULVERT HEADWALLS 4 INCHES OR MORE ABOVE GROUND	X
7. TREES*	X
8. UTILITY POLES*	X
9. LIGHTING POLES WITH HIGH MAST LIGHTING	X

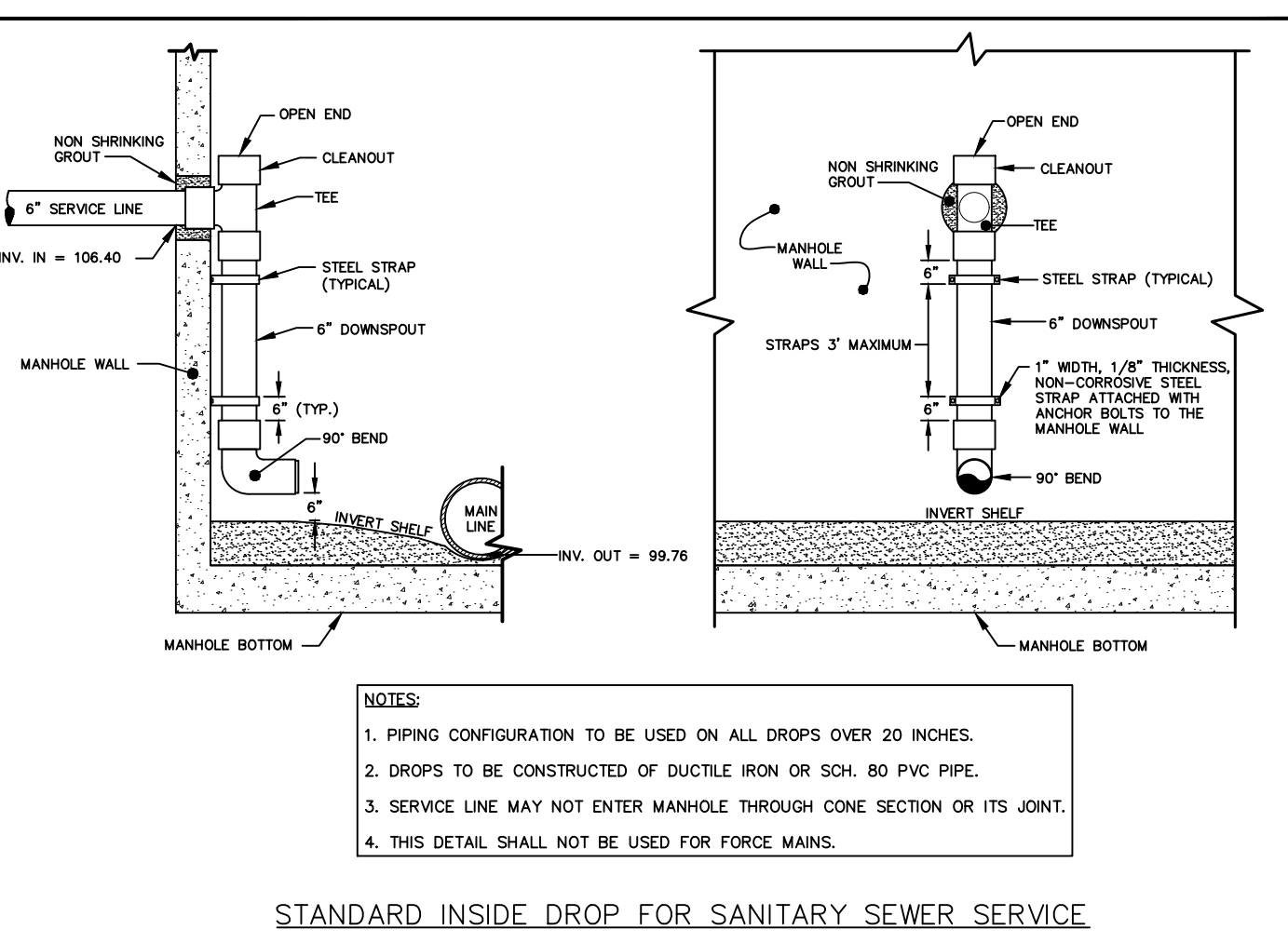
*USE SOUND ENGINEERING JUDGEMENT AND CONSIDER PROTECTION IN SOME SPECIAL CASES WHERE SUCH OBJECTS ARE NEARLY TO OR ON TO HIGHWAY ROADWAY CONDITIONS, (OUTSIDE OF A CURVE, STEEP GRADE AT BEGINNING OF CURVE ETC.)



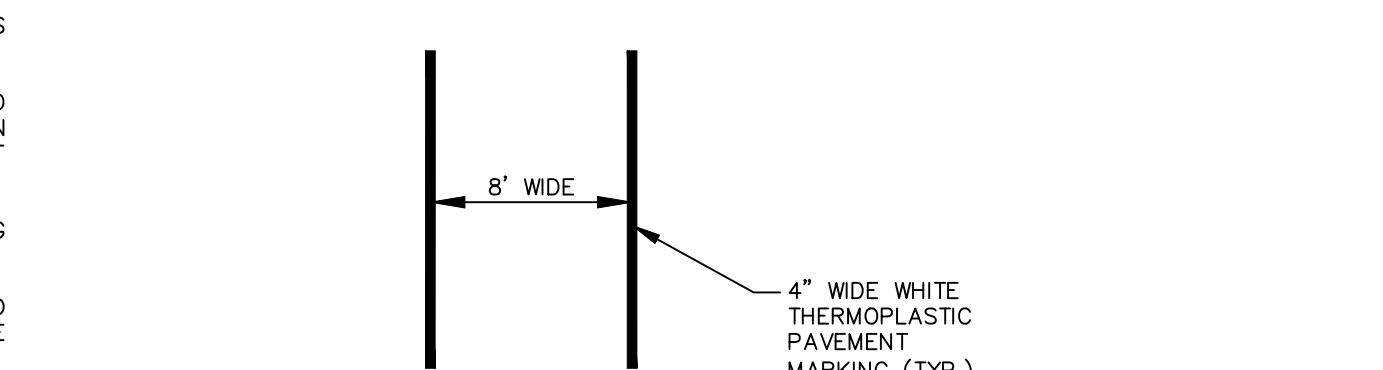
- HANDICAPPED PARKING SIGN SHALL CONFORM WITH CURRENT STATE & LOCAL CODES AND REGULATIONS.
- THE BOTTOM OF R7-8 SIGN, AND R7-8B WHERE PROVIDED, SHALL BE MOUNTED APPROXIMATELY 60 INCHES ABOVE THE PARKING LOT OR SIDEWALK SURFACE WHEN SIGN IS PARALLEL TO SIDEWALK AND APPROXIMATELY 72 INCHES ABOVE THE PARKING LOT OR SIDEWALK SURFACE WHEN SIGN IS PERPENDICULAR TO SIDEWALK.
- THE R7-8 SIGN SHALL BE CENTERED AND MOUNTED AT THE HEAD OF EACH PARKING SPACE.
- WHERE PARKING SPACES RESERVED FOR PERSONS WITH DISABILITIES ARE DESIGNATED TO ACCOMMODATE WHEEL CHAIR VANS, SIGN R7-8B SHOULD BE MOUNTED BELOW THE R7-8 SIGN.



- ALL POSTS SHALL BE BREAKAWAY POSTS AND OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
- ALL POSTS SHALL BE EMBEDDED 4'-2" MINIMUM BELOW GRADE.
- ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).
- POSTS MAY BE STEEL, ALUMINUM, OR TWO-PIECE U-POST.
- SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL AND DIRECTIONAL SIGN SHEET.
- BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
- ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ALL CURRENT AMENDMENTS.

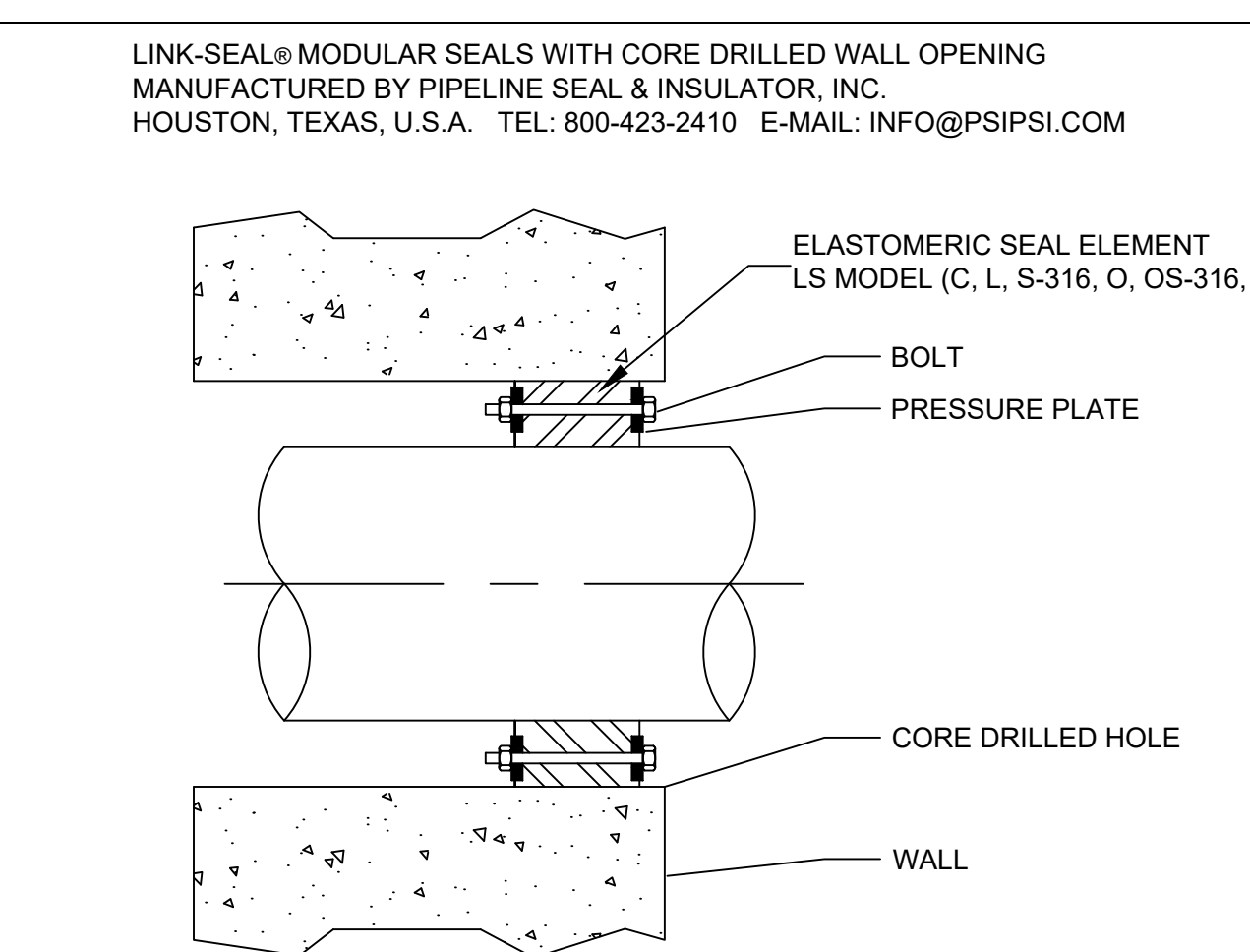


- PIPING CONFIGURATION TO BE USED ON ALL DROPS OVER 20 INCHES.
- DROPS TO BE CONSTRUCTED OF DUCTILE IRON OR SCH. 80 PVC PIPE.
- SERVICE LINE MAY NOT ENTER MANHOLE THROUGH CURVE SECTION OR ITS JOINT.
- THIS DETAIL SHALL NOT BE USED FOR FORCE MAINS.



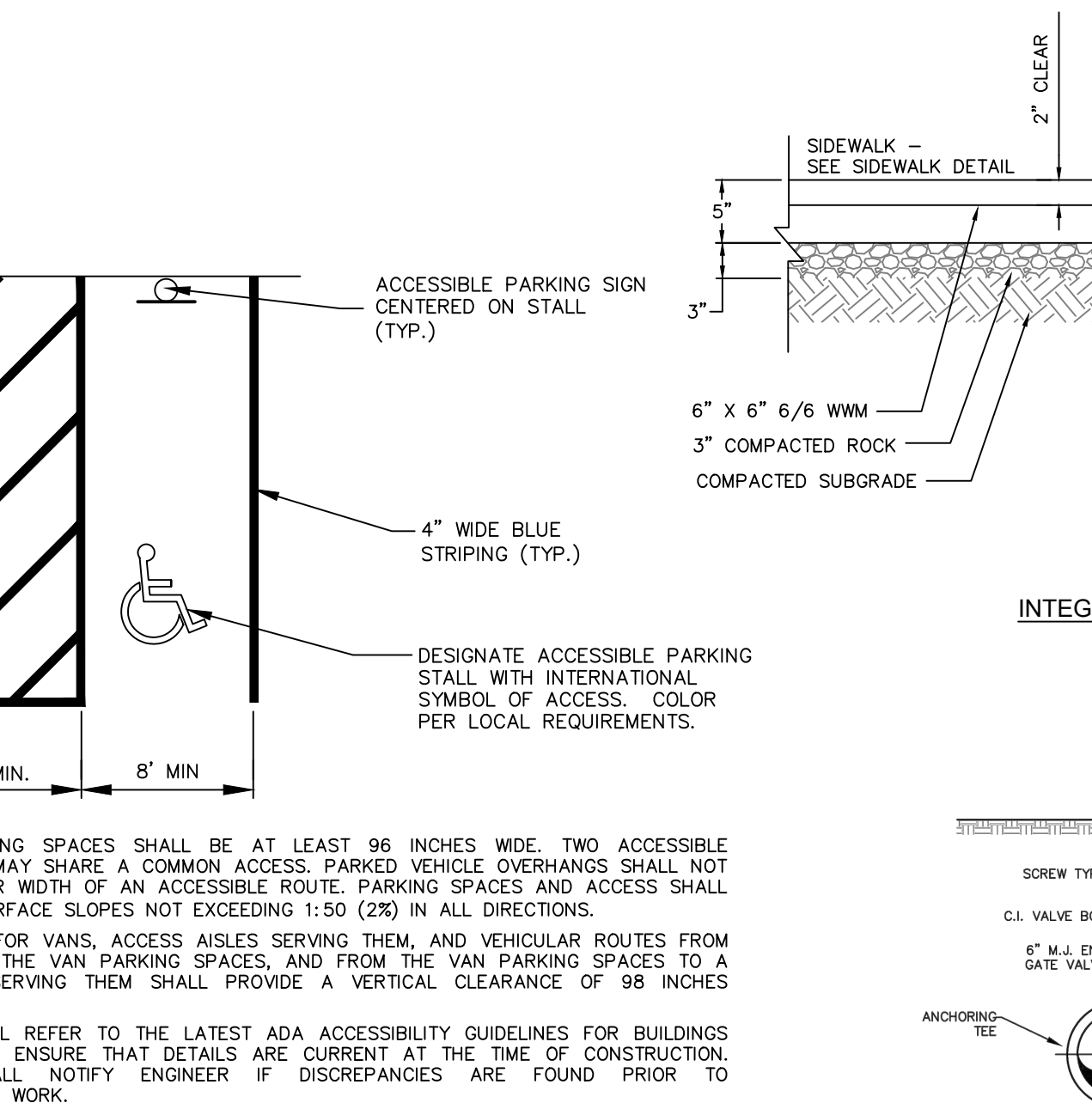
- CONTRACTOR TO INSTALL CROSSWALKS PER THE MANUAL ON UNIFORM TRAFFIC CONTROL STANDARDS (MUTCD), CURRENT EDITION WITH LATEST REVISIONS.
- ALL THERMOPLASTIC AND EPOXY RESIN PAVEMENT MARKINGS TO BE INSTALLED PER PENNDOT PUBLICATION 408, CURRENT EDITION WITH LATEST REVISIONS.

CONCRETE SIDEWALK



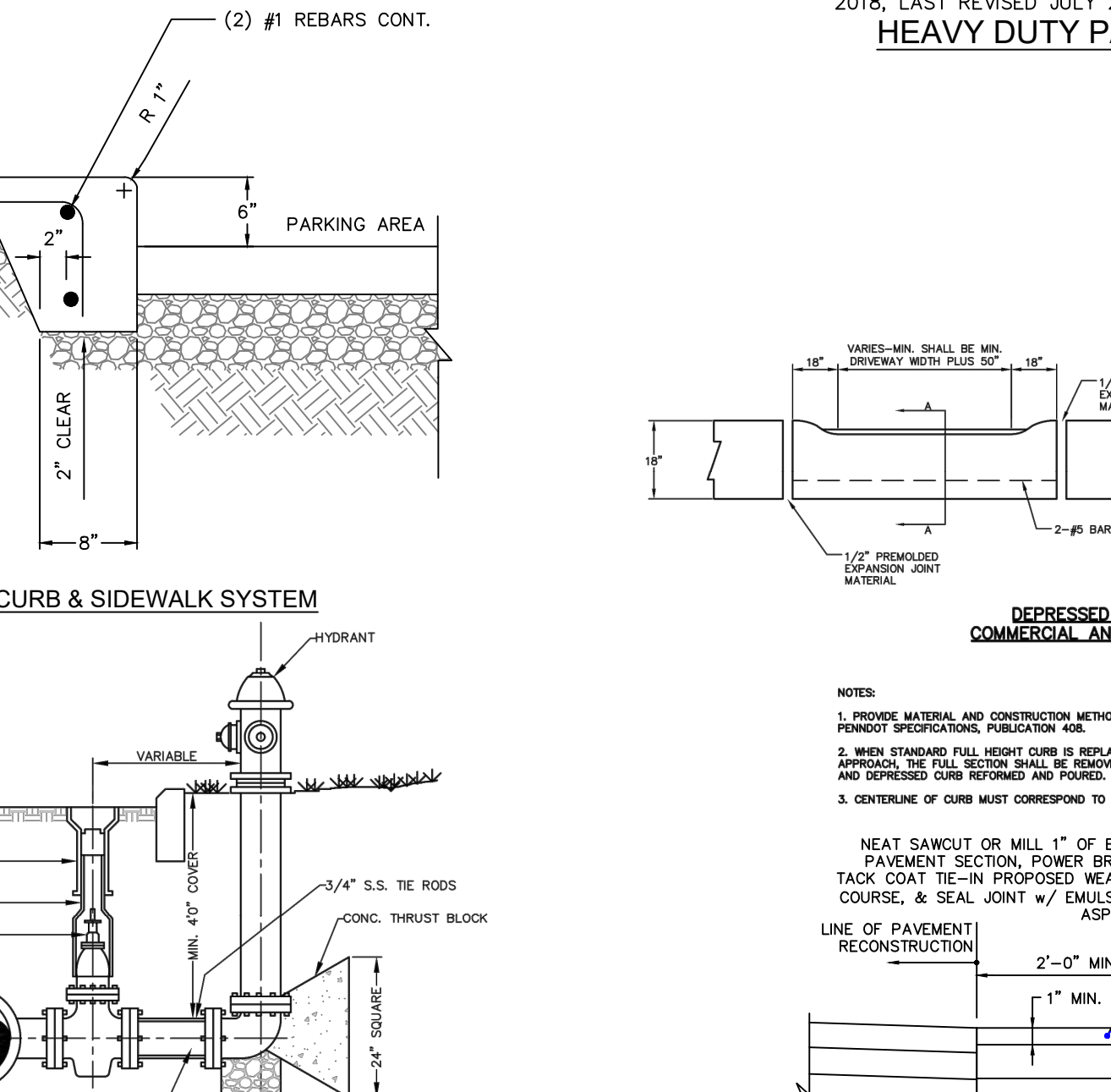
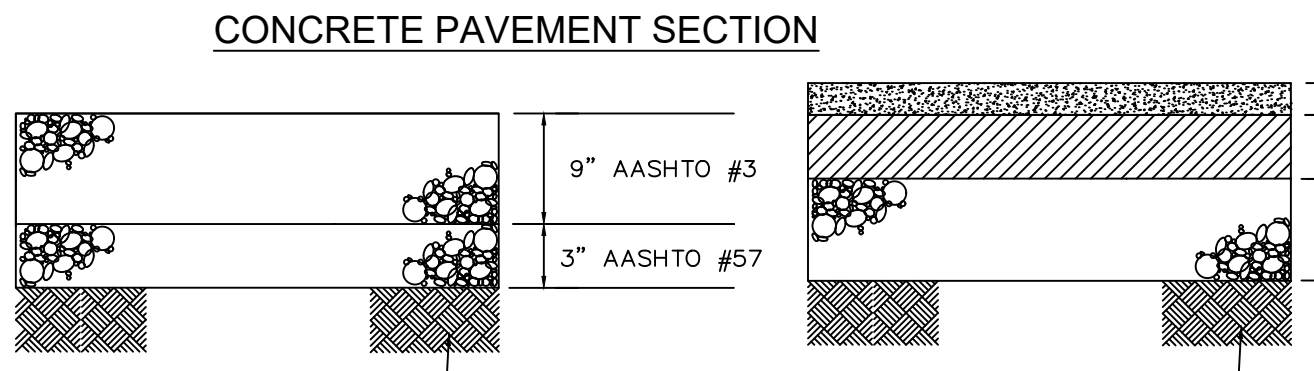
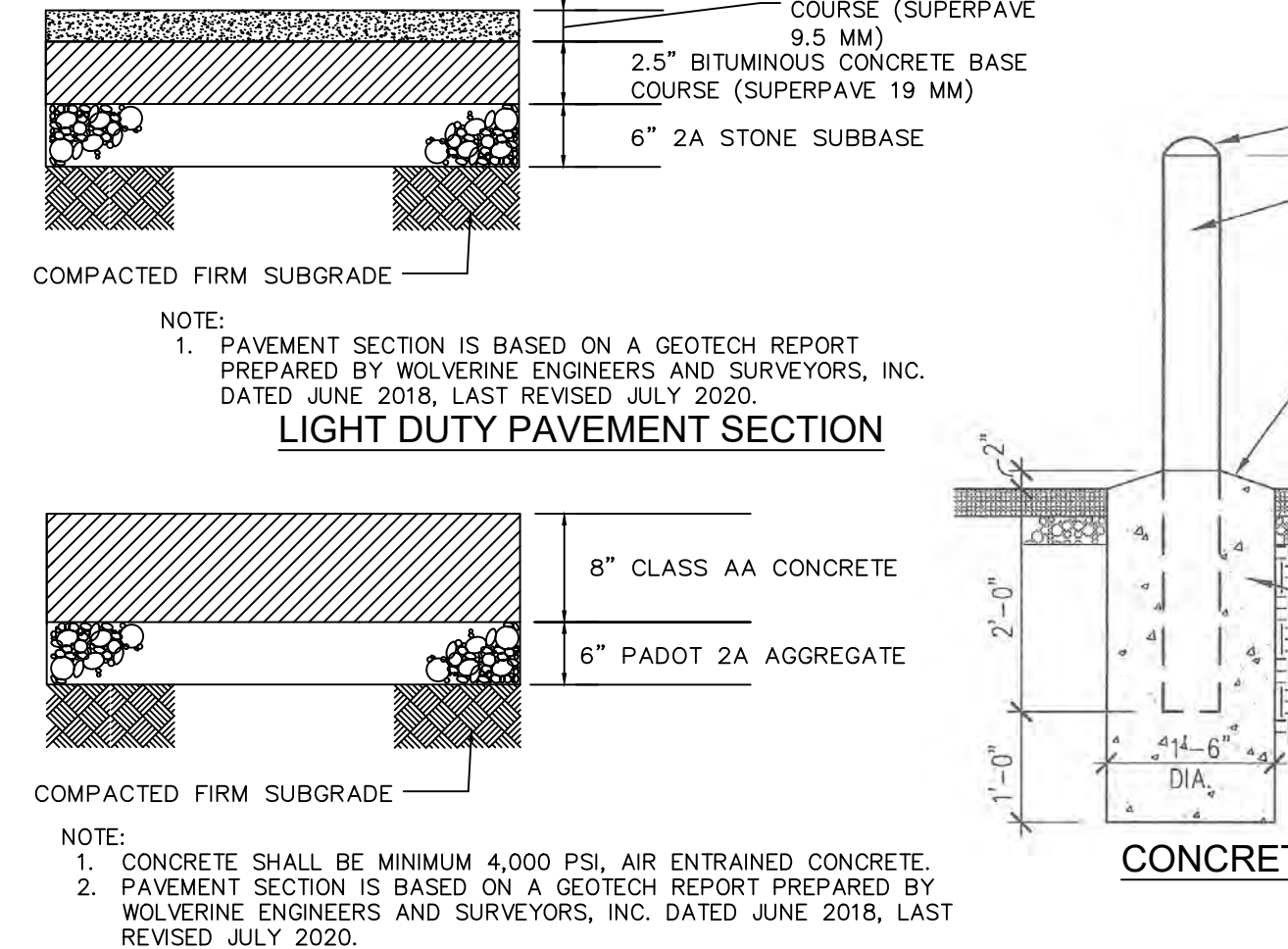
LS Model	Seal Element	Bolts/Nuts	Pressure Plate
C	EPDM (Black)	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
L	EPDM (Blue)	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
O	Nitrile	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
S	Silicone	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Steel Zinc Dichromate
(C,L,O)+S-316	(see model options)	316 Stainless Steel	Reinforced Nylon Polymer

For more Material Property Information, see literature at www.linkseal.com



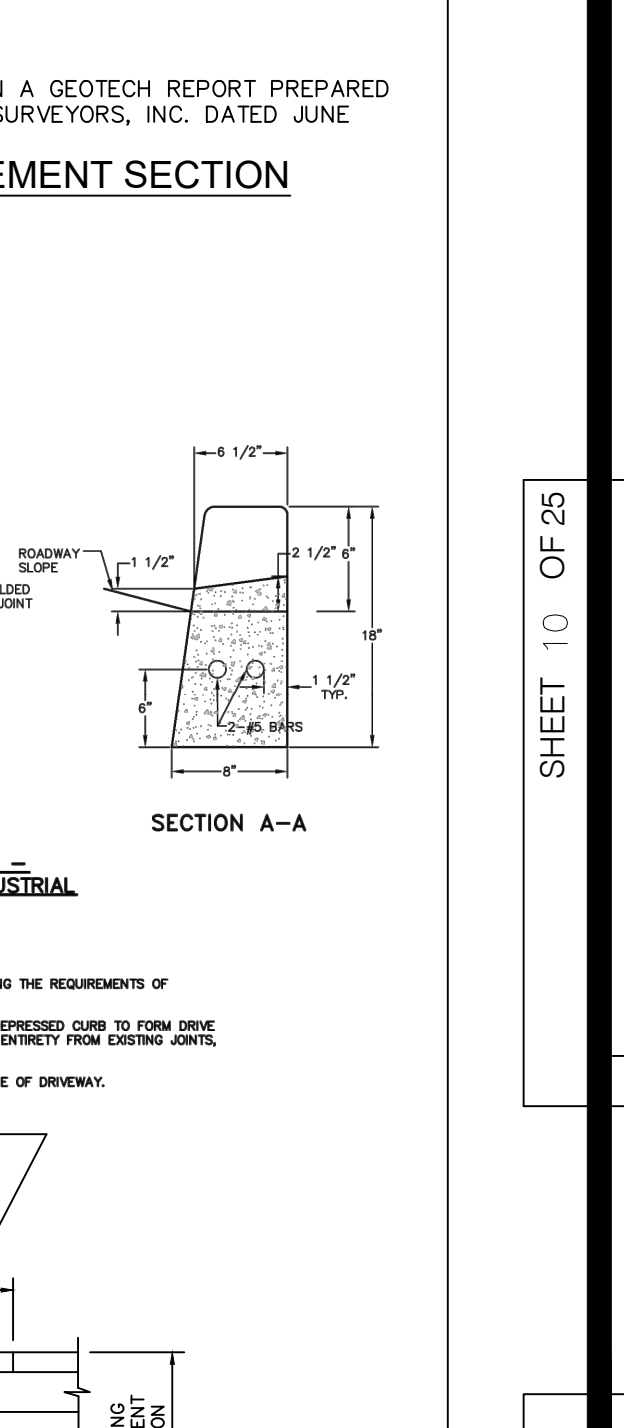
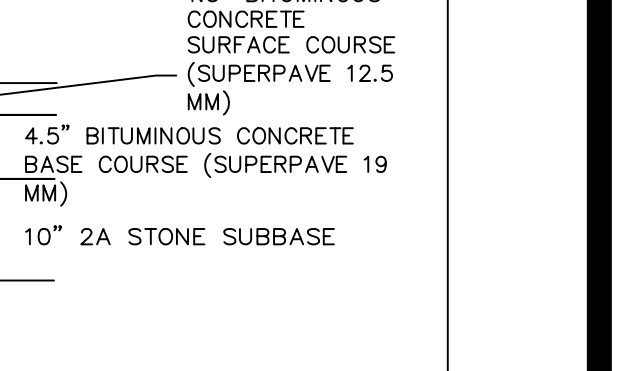
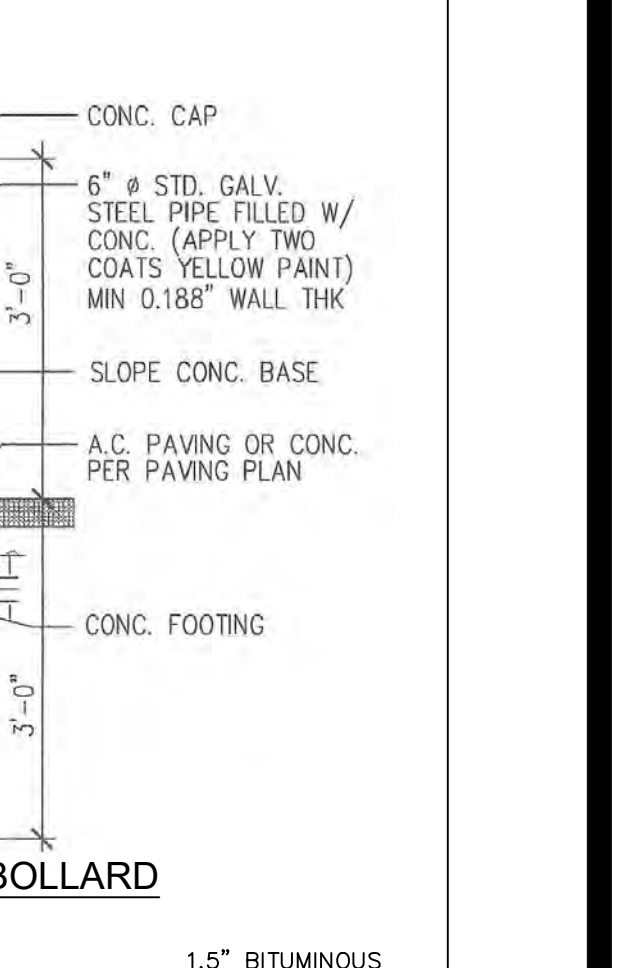
- ACCESSIBLE PARKING SPACES SHALL BE AT LEAST 96 INCHES WIDE, TWO ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS, PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE, PARKING SPACES AND ACCESS SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS.
- PARKING SPACES FOR VANS, ACCESS AISLES SERVING THEM, AND VEHICULAR ROUTES FROM AN ENTRANCE TO THE VAN PARKING SPACES, AND FROM THE VAN PARKING SPACES TO A VEHICULAR EXIT SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF 98 INCHES MINIMUM.
- CONTRACTOR SHALL REFER TO THE LATEST ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES TO ENSURE THAT DETAILS ARE CURRENT AT THE TIME OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF DISCREPANCIES ARE FOUND PRIOR TO COMMENCEMENT OF WORK.

CONCRETE END WALLS

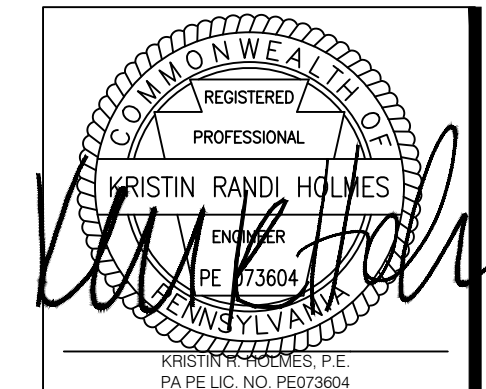


- PROVIDE MATERIAL AND CONSTRUCTION METHODS MEETING THE REQUIREMENTS OF PENNDOT SPECIFICATIONS, PUBLICATION 408.
- WHERE EXISTING FULL HEIGHT CURB IS REPLACED BY DEEPENED CURB TO FORM DRIVE APPROACH, THE FULL SECTION SHALL BE REMOVED IN ITS ENTIRETY FROM EXISTING JOINTS AND DEEPENED CURB REFINED AND POURED.
- CENTELINE OF CURB MUST CORRESPOND TO CENTERLINE OF DRIVEWAY.

CONCRETE BOLLARD



- PROVIDE MATERIAL AND CONSTRUCTION METHODS MEETING THE REQUIREMENTS OF PENNDOT SPECIFICATIONS, PUBLICATION 408.
- WHERE EXISTING FULL HEIGHT CURB IS REPLACED BY DEEPENED CURB TO FORM DRIVE APPROACH, THE FULL SECTION SHALL BE REMOVED IN ITS ENTIRETY FROM EXISTING JOINTS AND DEEPENED CURB REFINED AND POURED.
- CENTELINE OF CURB MUST CORRESPOND TO CENTERLINE OF DRIVEWAY.

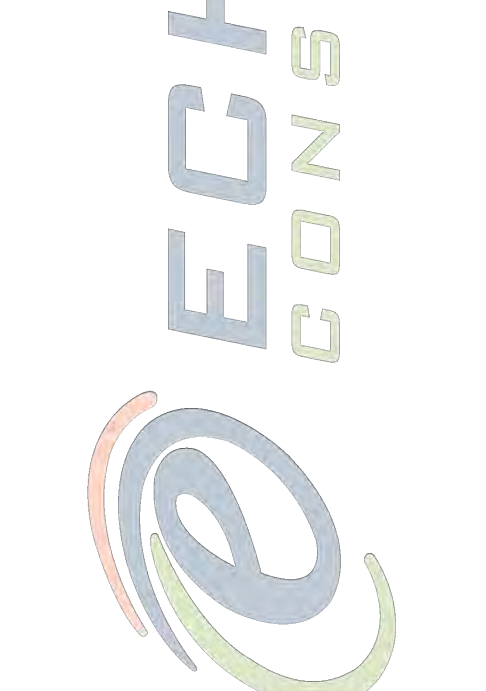


The Professional Engineers seal affixed to this sheet indicates that the named Engineer has prepared or checked the preparation of the material shown only on this sheet. Other drawings and documents not exhibiting this seal shall not be considered prepared by or the responsibility of the undersigned.

ARCHITECT:
ZWICK + GANDT
ARCHITECTURE, INC.
9109 Watson Road, Ste. 110
Saint Louis, MO 63126
info@zgwarch-stl.com
ph: 314-992-9292

STRUCTURAL:
ALPER AUDI, INC.
STRUCTURAL ENGINEERS
1804 Borman Circle Drive,
St. Louis, MO 63146
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CIVIL
HOLMES
CUNNINGHAM
ENGINEERING
409 E. BUTLER AVE, UNIT 5
DOYLESTOWN, PA 18901
ph: +1-215-586-3390



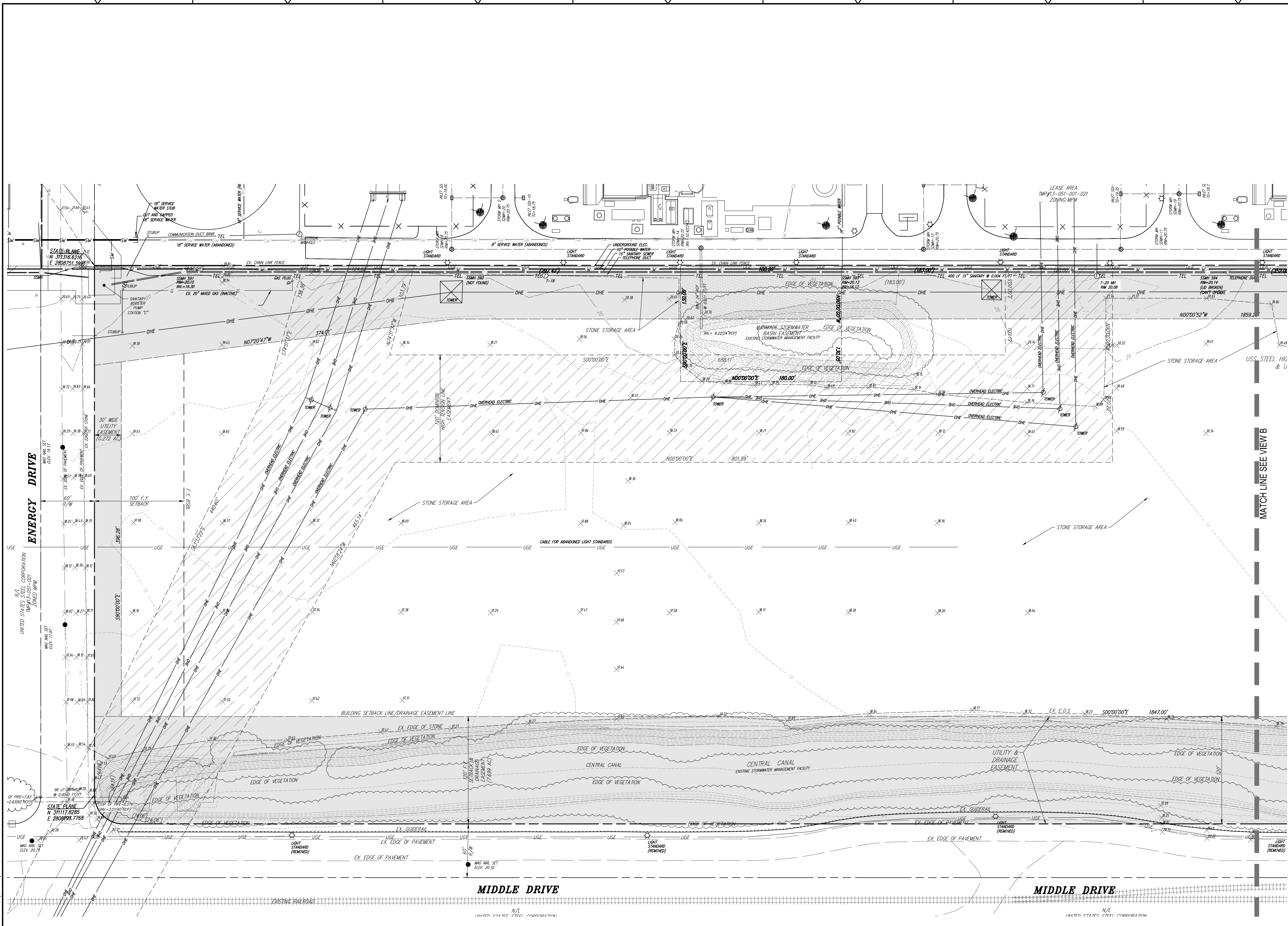
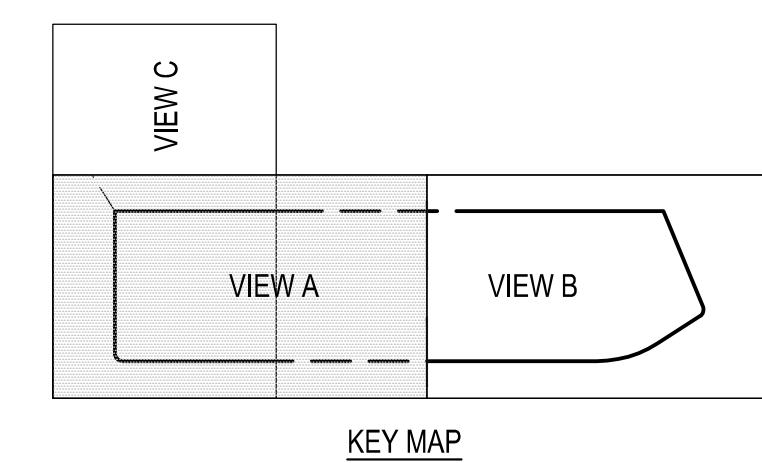
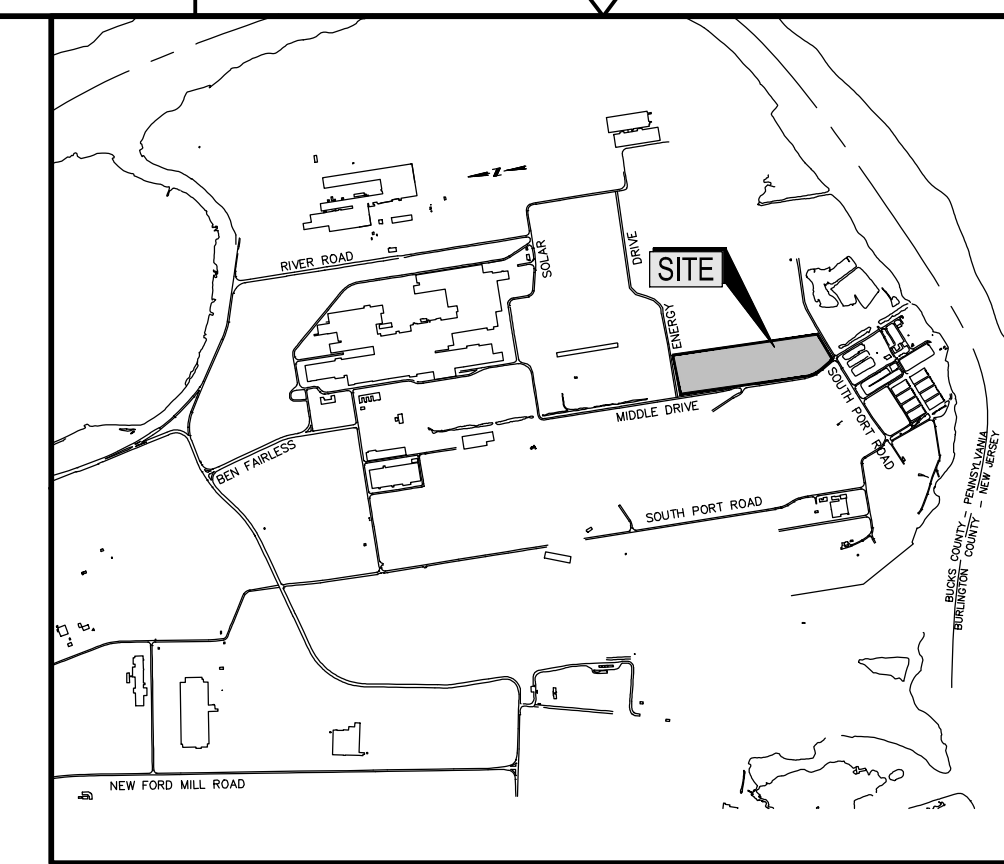
Airo Steel
PROGRESS DRIVE AND SOUTH STEEL ROAD
MORRISVILLE, PA 19067
TP# 13-047-166-001 & 13-047-166-002

NO.	DESCRIPTION	DATE
1	PROGRESS PLAN	3/16/20
2	LAND DEVELOPMENT SUBMISSION	3/24/20
3	BUILDING REVISIONS	5/11/20
4	BUILDING REVISIONS PROGRESS SET	6/22/20
5	LAND DEVELOPMENT RESUBMISSION	6/4/20
6	LAND DEVELOPMENT PROGRESS SET	7/13/20
7	LAND DEVELOPMENT RESUBMISSION	8/5/20

PROJECT NUMBER: 190-64.00 / HCE 1469

CONSTRUCTION
DETAILS

C2.3

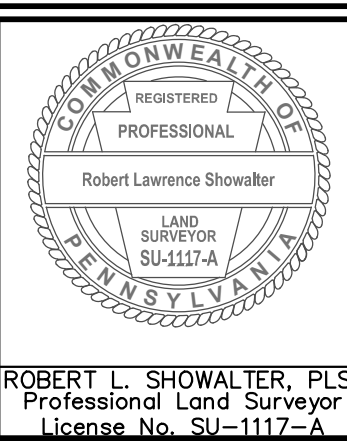


LEGEND

---	LEASE LINE	---	EXISTING ELECTRIC (UNDERGROUND)
- - -	ADJ. BOUNDARY	---	EXISTING GAS LINES
- - -	PROPERTY SETBACK LINE	---	EXISTING INDUSTRIAL WASTE LINES
- - -	EASEMENT	---	EXISTING SANITARY SEWER
.....	EXISTING SOILS	---	EXISTING STORM SEWER
○	MONUMENT FOUND	---	EXISTING TELECOM
---	EXISTING CONTOUR INDEX	---	EXISTING FIBER OPTICS
---	EXISTING CONTOUR INTERVAL	---	EXISTING WATER (FIRE SERVICE)
---		---	EXISTING WATER (POTABLE)
---		---	EXISTING WATER (SERVICES)
---		---	EXISTING COMPRESSED AIR
---		---	EXISTING STEAM
---		---	EXISTING OXYGEN
---		---	EXISTING HYDRANT

---	U/G	---	PROPOSED BASIN EASEMENT EXTENSION
---	---	---	EXISTING BASIN EASEMENT
---	---	---	EXISTING DOMINION HIGH TENSION LINE EASEMENT
---	---	---	EXISTING UTILITY AND DRAINAGE EASEMENT

EXISTING EASEMENTS AREA= 16.60 AC.
EASEMENTS COMPRISE 49% OF THE GROSS SITE AREA



REV. NO.	DATE	DRWN	CHKD	REMARKS

GRAPHIC SCALE
1 inch = 50 ft.

SADAT ASSOCIATES INC.
ENGINEERING & ENVIRONMENTAL SCIENCE
1545 LAMBERTON ROAD, TRENTON NJ 08611
(609) 826-9600 FAX (609) 826-9601

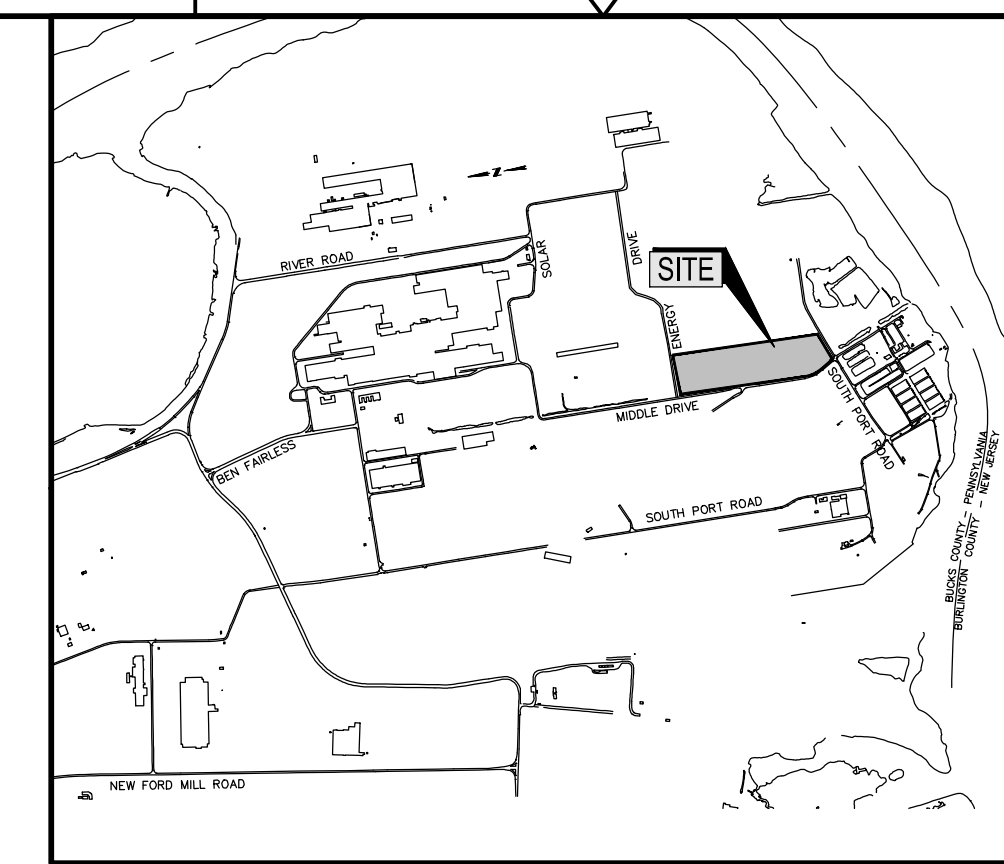
R. L. Showalter & Associates, Inc.
116 East Butler Avenue Chalfont, PA 18914
(215) 822-2990 FAX (215) 822-5684
• Engineering • Planning • Surveying •

PROJECT
EMPIRE SUNSHINE FIBER, LLC
KEYSTONE INDUSTRIAL PORT COMPLEX
FAIRLESS HILLS, BUCKS COUNTY, PA

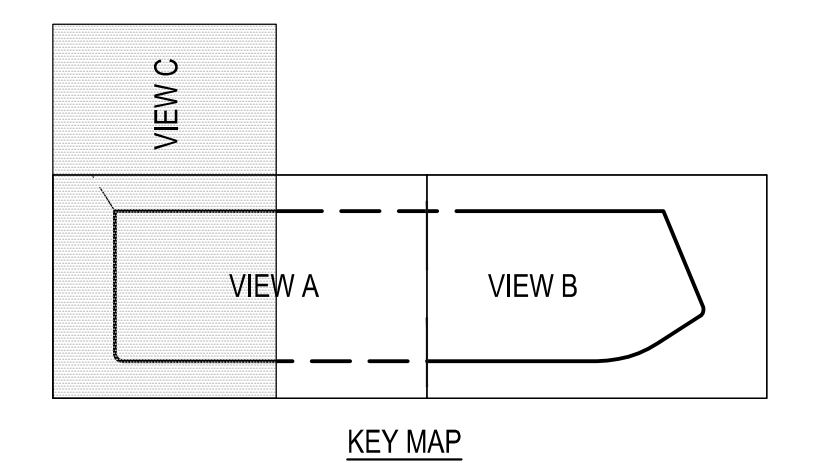
AMIRA FAHIM, Ph.D., P.E.
Professional Engineering License No. 061254

DESIGN BY RLB	CHECKED BY RLS	CERTIFICATE OF AUTHORIZATION No. 245A28015200
PROJ MGR RLB	STATUS <input checked="" type="checkbox"/> DRAFT <input type="checkbox"/> PRELIM <input type="checkbox"/> FINAL <input type="checkbox"/> CONSTRUCTION	
DRAWN BY JHS	DRAWING TITLE EXISTING FEATURES PLAN (VIEW A)	
DATE AUG 2020	(2 OF 4)	
SCALE 1"=50'	SHEET 3 OF 36	
JOB NO 2020-011	DRAWING NO.	REV.

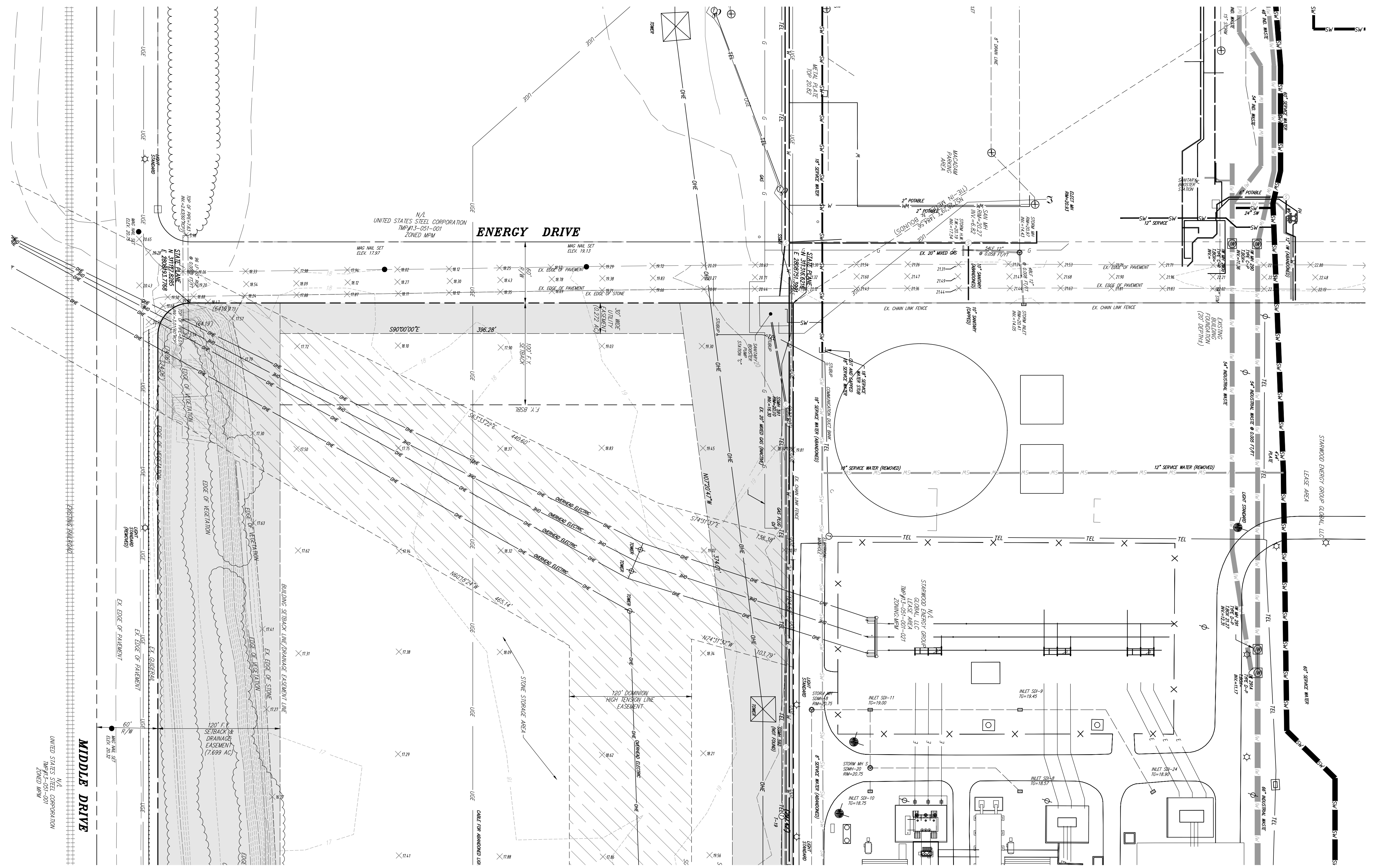
F:\DWG\2020\2020-011 - Saddat Associates\2020-011_Plan.dwg 2020-9-3
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LOCATION MAP
SCALE: 1"=3000'



KEY MAP



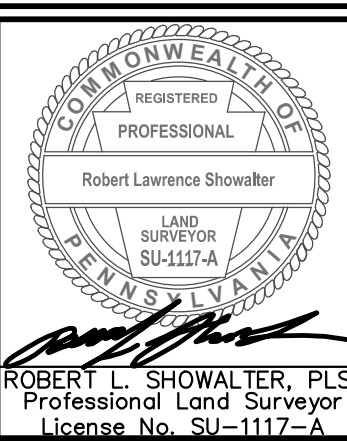
SEE VIEW A



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LEGEND	
	LEASE LINE
	ADJ. BOUNDARY
	PROPERTY SETBACK LINE
	EASEMENT
	EXISTING SOILS
	MONUMENT FOUND
	EXISTING CONTOUR INDEX
	EXISTING CONTOUR INTERVAL
	EXISTING ELECTRIC (OVERHEAD)
	EXISTING ELECTRIC (UNDERGROUND)
	EXISTING GAS LINES
	EXISTING INDUSTRIAL WASTE LINES
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING TELECOM
	EXISTING FIBER OPTICS
	EXISTING WATER (FIRE SERVICE)
	EXISTING WATER (POTABLE)
	EXISTING WATER (SERVICES)
	EXISTING COMPRESSED AIR
	EXISTING STEAM
	EXISTING OXYGEN
	EXISTING HYDRANT
	PROPOSED BASIN EASEMENT EXTENSION
	EXISTING BASIN EASEMENT
	EXISTING DOMINION HIGH TENSION LINE EASEMENT
	EXISTING UTILITY AND DRAINAGE EASEMENT

EXISTING EASEMENTS AREA= 16.60 AC.
EASEMENTS COMPRISE 49% OF THE GROSS SITE AREA



REV. NO.	DATE	DRWN	CHKD	REMARKS

GRAPHIC SCALE
1 inch = 50 ft.

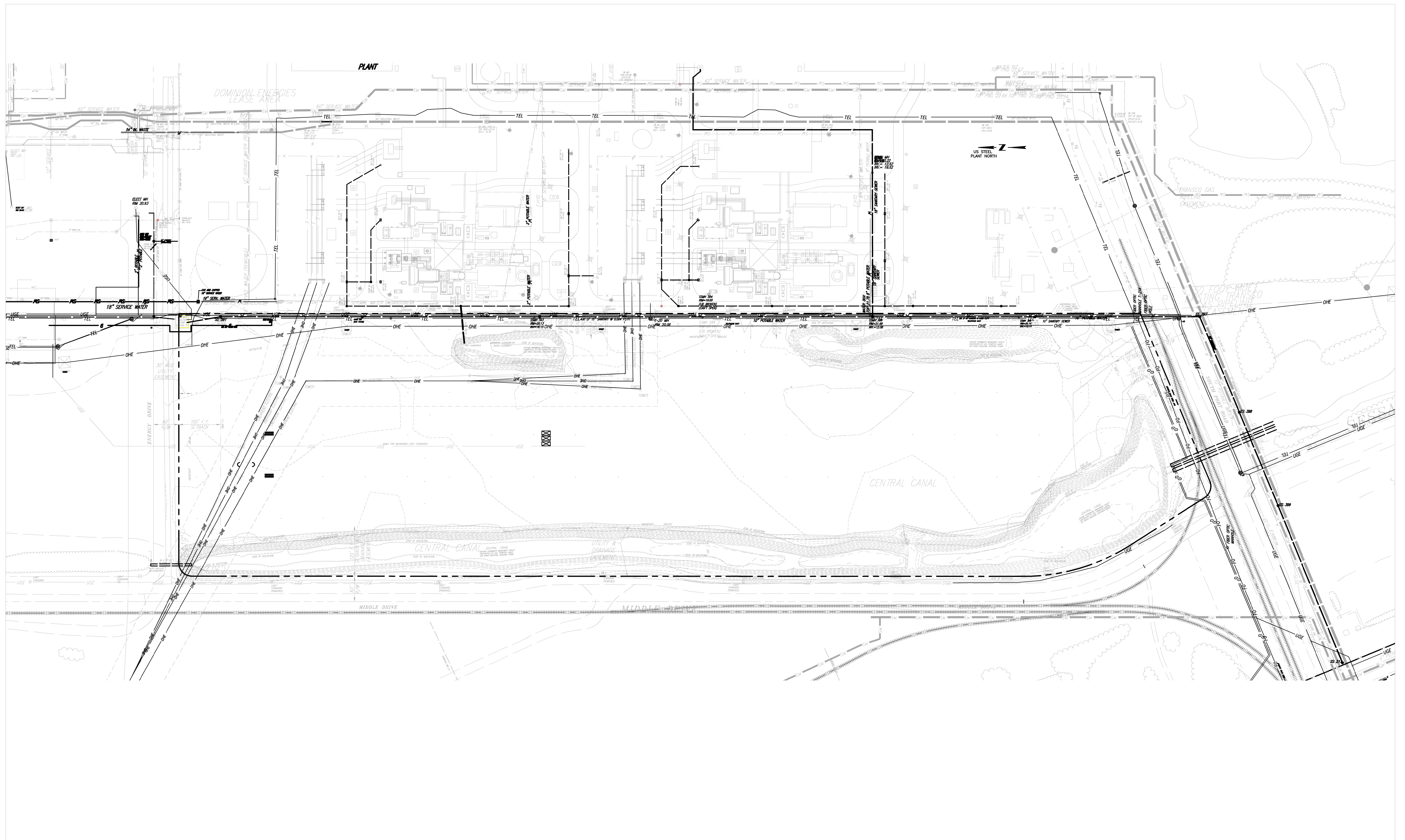
SADAT ASSOCIATES INC.
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R. L. Showalter & Associates, Inc.
116 East Butler Avenue Chalfont, PA 18914
(215) 822-2990 FAX (215) 822-5684
• Engineering • Planning • Surveying •

PROJECT	EMPIRE SUNSHINE FIBER, LLC KEYSTONE INDUSTRIAL PORT COMPLEX FAIRLESS HILLS, BUCKS COUNTY, PA
DESIGN BY	RLB
CHECKED BY	RLS
STATUS	(D) DRAFT (P) PRELIM (F) FINAL (C) CONSTRUCTION
DRAWN BY	JHS
DATE	AUG 2020
SCALE	1"=50'
AUTOCAD PATH	

CERTIFICATE OF AUTHORIZATION	NO. 245A28015200
EXISTING FEATURES PLAN (VIEW C)	(4 OF 4)
DRAWING NO.	2020-011
SHEET	5 OF 36

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LEGEND

- | | | | | | |
|-----------|---|---------|---------------------------------|--------|-------------------------------|
| — — — — — | PROPERTY LINE | — OHE — | EXISTING ELECTRIC (OVERHEAD) | — WS — | EXISTING WATER (FIRE SERVICE) |
| — — — — — | EXISTING MAJOR CONTOUR | — UGE — | EXISTING ELECTRIC (UNDERGROUND) | — W — | EXISTING WATER (POTABLE) |
| — — — — — | EXISTING MINOR CONTOUR | — G — | EXISTING GAS LINES | — SW — | EXISTING WATER (SERVICE) |
| — — — — — | EXISTING STORMWATER MANAGEMENT FACILITY | — SS — | EXISTING SANITARY SEWER | — H — | EXISTING HYDRANT |
| | | — TS — | EXISTING STORM SEWER | | |
| | | — TEL — | EXISTING TELECOMM | | |
| | | — FO — | EXISTING FIBER OPTICS | | |

REV. NO.	DATE	DRWN	CHKD	REMARKS

GRAPHIC SCALE

Scale: 1"=100'

SADAT ASSOCIATES INC.
ENGINEERING & ENVIRONMENTAL SCIENCE
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116 East Butler Avenue Chalfont, PA 18914
(215) 822-2990 FAX (215) 822-5684
• Engineering • Planning • Surveying •

PROJECT	EMPIRE SUNSHINE FIBER, LLC KEYSTONE INDUSTRIAL PORT COMPLEX FAIRLESS HILLS, BUCKS COUNTY, PA	
DESIGN BY	AF	CHECKED BY
PROJ MGR	LC	STATUS
DRAWN BY	PAB/JG	DRAWING TITLE
DATE	AUGUST 2020	EXISTING UTILITY PLAN
SCALE	1"=100'	
JOB NO	19007	DRAWING NO.
		UT-01
		SHEET
		6 OF 36
		REV.

CERTIFICATE OF AUTHORIZATION	NO. 240A28015200
AMIRA FAHIM, Ph.D., P.E.	Professional Engineering License No. 061254

OWNER'S CERTIFICATION OF INTENT
UNITED STATES STEEL CORPORATION

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
ON THIS _____ DAY OF _____ 20____
BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED _____ WHO ACKNOWLEDGED HIMSELF TO BE _____ OF UNITED STATES STEEL CORPORATION, _____ BEING AUTHORIZED TO DO SO, EXECUTED THE FOREGOING PLAN, AND DESIRES THAT THE FOREGOING PLAN BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL, THE DAY AND YEAR AFORESAID.

NOTARY PUBLIC
MY COMMISSION EXPIRES _____ DAY OF _____ 20____
(SEAL)

UNITED STATES STEEL CORPORATION
BY: _____
NAME: _____
TITLE: _____

RECORDER OF DEEDS NOTATION
RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS, IN BUCKS COUNTY, PENNSYLVANIA, IN
PLAN BOOK _____ PAGE _____ ON THE _____ DAY OF _____ 20____

BOARD OF SUPERVISORS OF FALLS TOWNSHIP

APPROVED BY THE BOARD OF SUPERVISORS OF FALLS TOWNSHIP,
THIS _____ DAY OF _____ 20____

CHAIRMAN _____ SECRETARY _____

PLANNING COMMISSION OF FALLS TOWNSHIP

APPROVED BY THE PLANNING COMMISSION OF FALLS TOWNSHIP,
THIS _____ DAY OF _____ 20____

CHAIRMAN _____ SECRETARY _____

TOWNSHIP ENGINEER'S REVIEW

REVIEWED BY THE FALLS TOWNSHIP ENGINEER
THIS _____ DAY OF _____ 20____

SIGNATURE _____

WETLAND CERTIFICATION:

I HEREBY CERTIFY THAT GHD CONDUCTED A WETLAND INVESTIGATION ON THIS PARCEL IN ACCORDANCE WITH THE METHODS OF THE CORPS OF ENGINEERS 1987 WETLAND DELINEATION MANUAL AND THAT THERE ARE NO WETLANDS PRESENT ON THIS PROPERTY TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SCOTT E. BUSH, PWS #1567 DATE _____
GHD

PROFESSIONAL ENGINEER CERTIFICATION

I, AMIRA FAHIM, PE-061254
(NAME OF PROFESSIONAL ENGINEER) (REGISTRATION NUMBER)

DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF THAT THE INFORMATION CONTAINED IN THE ACCOMPANYING PLANS, SPECIFICATIONS AND REPORTS, HAS BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE, IS TRUE AND CORRECT, AND IS IN CONFORMANCE WITH THE ZONING ORDINANCE AND THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE OF THE MUNICIPALITY AS LAST AMENDED.

SIGNATURE _____ DATE _____

STORMWATER MANAGEMENT LANDOWNER ACKNOWLEDGEMENT

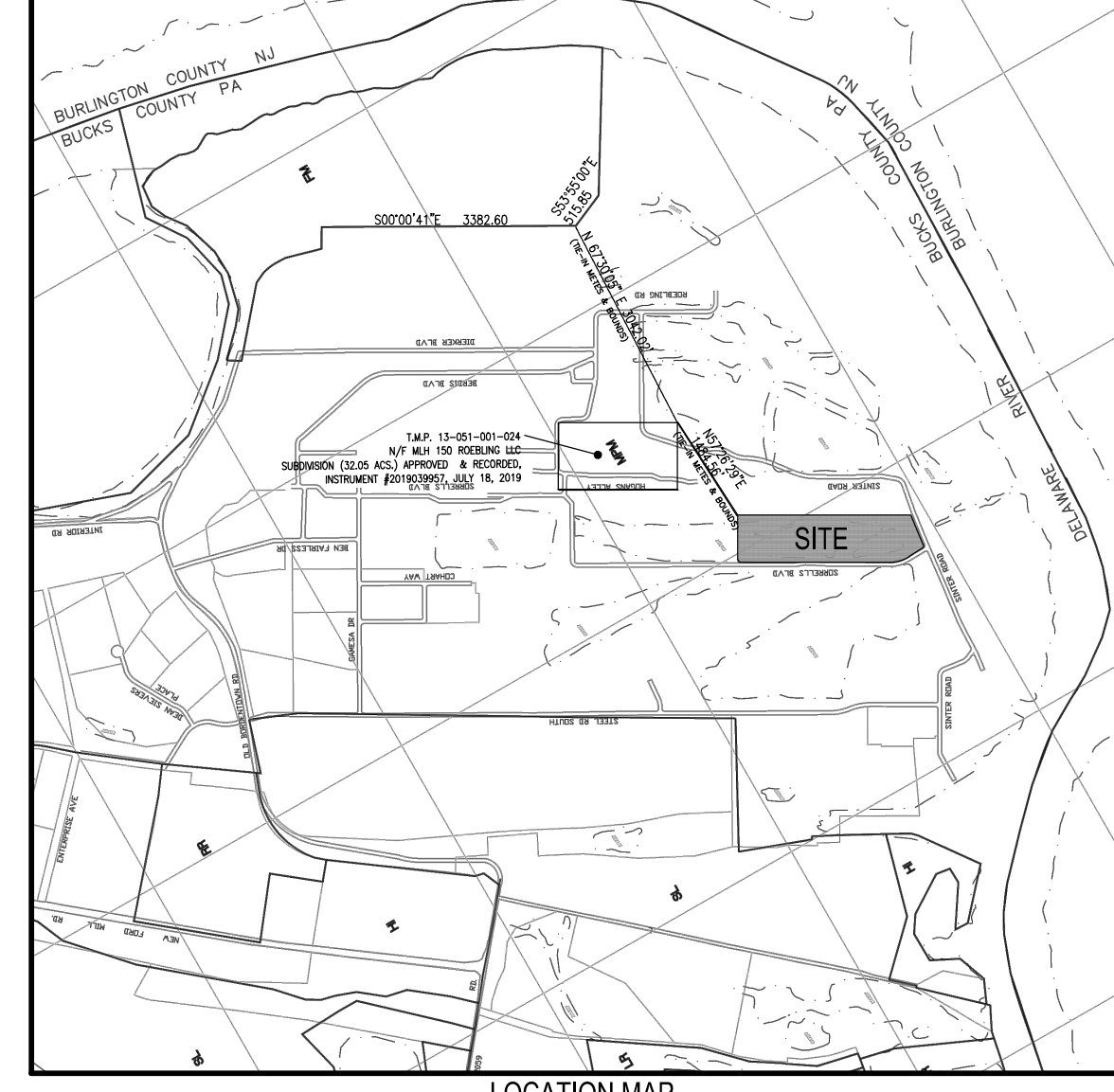
THE STORMWATER MANAGEMENT SYSTEM SHALL BE A PERMANENT FEATURE THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED PLAN BY THE TOWNSHIP OF FALLS. ANY REVISED PLAN SHALL BE RECORDED AND APPLICABLE TO ALL FUTURE LANDOWNERS.

BUCKS COUNTY PLANNING COMMISSION

B.C.P.C. FILE # 11143-J
PROCESSED AND REVIEWED. A REPORT HAS BEEN PREPARED BY THE BUCKS COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE.
CERTIFIED THIS DATE _____
EXECUTIVE DIRECTOR, BUCKS COUNTY PLANNING COMMISSION

GENERAL NOTES:

- BOUNDARY INFORMATION BASED ON SURVEY OF LANDS OF UNITED STATES STEEL CORPORATION, PERFORMED BY SHOWALTER AND ASSOCIATES IN 2006, 2007 & 2012. SEE LOCATION MAP. THE IN-RELATES THE EXISTING OVERALL PROPERTY BOUNDARY TO THE SUBJECT LEASED AREA. REFER TO THE MINOR SUBDIVISION PLAN, PREPARED BY R.L. SHOWALTER & ASSOCIATES, DATED FEBRUARY 26, 2014, LAST REVISED APRIL 30, 2014 (INSTRUMENT #2014026520).
- HORIZONTAL DATUM IS BASED ON UNITED STATES STEEL CORPORATION PLANT DATUM. NAD83 STATE PLANE REFERENCE: PLANT BEARING BASE IS ROTATED 1941'36" CLOCKWISE OF STATE PLANE COORDINATE BASE. (NAD83/00'D00"E = STATE PLANE BASE N70'18'24"E)
- ENERGY DRIVE AND MIDDLE DRIVE PRIVATE R/W ESTABLISHED ON MINOR SUBDIVISION PLAN PREPARED FOR USS REAL ESTATE DATED JUNE 28, 2007.
- THE VERTICAL DATUM ON THESE SUBJECT PLANS, AS PREPARED BY R.L. SHOWALTER & ASSOCIATES, INC., IS PER UNITED STATES STEEL CORPORATION PLANT DATUM, WHICH IS BASED ON NAD02'29. THE CONVERSION FROM NAD02'29 TO NAD83 IN THIS AREA IS (-0.91 FT) PER FEMA FIS NO.42017CVD00, REVISED MARCH 21, 2017.
- THE AREA ON THE SUBJECT PROPERTY PROPOSED FOR DEVELOPMENT IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA (100 YEAR FLOODPLAIN OR FLOODWAY) PER FEMA FIRM #20170488A, EFFECTIVE MARCH 16, 2015. THIS EFFECTIVE MAP IS BASED ON NAD83, BASE FLOOD ELEVATION = 13.0 FT. ELEVATIONS ON THIS SUBJECT PROPERTY ARE ABOVE ELEVATION 13.0 FT AFTER CONVERSION TO NAD83 DATUM. LOWER AREAS HAVE BEEN FOUND TO BE PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD BY LEAVES.
- WATER AND SEWER IS SUPPLIED BY UNITED STATES STEEL CORPORATION.
- ALL UTILITIES AND RAILROADS ARE OWNED BY UNITED STATES STEEL CORPORATION.
- A BLANKET EASEMENT IS PROVIDED FOR ACCESS TO AND MAINTENANCE OF THE EXISTING UTILITIES IN FAVOR OF UNITED STATES STEEL CORPORATION.
- A BLANKET EASEMENT IS PROVIDED FOR VEHICULAR CIRCULATION IN FAVOR OF THE LESSEE FOR ACCESS TO THE SURROUNDING ROADWAY NETWORK TO PERMIT ACCESS TO THE SUBJECT LEASE AREA.
- FIRE LINES ARE TO BE PROVIDED AS SHOWN BY EITHER FIRE LANE SIGNS OR MARKINGS AND SHALL BE MAINTAINED AT ALL TIMES AND REPLACED AS NECESSARY. TOWNSHIP FIRE MARSHALL TO BE CONSULTED FOR ADVICE PRIOR TO PLACEMENT.
- SHOP DRAWINGS ARE TO BE PROVIDED FOR ALL SITE IMPROVEMENTS PRIOR TO THE START OF CONSTRUCTION. CONSTRUCTION DETAILS SHALL COMPLY WITH THE FALLS TOWNSHIP DESIGN DETAILS AND PRACTICES, APPENDIX A OF CHAPTER 191 SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.
- THE STORMWATER MANAGEMENT FACILITIES WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER. FALLS TOWNSHIP SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT OR DRAINAGE FACILITY.
- PRIOR TO CONSTRUCTION, THE EXISTING STORMWATER FACILITIES WILL BE INSPECTED BY THE DESIGN ENGINEER TO ENSURE THAT THEY ARE PROPERLY FUNCTIONING AND ADEQUATE FOR THE PURPOSE OF COMPLYING WITH THE TOWNSHIP'S STORMWATER MANAGEMENT ORDINANCE AS RELATED TO THIS LAND DEVELOPMENT APPLICATION. SHOULD INSPECTION SHOW THAT THE EXISTING FACILITIES NEED MAINTENANCE OR REPAIRS, THE OWNER/RESPONSIBLE PARTY SHALL DO THE REQUIRED WORK TO THE SATISFACTION OF THE TOWNSHIP ENGINEER PRIOR TO CONSTRUCTION OF THE SITE IMPROVEMENTS SHOWN HEREON, OR AS DIRECTED BY THE TOWNSHIP ENGINEER. EXISTING STORM SEWERS ASSOCIATED WITH PROJECT SHALL BE INSPECTED DURING CONSTRUCTION AND ANY DEBRIS ENCOUNTERED SHALL BE REMOVED.
- SEWAGE FACILITIES PLANNING MODULE APPROVAL IS PENDING.
- ALL FILL MATERIAL BROUGHT ONTO THE SITE, OR RECLAIMED ON THE SITE, THAT IS PROPOSED FOR THE USE/REUSE AS PROJECT FILL IS SUBJECT TO APPROVAL BY THE FALLS TOWNSHIP ENGINEER. FILL MATERIAL SHALL BE FREE FROM LARGE STONES, FROZEN LUMPS, WOOD OR OTHER EXTRANEOUS MATERIAL LARGE ENOUGH TO INTERFERE WITH COMPACTION. ORGANIC FILL MATERIAL FROM EXCAVATION OR LOCAL SOURCE AS APPROVED BY THE TOWNSHIP ENGINEER, FILL LAYS SHALL BE UNIFORM AND SHOULD BE BETWEEN 4" TO 8" THICK. LAYERS SHALL BE PROPERLY COMPACTED TO MEET STANDARD SPECIFICATIONS FOR DENSITY AND MOISTURE CONTROL.
- THE CONSTRUCTION OF THE WASTE WATER TREATMENT PLANT AND PACKAGE BOILER CAN BE CONSTRUCTED ONLY IF COINCIDENT WITH OR AFTER CONSTRUCTION OF THE PRINCIPAL BUILDING.
- ALL SIGNS AND PAVEMENT MARKINGS, WHETHER ON-SITE OR OFF-SITE, MUST COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, MUTCD.



LOCATION MAP
SCALE: 1"=2400'

SITE DATA
TMP# 13-051-001
LEASE AREA = 33.62 ACRES
SITE LOCATION: MIDDLE DRIVE AND SOUTH PORT ROAD

EQUITABLE OWNER
UNITED STATES STEEL CORPORATION
600 GRANT STREET, ROOM 2477
PITTSBURGH, PA 15930

APPLICANT
EMPIRE SUNSHINE FIBER, LLC
KEYSTONE INDUSTRIAL PORT COMPLEX
ONE BEN FAIRLESS DRIVE
FAIRLESS HILLS, PA 19030

ZONING DATA
DISTRICT: MPV - MATERIALS PROCESSING & MANUFACTURING
PROPOSED USE: RECYCLE MARKET PULP MILL MANUFACTURING FACILITY (PERMITTED BY RIGHT)

	REQUIRED	EXISTING	PROPOSED
MIN. TRACT AREA:	50 AC.	33.62 AC.	33.62 AC.
MIN. LOT AREA:	5 AC.	33.62 AC.	33.62 AC.
MIN. LOT FRONTAGE:	100 FT.	431 FT.	431 FT.
MIN. LOT WIDTH:	100 FT.	2,309 FT.	2,309 FT.
MIN. LOT DEPTH:	200 FT.	624 FT.	624 FT.
MIN. FRONT YARD (F.Y.):	100 FT.	100 FT.	152 FT./390 FT./30 FT.*
MIN. SIDE YARD (S.Y.):	20 FT.	20 FT.	-
MIN. REAR YARD (R.Y.):	20 FT.	60 FT.	108.6 FT.
MAX. BUILDING HEIGHT:	N/A	N/A	N/A
MAX. BUILDING COVERAGE:	40%	40%	20.4%
MAX. IMPERVIOUS SURFACE RATIO:	80%	62.4%	57.2%

*ZONING VARIANCE GRANTED 7/14/2020 TO REDUCE THE FRONT YARD SETBACK ON ENERGY DRIVE TO 30 FT AND TO PERMIT ACCESSORY STRUCTURES IN THE FRONT YARD SETBACK.

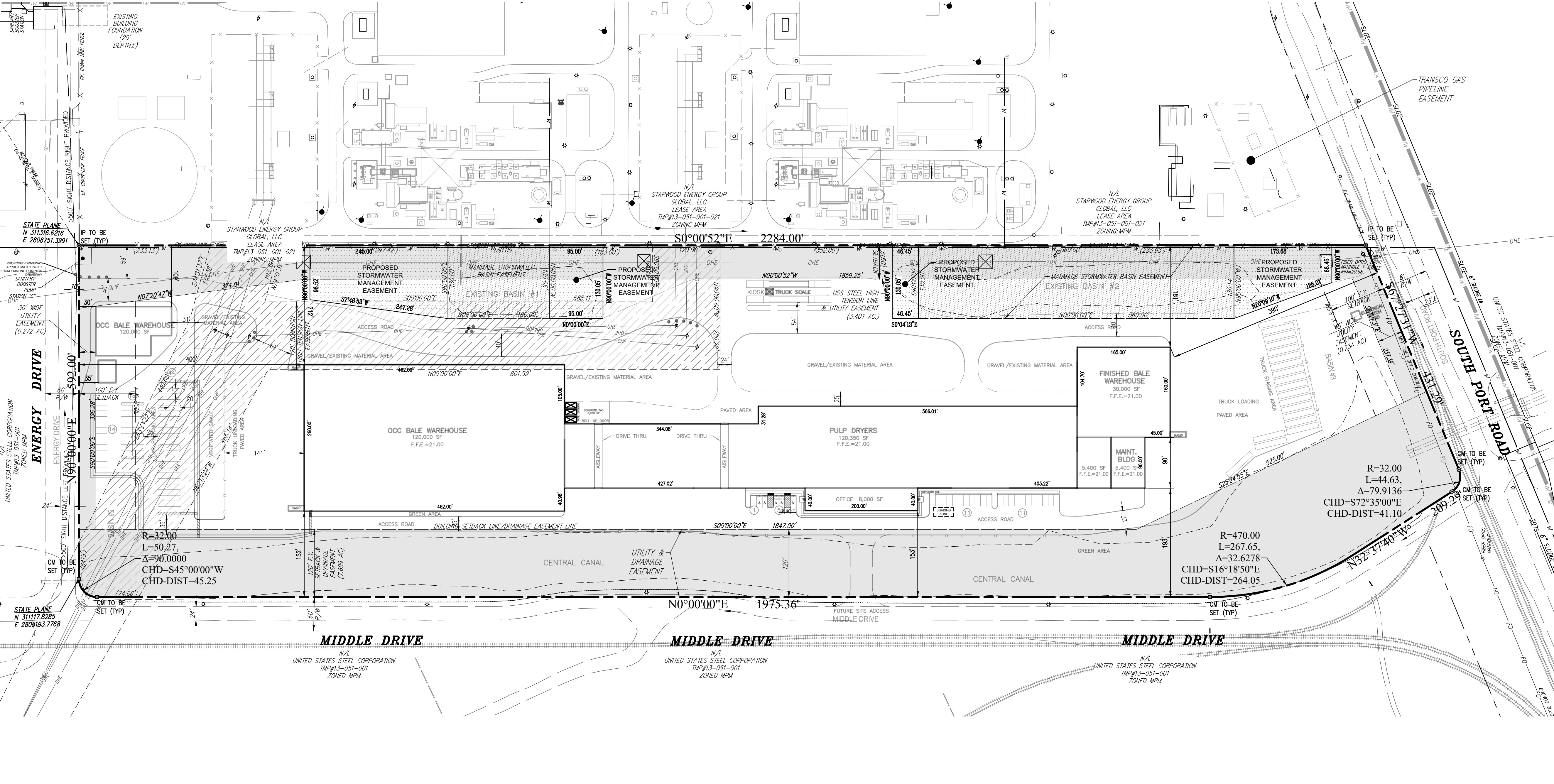
PARKING SUMMARY

- PROPOSED NUMBER OF EMPLOYEES: 100
- PROPOSED PARKING: 125 (25% OVER-LARGEST SHIFT (65*1.25=81) 2 PER MANAGERIAL PERSONNEL (2*2=4) 1 PER BUSINESS RELATED VEHICLE (1) TOTAL REQUIRED = 81 + 4 + 1 = 86 SPACES
- REQUIRED PARKING: 101 STANDARD 5 ADA 106 TOTAL SPACES

IMPERVIOUS SURFACE COVERAGE TABLE

DESCRIPTION	EXISTING	EXIST. (TBR)	EXIST. (TO REMAIN)	PROPOSED	TOTAL POST DEV.
BLDG (SF)	0	0	0	298,976	298,976
ASPHALT (SF)	0	0	0	405,123	405,123
CONCRETE (SF)	0	0	0	9,472	9,472
STONE (SF)	913,810	913,810	0	123,900	123,900
TOTALS (SF)	913,810	913,810	0	837,471	837,471
TOTALS (AC)	20.978	20.978	0.000	19.226	19.226
LOT AREA (AC)	33.62				33.62
IMPERV. (%)	62.4%				57.2%
BLDG COV. (%)	0.0%				20.4%

- WAIVERS REQUESTED:**
- SECTION 191-11(A) FROM INSTALLING CURBING AND FROM WIDENING THE EXISTING CARTWAY WIDTHS (24') TO THE REQUIRED CARTWAY WIDTHS FOR MIDDLE DRIVE (36'), ENERGY DRIVE (36'), AND SOUTH PORT ROAD (40'). CURBING WILL BE INSTALLED WHERE NEEDED FOR STORMWATER AND PEDESTRIAN SAFETY TO THE SATISFACTION OF THE TOWNSHIP ENGINEER.
 - SECTION 191-36(D) PARTIAL WAIVER FROM INSTALLING CURBING ALONG ALL PROPOSED DRIVEWAYS ON-SITE. CURBING WILL BE INSTALLED WHERE NEEDED FOR STORMWATER AND PEDESTRIAN SAFETY TO THE SATISFACTION OF THE TOWNSHIP ENGINEER.
 - SECTION 191-37(B) FROM OFF-STREET PARKING REQUIREMENTS, TO PERMIT NO CURBING AROUND PARKING AREAS NOT IMMEDIATELY ADJACENT TO THE BUILDING, TO PERMIT VEHICLE PARKING SPACES TO BE LOCATED 10 FT FROM THE PROPOSED BUILDING, WHERE 15 FT IS REQUIRED. CURBING WILL BE INSTALLED WHERE NEEDED FOR STORMWATER AND PEDESTRIAN SAFETY TO THE SATISFACTION OF THE TOWNSHIP ENGINEER.
 - SECTION 191-37(C)(1) FROM THE REQUIREMENT THAT ALL PLANTING ISLANDS BE CURBED. CURBING WILL BE INSTALLED WHERE NEEDED FOR STORMWATER AND PEDESTRIAN SAFETY TO THE SATISFACTION OF THE TOWNSHIP ENGINEER.
 - SECTION 191-37(C)(2) FROM THE REQUIREMENT TO INSTALL ONE SHADE TREE PER PLANTING ISLAND
 - SECTION 191-37(C)(4) FROM THE REQUIREMENT TO PROVIDE PARKING AREA LANDSCAPING
 - SECTION 191-44(0) TO PERMIT TOP OR BOTTOM OF SLOPES TO BE WITHIN 5 FEET OF PROPERTY LINES DUE TO THE GRADING IMPROVEMENTS ADJACENT TO THE PROPOSED LEASE AREA.
 - SECTION 191-46(C). A WAIVER IS REQUESTED TO PERMIT PERMANENT STRUCTURES TO BE LOCATED PARTIALLY WITHIN EXISTING EASEMENT AREAS, PROVIDED THAT THE REQUIRED DISTANCES FROM UTILITY LINES ARE MAINTAINED AND PERMISSION IS GRANTED FROM EASEMENT OWNER.
 - SECTION 191-48(A) FROM PLANTING THE REQUIRED STREET TREES ALONG THE EXISTING RIGHTS-OF-WAY.
 - SECTION 191-52.1 TO PERMIT DISTURBANCE TO WOODLANDS AND STEEP SLOPES IN EXCESS IN WHAT IS PERMITTED DUE TO GRADING IMPROVEMENTS TO THE EXISTING STORMWATER BASINS. THE "STEEP SLOPES" ARE MANMADE BASIN SIDE SLOPES AND THE "WOODLANDS" ARE EXISTING BASIN VEGETATION.
 - SECTION 191-62(B). FROM THE REQUIREMENT TO INSTALL CURBING AND CARTWAY WIDENING ALONG EXISTING ENERGY DRIVE, MIDDLE DRIVE AND SOUTH PORT ROAD.
 - SECTION 191-78(C)(2) PARTIAL WAIVER FROM THE REQUIREMENT TO PROVIDE DETAILED EXISTING FEATURES OF THE SURROUNDING AREA WITHIN 200 FT OF ANY PORTION OF THE PROPERTY. DETAILS ON EXISTING UTILITIES WILL BE PROVIDED TO THE SATISFACTION OF THE TOWNSHIP ENGINEER.

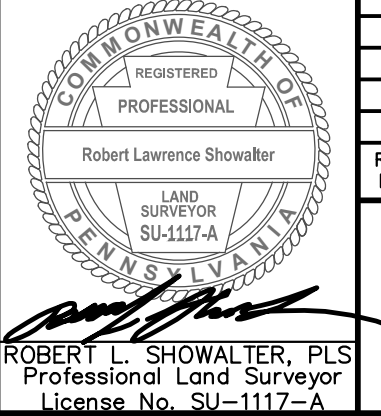


LEGEND

--- LEASE LINE	--- EXISTING ELECTRIC (UNDERGROUND)	--- EXISTING GAS LINES	--- PROPOSED BASIN EASEMENT EXTENSION
--- ADJ. BOUNDARY	--- EXISTING INDUSTRIAL WASTE LINES	--- EXISTING SANITARY SEWER	--- EXISTING BASIN EASEMENT
--- PROPERTY SETBACK LINE	--- EXISTING STORM SEWER	--- EXISTING TELEPHONE	--- EXISTING DOMINION HIGH TENSION LINE EASEMENT
--- EASEMENT	--- EXISTING FIBER OPTICS	--- EXISTING COMPRESSED AIR	--- EXISTING UTILITY AND DRAINAGE EASEMENT
--- EXISTING SOILS	--- EXISTING WATER (FIRE SERVICE)	--- EXISTING STEAM	--- EXISTING EASEMENTS AREA= 16.60 AC.
--- MONUMENT FOUND	--- EXISTING WATER (POTABLE)	--- EXISTING OXYGEN	--- EASEMENTS COMPRISE 49% OF THE GROSS SITE AREA
--- EXISTING CONTOUR INDEX	--- EXISTING WATER (SERVICES)	--- EXISTING HYDRANT	
--- EXISTING CONTOUR INTERVAL	--- EXISTING COMPRESSED AIR		
---	--- EXISTING STEAM		
---	--- EXISTING OXYGEN		
---	--- EXISTING ELECTRIC (OVERHEAD)		

REV. NO.	DATE	DRWN	CHKD	REMARKS

GRAPHIC SCALE: 1 inch = 100 ft.



SADAT ASSOCIATES INC.
ENGINEERING & ENVIRONMENTAL SCIENCE
1545 LAMBERTON ROAD, TRENTON NJ 08611
(609) 826-9600 FAX (609) 826-9601

R. L. Showalter & Associates, Inc.
116 East Butler Avenue Chalfont, PA 18914
(215) 822-2990 FAX (215) 822-5684
• Engineering • Planning • Surveying •

PROJECT
EMPIRE SUNSHINE FIBER, LLC
KEYSTONE INDUSTRIAL PORT COMPLEX
FAIRLESS HILLS, BUCKS COUNTY, PA

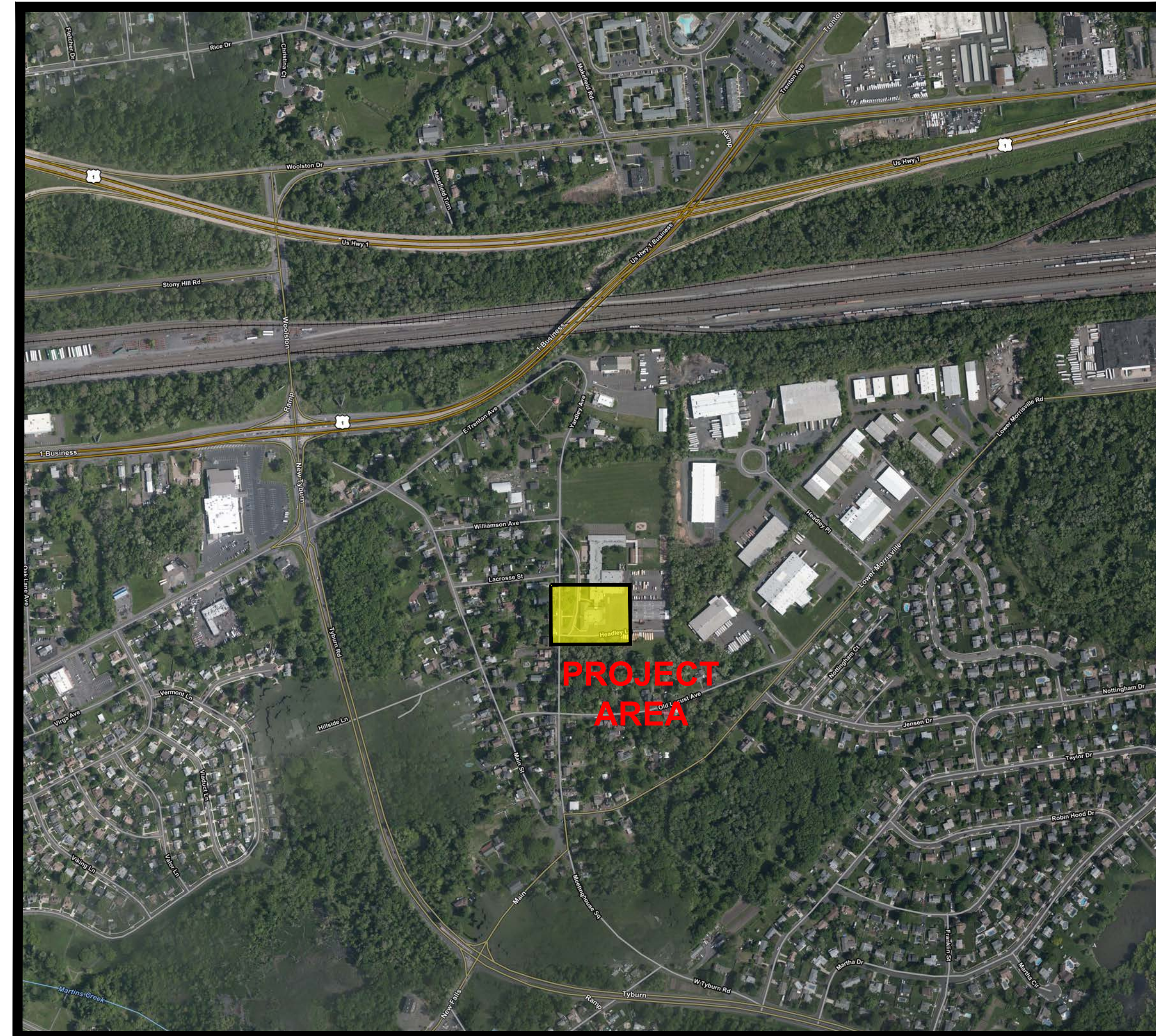
AMIRA FAHIM, Ph.D., P.E.
Professional Engineering License No. 061254

DESIGN BY RJB	CHECKED BY RLS	CERTIFICATE OF AUTHORIZATION No. 249428019200
PROJ MGR RJB	STATUS (D) DRAFT (P) PRELIM (F) FINAL (C) CONSTRUCTION	
DRAWN BY JHS	DRAWING TITLE LAND DEVELOPMENT PLAN (OVERALL)	
DATE AUG 2020	SCALE 1"=100'	(RECORD SHEET)
JOB NO 2020-011	DRAWING NO.	SHEET 7 OF 36

ADMINISTRATION BUILDING ELEVATOR LOBBY ADDITION PRELIMINARY/FINAL LAND DEVELOPMENT

LIST OF UTILITIES AND EMERGENCY CONTACT INFORMATION	
SEWER:	TOWNSHIP OF FALLS AUTHORITY 557 LINCOLN HIGHWAY FAIRLESS HILLS, PA 19030 215-946-6062
WATER:	TOWNSHIP OF FALLS AUTHORITY 557 LINCOLN HIGHWAY FAIRLESS HILLS, PA 19030 215-946-6062
ELECTRIC:	PECO ENERGY C/O STS LLC 3628 HORIZON DRIVE KING OF PRUSSIA, PA 19406
CABLE:	COMCAST CABLEVISION 55 INDUSTRIAL DRIVE IVYLAND, PA 18974
GAS:	PECO ENERGY C/O STS LLC 3628 HORIZON DRIVE KING OF PRUSSIA, PA 19406
TELEPHONE:	VERIZON PENNSYLVANIA INC. 1350 WELSH ROAD NORTH WALES, PA 19454

SHEET INDEX	
SHEET #	DESCRIPTION
1	TITLE SHEET
2	LEGEND
3	GENERAL NOTES
4	RECORD PLAN
5	TOPOGRAPHIC SURVEY PLAN
6	EXISTING CONDITIONS & DEMOLITION PLAN
7	SITE LAYOUT PLAN
8	GRADING PLAN
9	LANDSCAPE PLAN
10	CONSTRUCTION DETAILS
11	EROSION & SEDIMENT CONTROL PLAN
12	EROSION & SEDIMENT CONTROL NOTES
13	EROSION & SEDIMENT CONTROL DETAILS
14	PCSM PLAN
15	PCSM NOTES



PROJECT LOCATION MAP

SCALE: 1" = 500'

FALLS TOWNSHIP BUCKS COUNTY, PENNSYLVANIA

JULY 2020

ARCHITECT:
BONNETT ASSOCIATES, INC.
1510 CHESTER PIKE
220 BALDWIN TOWER
EDDYSTONE, PA 19022
610-447-1200

PA ONE - CALL SYSTEM



It is the responsibility of the contractor to contact the appropriate utility companies to determine the location of all underground utilities before any excavation work begins. Please call 1-800-252-1716 for more information. SERIAL # 20200991906

OWNER'S STATEMENT

I, THE UNDERSIGNED, HEREBY CERTIFY THAT I AM THE LAWFUL REPRESENTATIVE OF THE REGISTERED LAND OWNER OF THE PROPERTY DESCRIBED ON THIS PLAN, THAT MY CONSENT TO THE APPROVAL OF THIS PLAN HAS BEEN GRANTED, AND I DESIRE THE SAME TO BE RECORDED.

PENNSBURY SCHOOL DISTRICT

COMMONWEALTH OF PENNSYLVANIA:

SS.

COUNTY OF BUCKS

ON THIS _____ DAY OF _____, BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN BUCKS COUNTY, PERSONALLY APPEARED _____, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING PLAN, AND ACKNOWLEDGE THAT HE IS THE LAWFUL REPRESENTATIVE OF THE OWNER OF THE DESIGNATED LAND, THAT ALL NECESSARY PLAN APPROVALS HAVE BEEN OBTAINED AND IS ENDORSED THEREON, AND DESIRE THAT THE FOREGOING PLAN BE RECORDED ACCORDING TO LAW. WITNESS MY HAND AND NOTARIAL SEAL, THE DAY AND YEAR AFORESAID.

NOTARY PUBLIC

MY COMMISSION EXPIRES _____

(SEAL)

PLAN PREPARER'S STATEMENT

I, CHRISTOPHER J. FAZIO, P.E., HEREBY STATE THAT I AM A REGISTERED ENGINEER IN THE STATE OF PENNSYLVANIA, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA.

CHRISTOPHER J. FAZIO, P.E. (PE-0055338-E)

DESIGN ENGINEER'S STORMWATER CERTIFICATION

I, CHRISTOPHER J. FAZIO, P.E., ON THIS DATE _____ HEREBY CERTIFY THAT THE SWM PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE FALLS TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

CHRISTOPHER J. FAZIO, P.E. (PE-0055338-E)

SURVEYOR'S STATEMENT

I, JAMES R. WATSON, P.L.S., HEREBY STATE THAT THE SURVEY USED AS THE BASIS FOR THIS PLAN REPRESENTS MY WORK, THAT THE MONUMENTS/PINS SHOWN THEREON EXIST AS LOCATED, THAT THE DIMENSIONAL AND GEODETIC DETAILS ARE CORRECT, AND THAT THE SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH THE PENNSYLVANIA ENGINEERS REGISTRATION LAW, P.L. 913, NO. 367.

JAMES R. WATSON, P.L.S. (SU-1124-A)

TOWNSHIP BOARD OF COMMISSIONERS APPROVAL

APPROVED BY THE COMMISSIONERS OF THE TOWNSHIP OF FALLS, BUCKS COUNTY, PENNSYLVANIA, ON THE _____ DAY OF _____

PRESIDENT, TOWNSHIP BOARD OF COMMISSIONERS

TOWNSHIP PLANNING COMMISSION RECOMMENDATION

RECOMMENDED FOR APPROVAL BY THE PLANNING COMMISSION OF THE TOWNSHIP OF FALLS, BUCKS COUNTY, PENNSYLVANIA.

CHAIR, TOWNSHIP PLANNING COMMISSION

TOWNSHIP ENGINEER REVIEW

REVIEWED BY THE ENGINEER FOR FALLS TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA.

TOWNSHIP ENGINEER

COUNTY PLANNING COMMISSION RECOMMENDATION

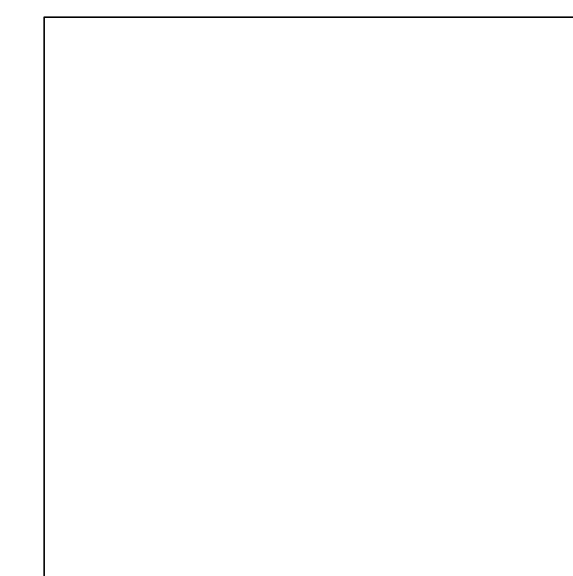
REVIEWED BY THE PLANNING COMMISSION OF BUCKS COUNTY, PENNSYLVANIA.

CHAIR, COUNTY PLANNING COMMISSION

STORMWATER STATEMENT

ANY REVISIONS TO THE STORMWATER MANAGEMENT PLAN MUST BE APPROVED BY THE TOWNSHIP.

PENNSBURY SCHOOL DISTRICT



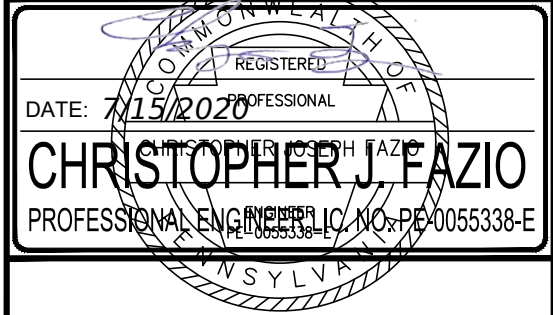
BUCKS COUNTY PLANNING COMMISSION



**REMINGTON
& VERNICK
ENGINEERS**

922 FAYETTE STREET
CONSHOHOCKEN, PA 19428
(610) 940-1050, FAX (610) 940-1161
WEB SITE ADDRESS : WWW.RVE.COM

-ENGINEERING EXCELLENCE-



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NO.	DATE	BY	CHK	REVISION	
				NO.	DATE

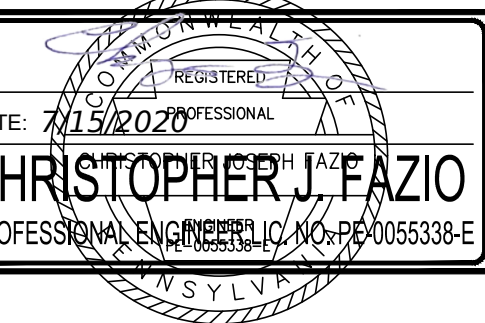
TITLE SHEET
PENNSBURY SCHOOL DISTRICT
ADMINISTRATION BUILDING
ELEVATOR LOBBY ADDITION
BUCKS COUNTY
FALLS TOWNSHIP
PENNSYLVANIA

DRAWN BY	DESIGN BY	CHECKED BY	SCALE
JMB	LMC	CJF	AS NOTED
DATE			SHEET No.
7/15/2020			1 of 15
JOB No.:			P081X010



1901
REMINGTON & VERNICK ENGINEERS

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 -ENGINEERING EXCELLENCE-



DATE: 7/15/2020
CHRISTOPHER M. FAZIO
 PROFESSIONAL ENGINEER, No. PE0055338-E

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NO.	REVISION	DATE	BY	CHK

RECORD PLAN
 PENNSBURY SCHOOL DISTRICT
ADMINISTRATION BUILDING
ELEVATOR LOBBY ADDITION
 FALLS TOWNSHIP
 BUCKS COUNTY
 PENNSYLVANIA

DRAWN BY	DESIGN BY	CHECKED BY	SCALE
JMB	LMC	CJF	AS NOTED
DATE	SHEET No.		
7/15/2020	4 of 15		
JOB No.	P081X010		

APPLICANT

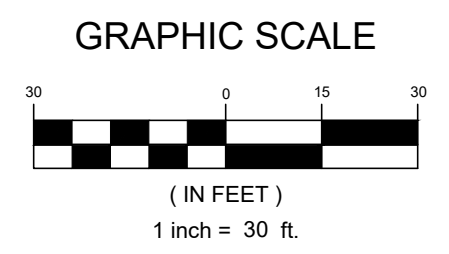
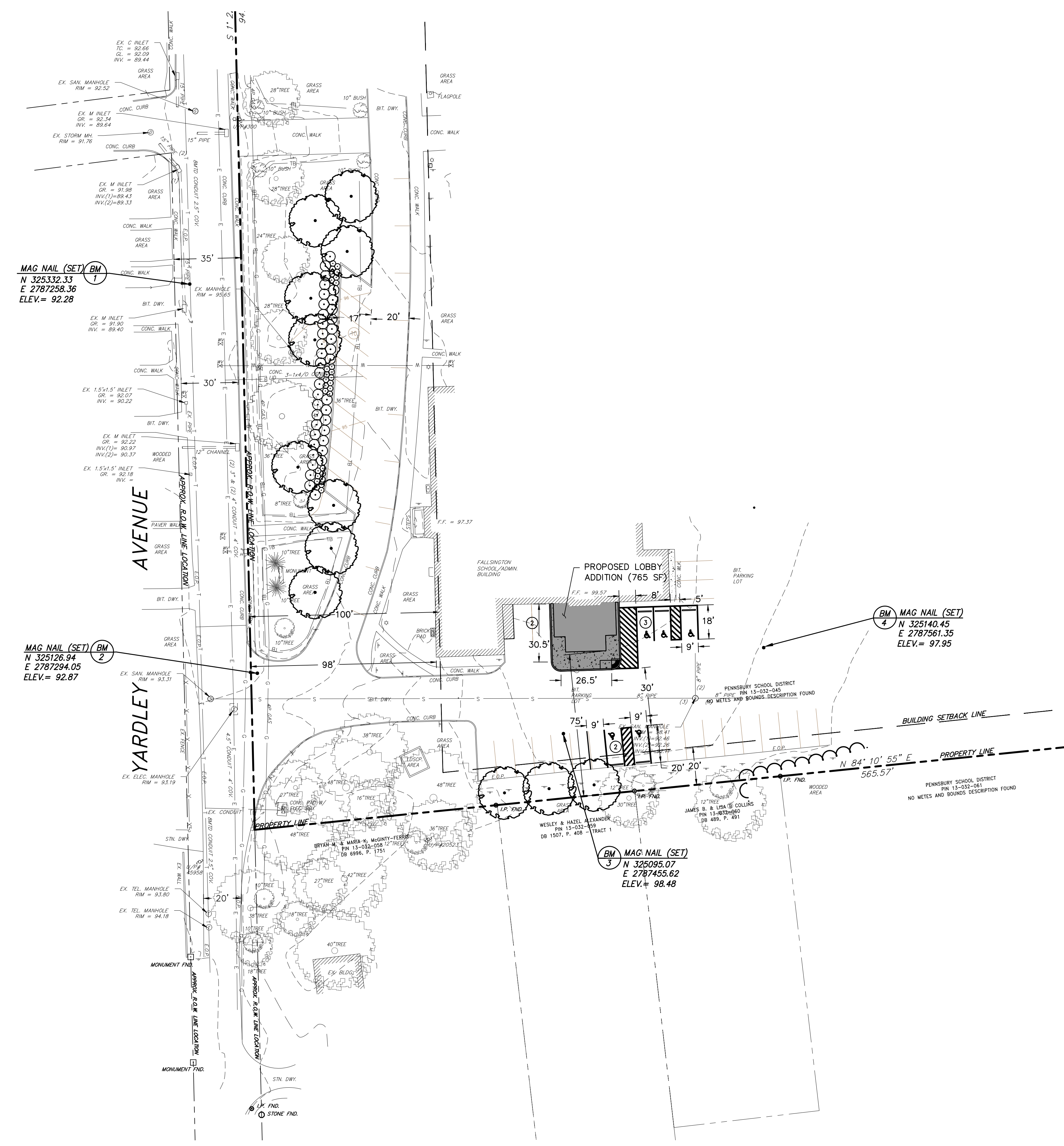
PENNSBURY SCHOOL DISTRICT
 134 YARDLEY AVENUE
 FALLSINGTON, PA 19054

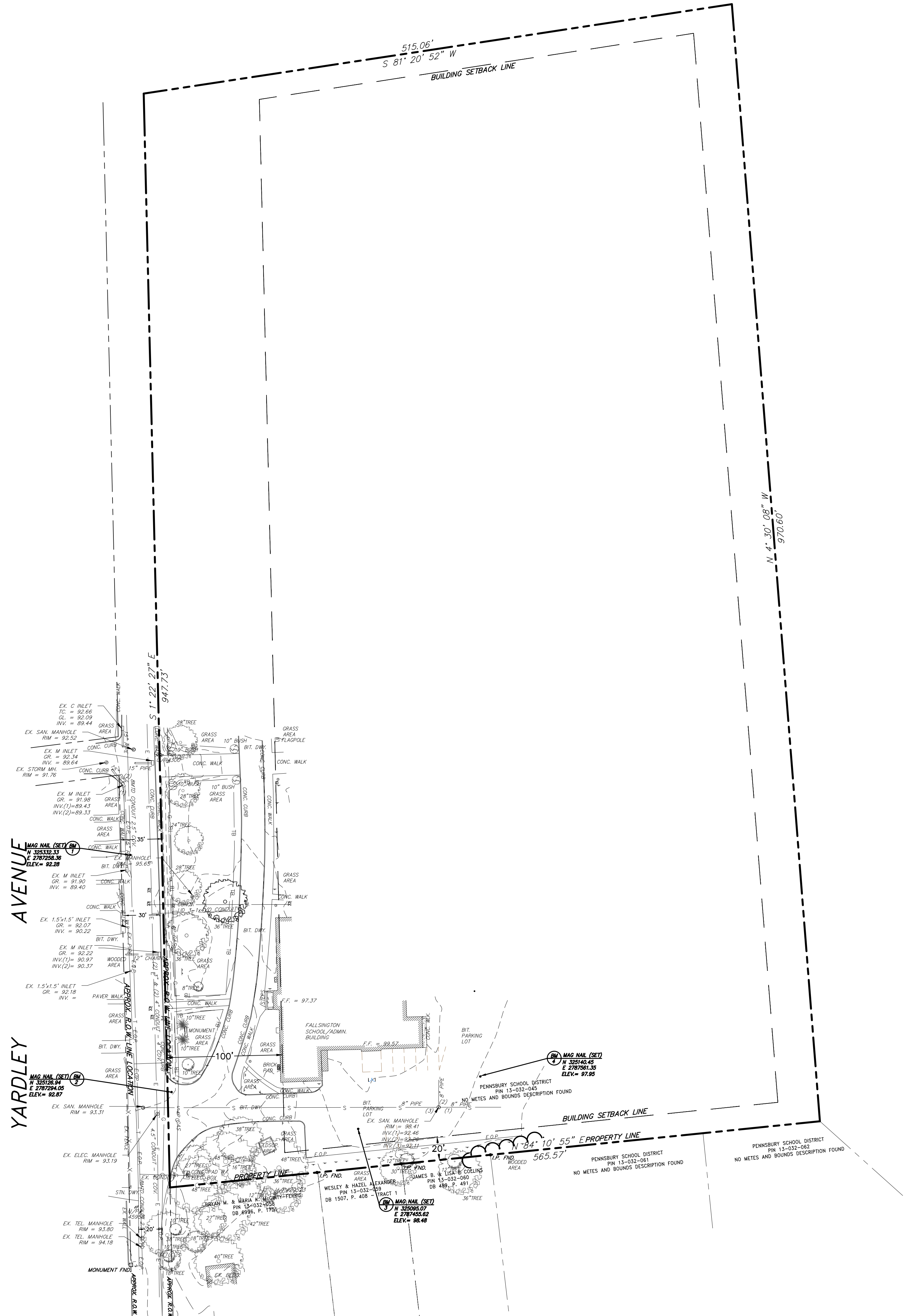
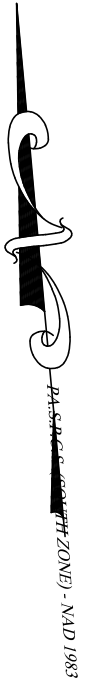
PROPERTY INFO

PARCEL ID #: 13-032-0451
 DEED BOOK / PAGE: 0879 / 0851
 ADDRESS: 134 YARDLEY AVE.
 FALLSINGTON, PA 19054
 OWNER: PENNSBURY SCHOOL DISTRICT
 TOTAL ACREAGE: 14.01

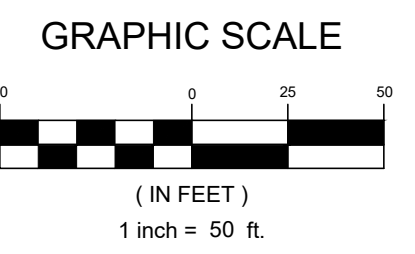
NOTE

- BUILDING ADDITION TO UTILIZE EXISTING WATER AND SEWER SERVICE.





1. THE HORIZONTAL DATUM IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE) NAD-1983 (2011 ADJ.), THE VERTICAL DATUM IS REFERENCED TO NAVD 1988 (GEOID 12c). ADD 1.06 FEET TO CONVERT TO NAVD 1929.
2. PROPERTY AND RIGHT-OF-WAY LINES SHOWN ON THESE PLANS ARE APPROXIMATE LOCATIONS BASED ON THE CURRENT PARCEL MAPS OF THE TOWNSHIP OF FALLS, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA. PROPERTY AND RIGHT-OF-WAY LINES ARE SHOWN FOR GRAPHICAL INFORMATION ONLY AND HAVE NOT BEEN FIELD VERIFIED.
3. EXISTING TOPOGRAPHIC CONDITIONS WERE SURVEYED BY REMINGTON & VERNICK ENGINEERS UNDER THE SUPERVISION OF JAMES R. WATSON, P.E., P.L.S. # SU-00124-A. THE SURVEY WORK WAS COMPLETED ON APRIL 16, 2020.
4. THIS PLAN AND SURVEY DOES NOT CERTIFY TO THE LOCATION, BOTH HORIZONTAL AND VERTICAL, OF ANY UNDERGROUND UTILITY OR STRUCTURE THAT WAS NOT EXPOSED FOR DIRECT MEASUREMENT.



RVE
1901

REMINGTON & VERNICK ENGINEERS

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CONSHOHOCKEN, PA 19428
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WEB SITE ADDRESS : WWW.RVE.COM

—ENGINEERING EXCELLENCE—

DATE: 7/15/2020

CHRISTOPHER FAZIO
PROFESSIONAL ENGINEER, No. PE00055339-E

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NO.	REVISION	DATE	BY	CHK

TOPOGRAPHIC SURVEY PLAN

PENNSBURY SCHOOL DISTRICT
ADMINISTRATOR BUILDING ADDITION
ELEVATOR LOBBY ADDITION

FALLS TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
JMB	LMC	CJF	AS NOTED
DATE:			SHEET No.:
7/15/2020			5 of 15
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P081X010			



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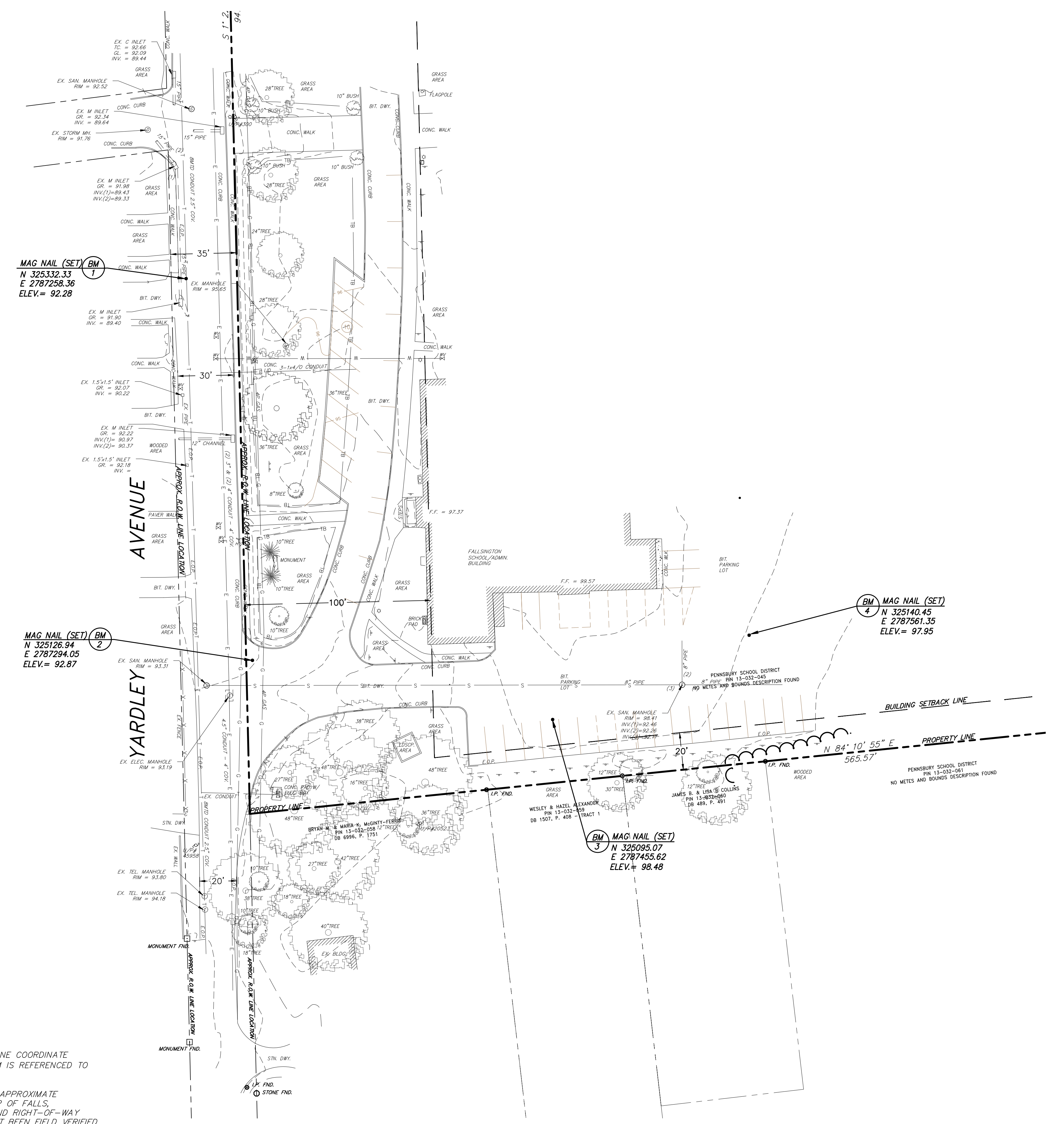
DATE: 7/15/2020
CHRISTOPHER J. FAZIO
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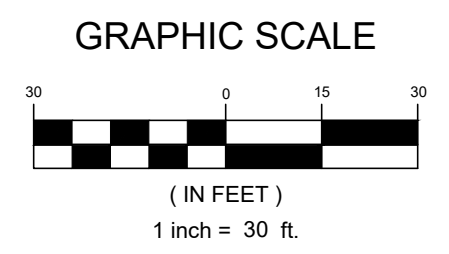
EXISTING CONDITIONS & DEMOLITION PLAN
 PENNSBURG SCHOOL DISTRICT
 ADMINISTRATION BUILDING
 ELEVATOR LOBBY ADDITION
 FALLS TOWNSHIP
 BUCKS COUNTY
 PENNSYLVANIA

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
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P081X010			



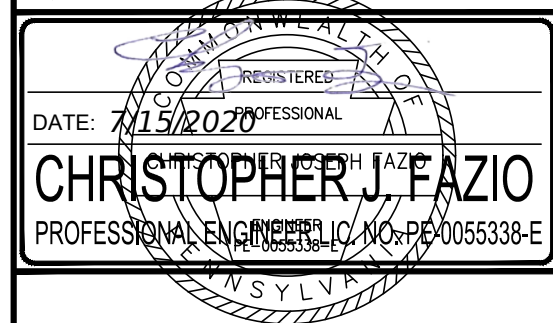
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4. THIS PLAN AND SURVEY DOES NOT CERTIFY TO THE LOCATION, BOTH HORIZONTAL AND VERTICAL OF ANY UNDERGROUND UTILITY OR STRUCTURE THAT WAS NOT EXPOSED FOR DIRECT MEASUREMENT.

- DEMOLITION NOTES:**
1. BEFORE BEGINNING ANY DEMOLITION WORK, THE CONTRACTOR SHALL INSTALL EROSION & SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLANS AND DETAILS.
 2. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL, TRANSPORTATION, AND PROPER DISPOSAL OF ALL DEMOLISHED MATERIALS.
 3. TREE REMOVAL SHALL INCLUDE THE REMOVAL OF THE EXISTING TREE ALONG WITH COMPLETE STUMP REMOVAL TO A DEPTH OF 12" BELOW EXISTING GRADE, PROPOSED GRADE, OR 12" BELOW ANY PROPOSED FEATURES (INCLUDING STORMWATER MANAGEMENT FACILITIES), WHICHEVER IS DEEPER.
 4. ALL DEMOLITION TO BE PERFORMED BY A QUALIFIED, LICENSED CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE TOWNSHIP, STATE, AND FEDERAL CODES AND REGULATIONS.
 5. ANY UTILITIES DAMAGED DURING DEMOLITION AND CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED IN KIND BY THE CONTRACTOR AT HIS OWN EXPENSE.
 6. EXISTING FEATURES WHICH REQUIRE REMOVAL IN ORDER TO COMPLETE THE PROPOSED IMPROVEMENTS SHALL BE REMOVED AT NO ADDITIONAL COST. NOT ALL ITEMS TO BE REMOVED, DEMOLISHED, EXCAVATED OR RELOCATED HAVE BEEN SHOWN ON THE PLAN.





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 CONSHOHOCKEN, PA 19428
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 -ENGINEERING EXCELLENCE-



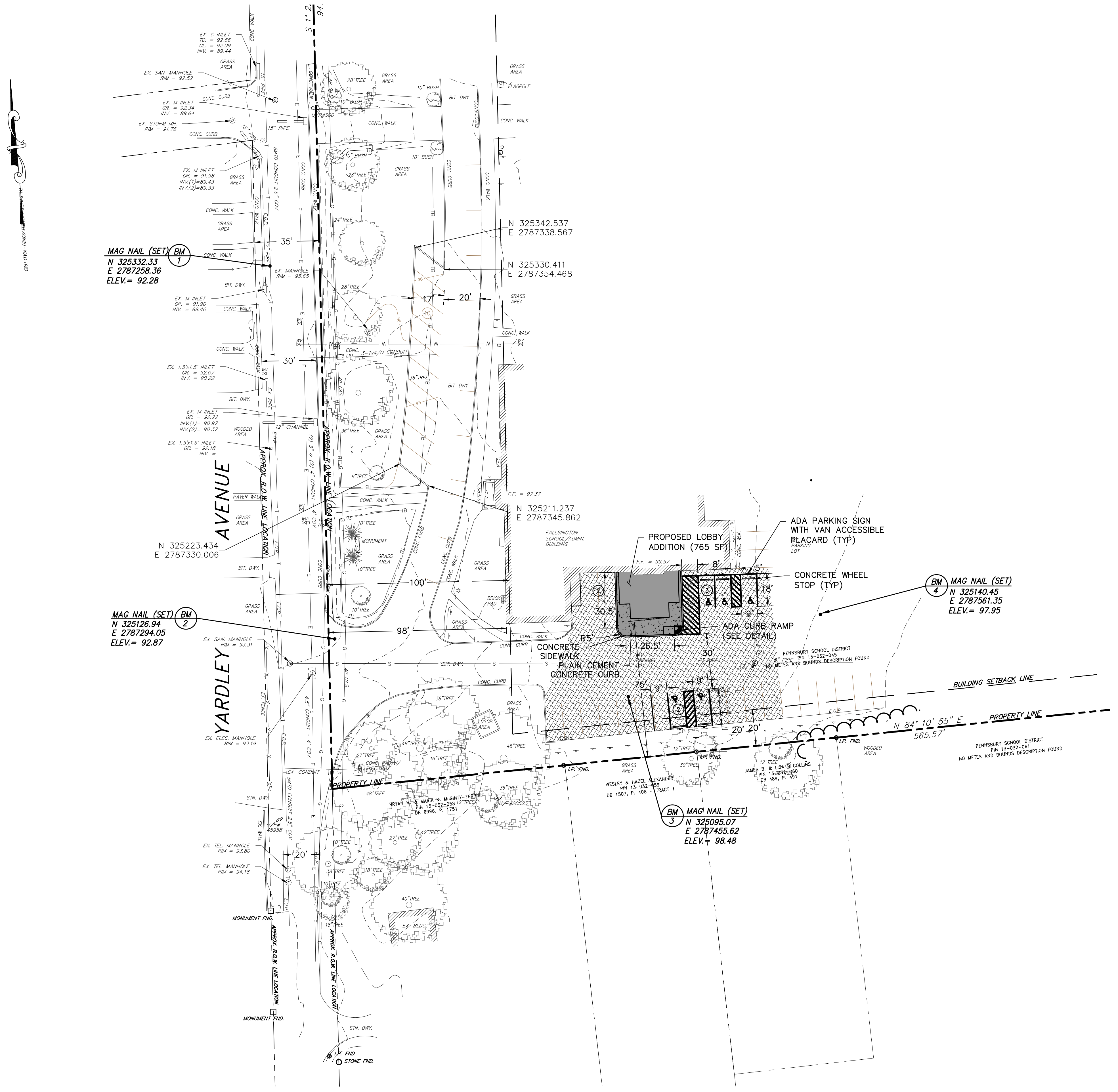
DATE: 7/15/2020
CHRISTOPHER M. FAZIO
 PROFESSIONAL ENGINEER, NO. PE0055339-E

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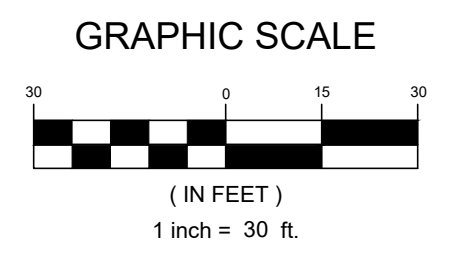
SITE LAYOUT PLAN
 PENNSBURY SCHOOL DISTRICT
**ADMINISTRATION BUILDING
 ELEVATOR LOBBY ADDITION**
 FALLS TOWNSHIP
 BUCKS COUNTY
 PENNSYLVANIA

DRAWN BY	DESIGN BY	CHECKED BY	SCALE
JMB	LMC	CJF	AS NOTED
DATE:	7/15/2020	SHEET No.:	7 of 15
JOB No.:	P081X010		



NOTE
 1. CONTRACTOR SHALL VERIFY MILL AND OVERLAY LIMITS WITH THE OWNER IN THE FIELD PRIOR TO MILLING.

LEGEND
 [Symbol] ASPHALT MILL AND OVERLAY AREAS

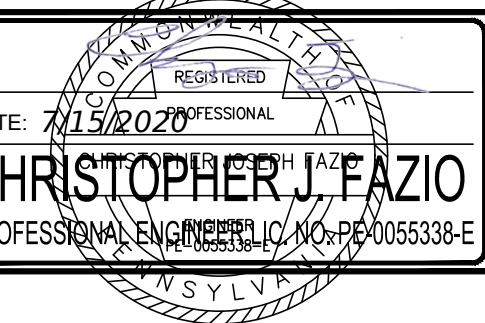




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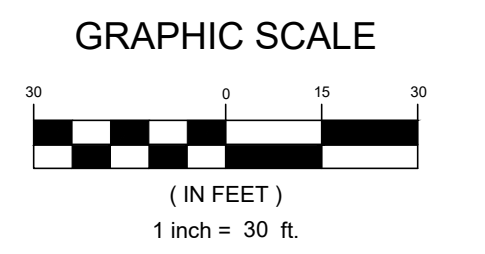
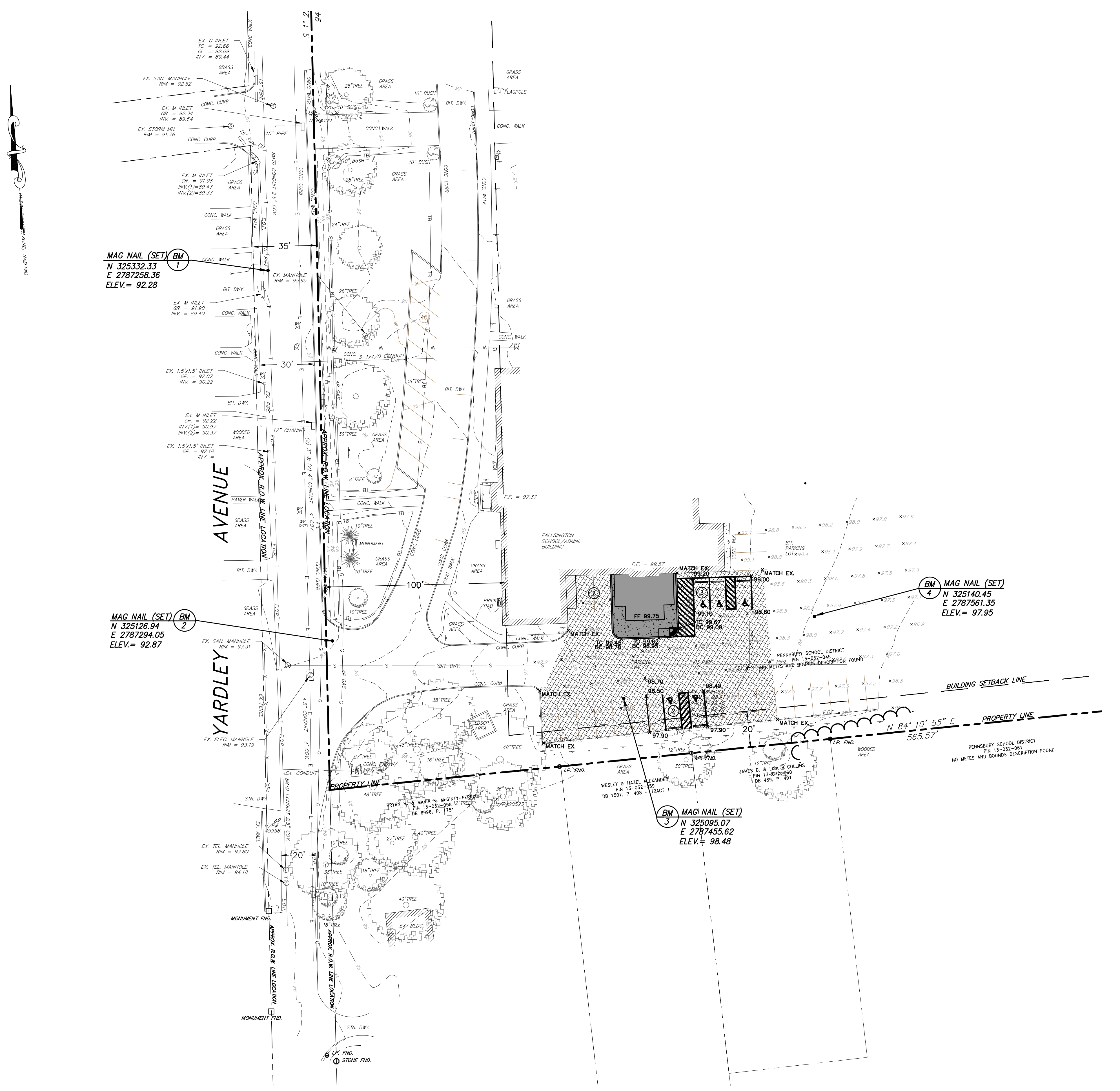
NO.	REVISION	DATE	BY/CHK

GRADING PLAN

PENNSBURG SCHOOL DISTRICT
ADMINISTRATION BUILDING
ELEVATOR LOBBY ADDITION

FALLS TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

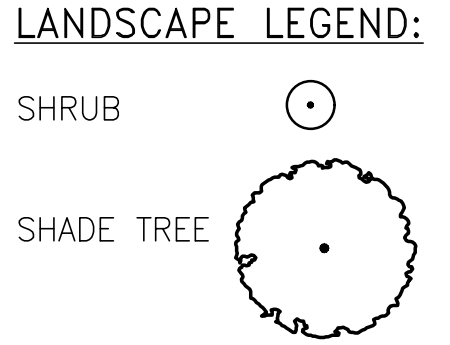
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7/15/2020			8 of 15
JOB No.			P081X010



PLANTING NOTES:

- A COMPLETE LIST OF PLANTS, INCLUDING A SCHEDULE OF QUANTITIES, SIZES, AND OTHER REQUIREMENTS IS SHOWN ON THE PLANT LIST. IN THE EVENT THAT DISCREPANCIES OCCUR BETWEEN THE QUANTITIES OF PLANTS INDICATED IN THE PLANT LIST AND THOSE INDICATED ON THE PLAN, THE PLANT QUANTITIES INDICATED ON THE PLAN SHALL GOVERN.
- NO SUBSTITUTIONS SHALL BE ACCEPTED, EXCEPT WITH WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT OR HIS AGENT.
- ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. ALL PLANTS SHALL HAVE NORMAL, WELL DEVELOPED BRANCHES AND VIGOROUS ROOT SYSTEMS. THEY SHALL BE FREE FROM DEFECTS, DISFIGURING KNOTS, ABRASIONS OF THE BARK, SUNSCALD INJURIES, PLANT DISEASES, INSECT EGGS, BORERS, AND ALL OTHER FORMS OF INFECTIONS. ALL PLANT MATERIAL INSTALLED BETWEEN OCTOBER 15 AND MARCH 15 SHALL BE THOROUGHLY WETTED WITH AN ANTI-TRANSPIRANT UPON DELIVERY OF THE MATERIAL TO THE SITE.
- QUALITY AND SIZE OF PLANT, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1) AS PUBLISHED BY AMERICANHORT. THE TRANSPLANTING AND PLANTING OF TREES AND SHRUBS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF "ANSI A330 PART 6: TREES, SHRUBS, AND OTHER WOODY PLANT MAINTENANCE-STANDARD PRACTICES (TRANSPLANTING)".
- ALL PLANTS SHALL BE PACKED, TRANSPORTED AND HANDLED WITH UTMOST CARE TO INSURE ADEQUATE PROTECTION AGAINST INJURY AND DEHYDRATION. EACH SHIPMENT SHALL BE CERTIFIED TO BE FREE FROM DISEASES AND INFESTATION. ANY INSPECTION CERTIFICATES REQUIRED BY LAW TO THIS EFFECT SHALL ACCOMPANY EACH SHIPMENT INVOICE OR ORDER OF STOCK, AND ON ARRIVAL, THE CERTIFICATE SHALL BE FILED WITH THE LANDSCAPE ARCHITECT.
- NO PLANT MATERIAL SHALL BE PLANTED BY THE CONTRACTOR UNTIL IT IS INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT OR HIS AGENT AT THE SITE. THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE QUALITY AND ACCEPTABILITY OF THE MATERIALS. ALL REJECTED MATERIALS SHALL BE IMMEDIATELY REPLACED WITH ACCEPTABLE MATERIAL AT NO ADDITIONAL COST.
- DECIDUOUS AND EVERGREEN TREES SHALL BE FIELD ADJUSTED TO MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET FROM ANY OVERHEAD UTILITY WIRES AND/OR UNDERGROUND UTILITIES.
- DECIDUOUS AND EVERGREEN TREES SHALL BE PLANTED AT LEAST TWO (2) FEET FROM ANY CURBING, PAVING, OR SIDEWALK. WHENEVER POSSIBLE THIS DIMENSION SHOULD BE INCREASED TO FOUR (4) FEET FROM ANY PLANTING, EXCEPT GROUND COVERS, SHOULD BE PLANTED AT LEAST TWO (2) FEET FROM ANY BUILDING AND FIVE (5) FEET FROM ABOVE AND BELOW GROUND UTILITIES.
- PLANTING MIXTURE SHALL CONSIST OF 70% EXISTING SOIL FROM THE PLANTING SITE AND 30% HUMUS OR MUSHROOM SOIL. PRIOR TO USING EXISTING TOPSOIL, REMOVE ALL FOREIGN DEBRIS AND ALL ROCKS OR STONES LARGER THAN 2 INCHES. EACH CUBIC YARD SHALL BE ADDED AND INCORPORATED BY THOROUGHLY MIXING, FOUR POUNDS OF COMMERCIAL FERTILIZER HAVING AN ANALYSIS OF 6-6-6.
- ALL PLANTS (B&B OR CONTAINER) SHALL BE PROPERLY IDENTIFIED BY WEATHERPROOF LABELS AND SECURELY ATTACHED THERE TO BEFORE DELIVERY TO THE PROJECT SITE. LABELS SHALL IDENTIFY THE PLANTS BY COMMON NAME, BOTANICAL NAME AND SIZE. LABELS SHALL NOT BE REMOVED UNTIL FINAL INSPECTION BY THE LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL SCALE PLANT LOCATIONS FROM THE PLANS AND STAKE LOCATIONS ON-SITE FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR HIS AGENT.
- ALL SEEDING AREAS THAT DO NOT SHOW A PROMPT UNIFORM GERMINATION SHALL BE RESEEDING BY THE LANDSCAPE CONTRACTOR AT INTERVALS OF 45 - 60 DAYS, UNTIL A GOOD GROWTH IS ESTABLISHED OVER THE ENTIRE LAWN AREA.
- ALL PLANT BEDS SHALL BE MULCHED WITH THREE (3) INCHES OF DOUBLE SHREDDED HARDWOOD BARK MULCH OR OTHER MATERIAL APPROVED BY THE LANDSCAPE ARCHITECT. THE LIMIT OF THE MULCH FOR TREES SHALL EXTEND 12 INCHES BEYOND THE PLANTING HOLE, AND FOR SHRUBS AND BEDS, THE ENTIRE SHRUB OR BED AREAS AS INDICATED ON THE PLAN OR APPROVED IN THE FIELD. NO MULCH SHALL BE PLACED WITHIN THREE (3) INCHES OF THE TRUNK OR TRUNK FLARE. NO SEPARATE PAYMENT SHALL BE MADE FOR MULCH, BUT THE COST SHALL BE INCLUDED IN VARIOUS ITEMS OF THE PROPOSAL.
- ALL PLANTING BEDS SHALL BE ROTILLATED TO A DEPTH OF TEN (10) INCHES PRIOR TO ANY PLANTING. STONES, WIRE, CONCRETE AND UNSUITABLE MATERIALS SHALL BE REMOVED. ALL SHRUB PLANTINGS SHALL BE INSTALLED IN MULCHED PLANTING BEDS EXTENDING AT LEAST TWO (2) FEET FROM THE PLANTS OR AS INDICATED ON THE APPROVED PLANS.
- PLANTING BEDS SHALL BE THOROUGHLY EXCAVATED, AND BACKFILLED WITH THE PLANT MIXTURE DESCRIBED IN 9 ABOVE. ALL PAVEMENT SUB-BASE AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE ISLAND PLANTING BEDS UNTIL THE VIRGIN SOIL IS REACHED.
- IT IS UNDERSTOOD THAT THE OWNER SHALL ASSUME THE RESPONSIBILITY FOR WATERING ALL PLANT MATERIAL AND LAWN AREAS BEYOND THE GUARANTEE PERIOD FROM COMMENCING WITH THE DATE OF FINAL ACCEPTANCE.
- ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN VIGOROUS GROWING CONDITION. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF TWO (2) YEARS FROM THE COMPLETION DATE OF INSTALLATION. ANY PLANT MATERIAL THAT IS 25% DEAD OR MORE SHOULD BE CONSIDERED DEAD AND MUST BE REPLACED. A TREE SHOULD BE CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK OR WHEN 25% OF THE CROWN IS DEAD. REPLACEMENT SHALL BE MADE AT THE BEGINNING OF THE FIRST SUCCEEDING PLANTING SEASON. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THAT STATED ABOVE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES BEFORE EXCAVATING.
- THE LANDSCAPE ARCHITECT OR HIS AGENT SHALL BE NOTIFIED OF ANY RELOCATION OF PLANTS MADE NECESSARY BY UTILITIES OR OTHER EXISTING FEATURES PREVENTING THE CONTRACTOR FROM IMPLEMENTATION OF THE PLANTING PLAN AS DRAWN. SUCH NOTIFICATION SHALL BE MADE BEFORE THE FIELD CHANGE IS CARRIED OUT.
- PLANT MATERIAL SHALL BE FURNISHED AND INSTALLED AS INDICATED INCLUDING ALL LABOR, MATERIALS, PLANTS, AND EQUIPMENT, INCIDENTALS AND CLEAN UP.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT THE CORRECT GRADES AND ALIGNMENT. SET ALL PLANTS PLUMB AND STRAIGHT. SET SHRUBS AT SUCH A LEVEL THAT, AFTER SETTLEMENT, A NORMAL OR NATURAL RELATIONSHIP TO THE CROWN OF THE PLANT WITH THE GROUND SURFACE WILL BE ESTABLISHED OR A MINIMUM OF TWO (2) INCHES ABOVE THE FINISHED GRADE. FOR TREE PLANTINGS, THE CONTRACTOR SHALL LOCATE THE HIGHEST ROOT FLARE PRIOR TO DIGGING THE PLANTING HOLE. THE PLANTING HOLE SHALL BE EXCAVATED TO A DEPTH THAT ENSURES THE TRUNK FLARE IS VISIBLE AND THAT THE HIGHEST ROOT FLARE IS FLUSH WITH EXISTING GRADE. TREES PLANTED LOWER OR HIGHER WILL BE REJECTED. LOCATE ALL PLANTS IN THE CENTER OF THE PIT.
- CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF THE PLANT MATERIAL.
- INsofar AS PRACTICABLE, PLANT MATERIALS SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED LONGER THAN A TWO (2) DAY PERIOD AFTER DELIVERY.
- PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTABLE LOCAL PRACTICE.
- ALL NON-BIODEGRADABLE ROOT WRAPPINGS (INCLUDING WIRE BASKETS) ARE TO BE REMOVED COMPLETELY BEFORE PLANTING.
- EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS. SHEARS ARE TO BE STERILIZED BETWEEN TREES.
- ALL INJURED ROOTS SHALL BE PRUNED BEFORE PLANTING, AND OBVIOUS GIRDLING ROOTS REMOVED, PRUNED OR EXTENDED AS APPROPRIATE. IT IS ADVISABLE TO PRUNE BRANCHES WHICH CROSS. THE MAIN LEADER OF DECIDUOUS TREES SHOULD NOT BE CUT BACK. LONG SIDE BRANCHES MUST BE SHORTENED.
- TREES ARE TO BE SUPPORTED IMMEDIATELY AFTER PLANTING IF CONDITIONS MERIT. TREES SIX (6) INCHES AND OVER IN CALIPER SHALL BE GUYED. SMALLER TREES SHALL BE STAKED. GUYING WIRES AND STAKES SHALL BE AS INDICATED.
- UNLESS OTHERWISE NOTED, ALL DECIDUOUS AND EVERGREEN TREES SHALL HAVE A SINGLE TRUNK.
- DECIDUOUS AND EVERGREEN TREES WHICH ARE B&B SHALL BE DRUM LACED IN LIEU OF WIRE BASKETS.
- CONTRACTOR MUST OBTAIN A TOWNSHIP PERMIT FOR TREE REMOVAL.

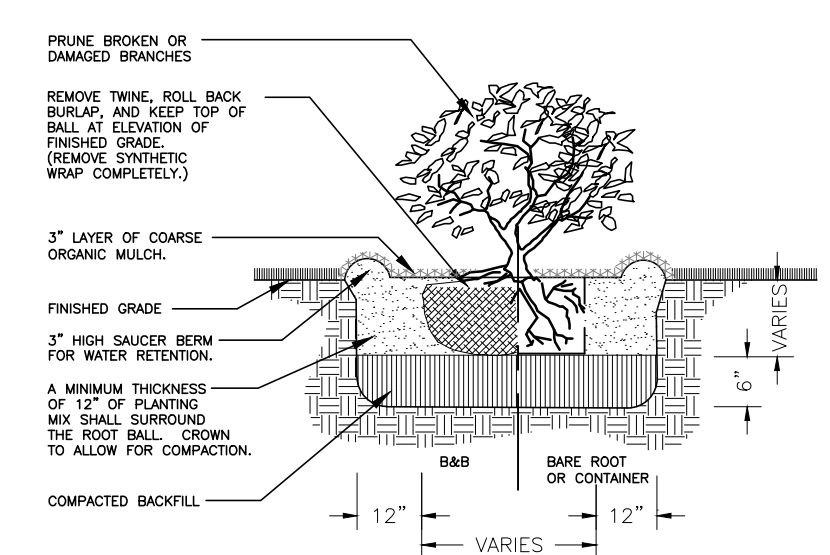
LANDSCAPE REQUIREMENTS	
CODE REF.	REQUIRED
209-42.B.(1)	10' WIDE PLANTING STRIP BETWEEN PARKING LOT AND STREET LINE.
199-4.B.(6)(a)	12 DECIDUOUS TREES MIN. 3" CALIPER



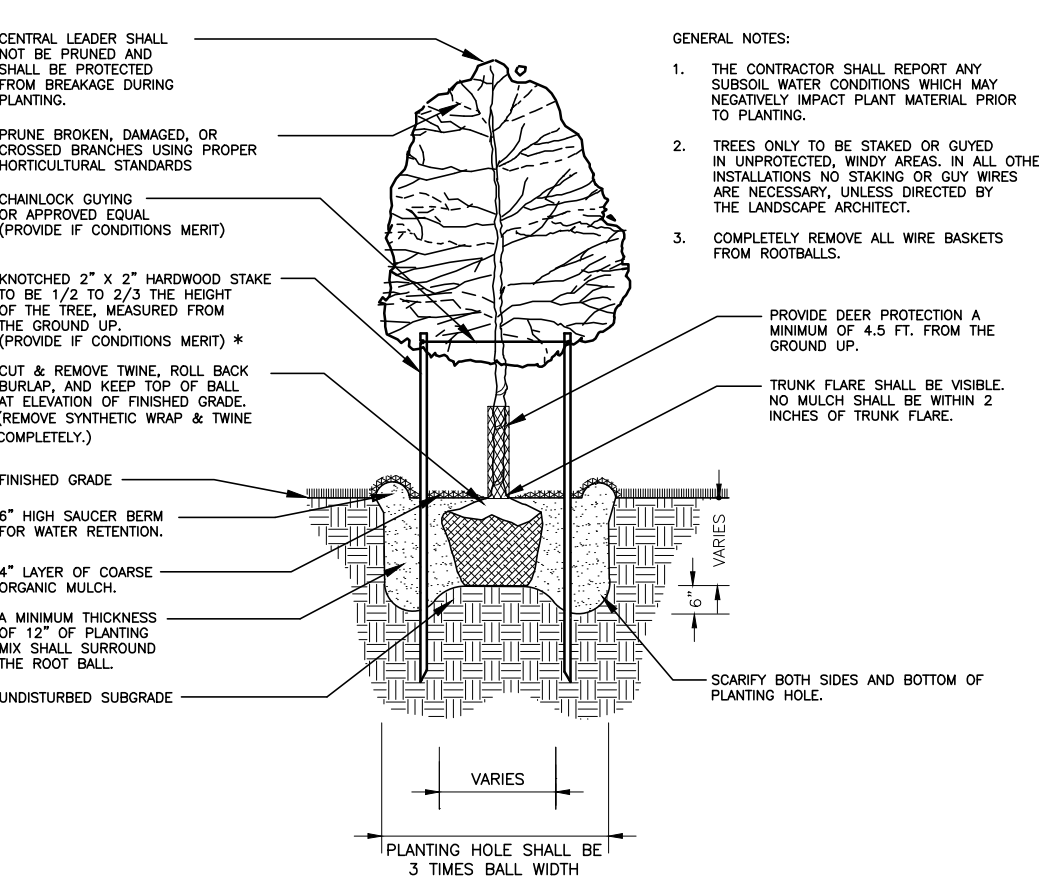
PLANT LIST					
KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
AG	ABELIA X GRANDIFLORA 'ROSE CREEK'	ROSE CREEK GLOSSY ABELIA	27	24-30"	CONT.
AR	ACER RUBRUM 'OCTOBER GLORY'	RED MAPLE	6	3" CAL.	B&B
CC	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	6	3" CAL.	B&B
IR	ILEX X RED BEAUTY	RED BEAUTY ('RUTZAN') HOLLY	20	24-30"	CONT.
PL	PRUNUS LAUROCERASUS 'OTTO LUYKENS'	OTTO LUYKEN CHERRY LAUREL	20	24-30"	CONT.

NOTES:

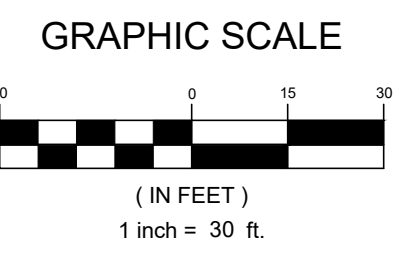
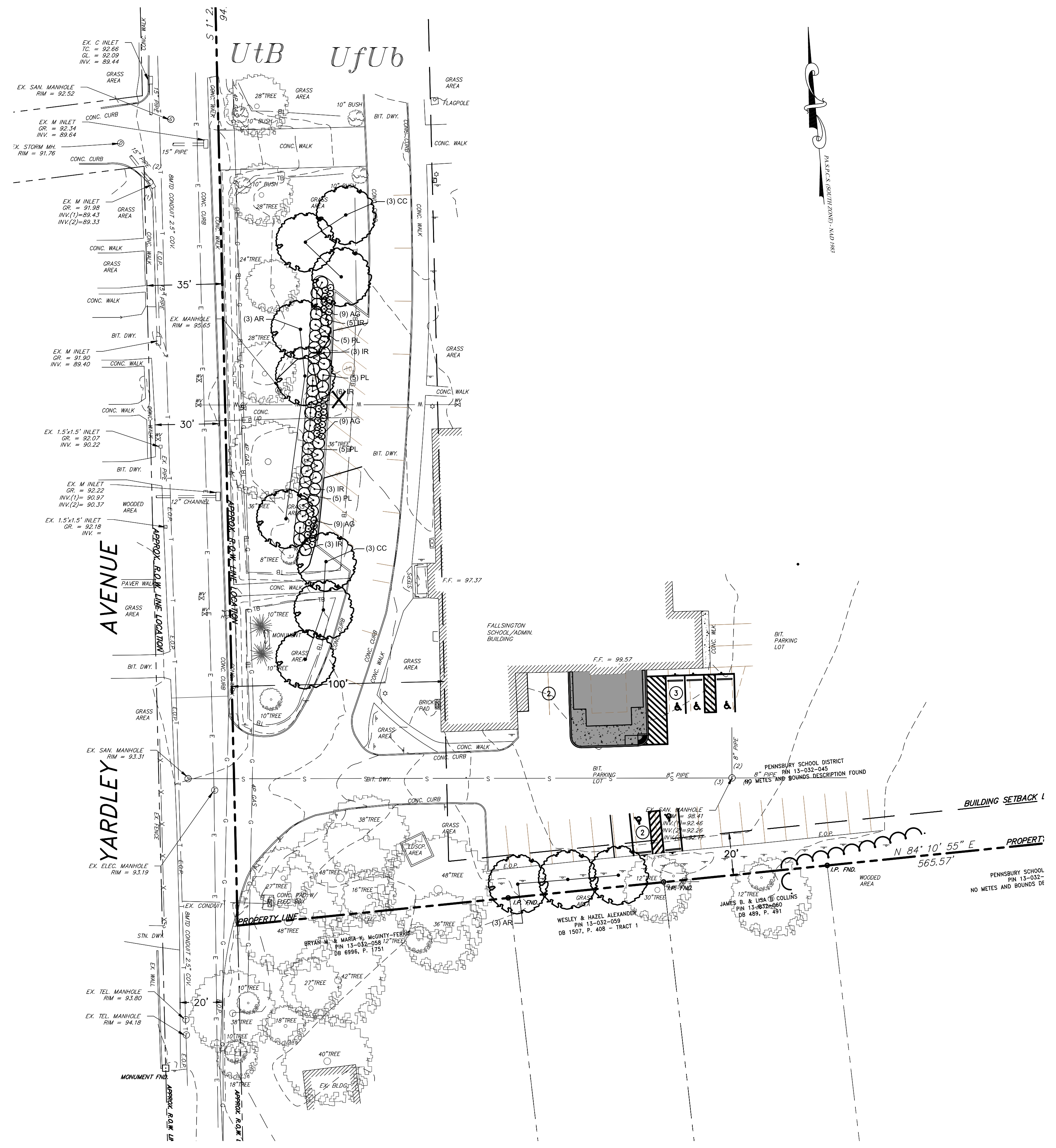
- THE FOLLOWING ARE CONSIDERED "FALL DIG HAZARDS" AND SHOULD ONLY BE PLANTED IN THE SPRING:
 - * ACER RUBRUM
- ALL EXTERIOR GROUND AREAS NOT OCCUPIED BY BUILDINGS, STRUCTURES AND PAVING (EXCEPT AREAS INDICATED TO BE UNDISTURBED AND PLANTING BEDS) SHALL BE LAWN AREAS.



SHRUB PLANTING DETAIL
NOT TO SCALE



SHADE TREE PLANTING DETAIL
NOT TO SCALE



RVE
1901

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-ENGINEERING EXCELLENCE-

DATE: 7/15/2020

JOSEPH A. PETRONGOLO
LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
PA001663R

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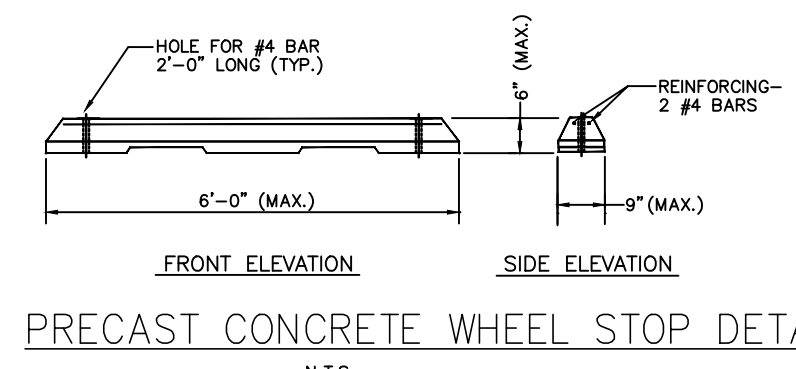
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LANDSCAPE PLAN

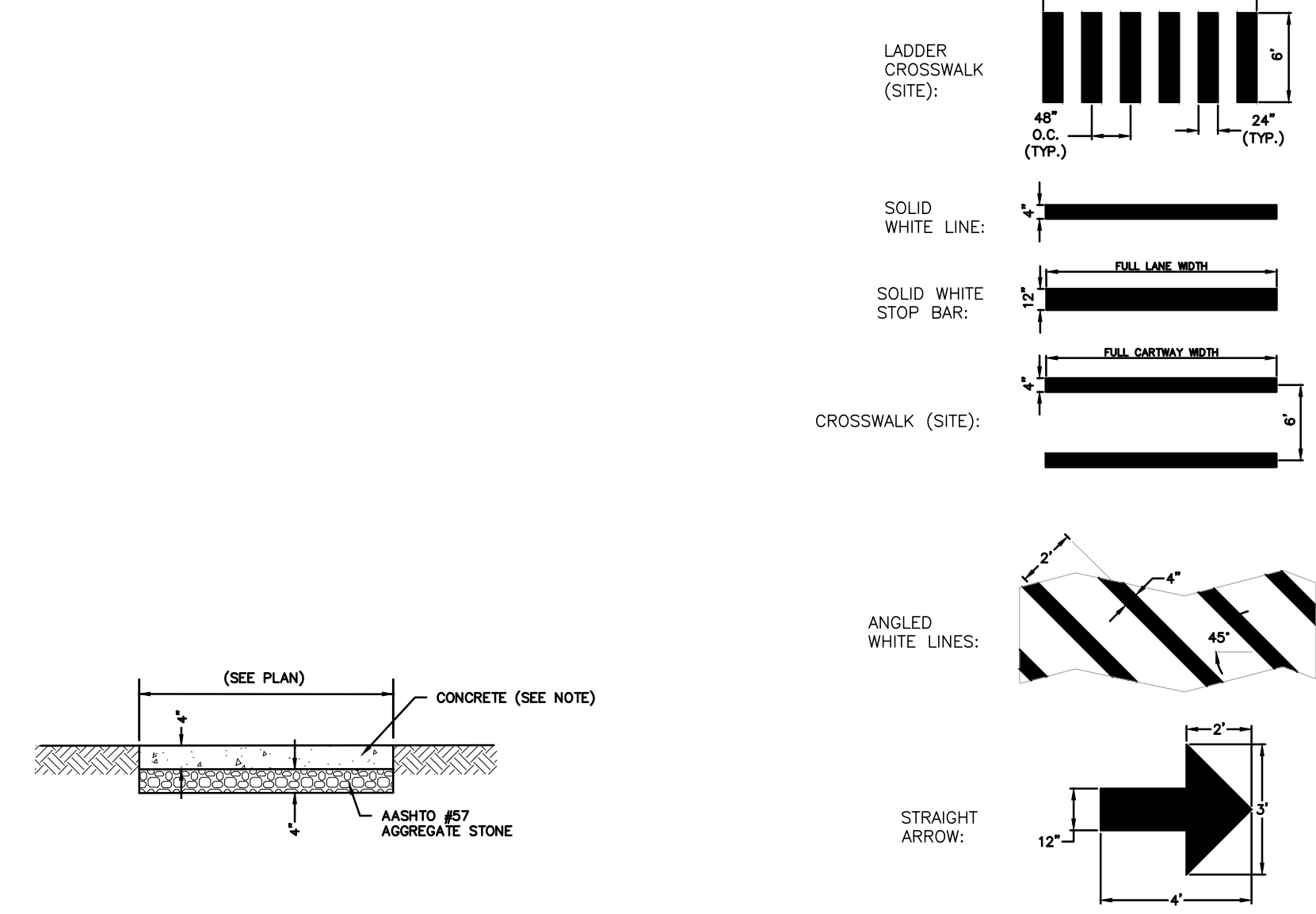
PENNSBURY SCHOOL DISTRICT
ADMINISTRATOR BUILDING
ELEVATOR LOBBY ADDITION

BUCKS COUNTY
FALLS TOWNSHIP

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
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PRECAST CONCRETE WHEEL STOP DETAIL
N.T.S.

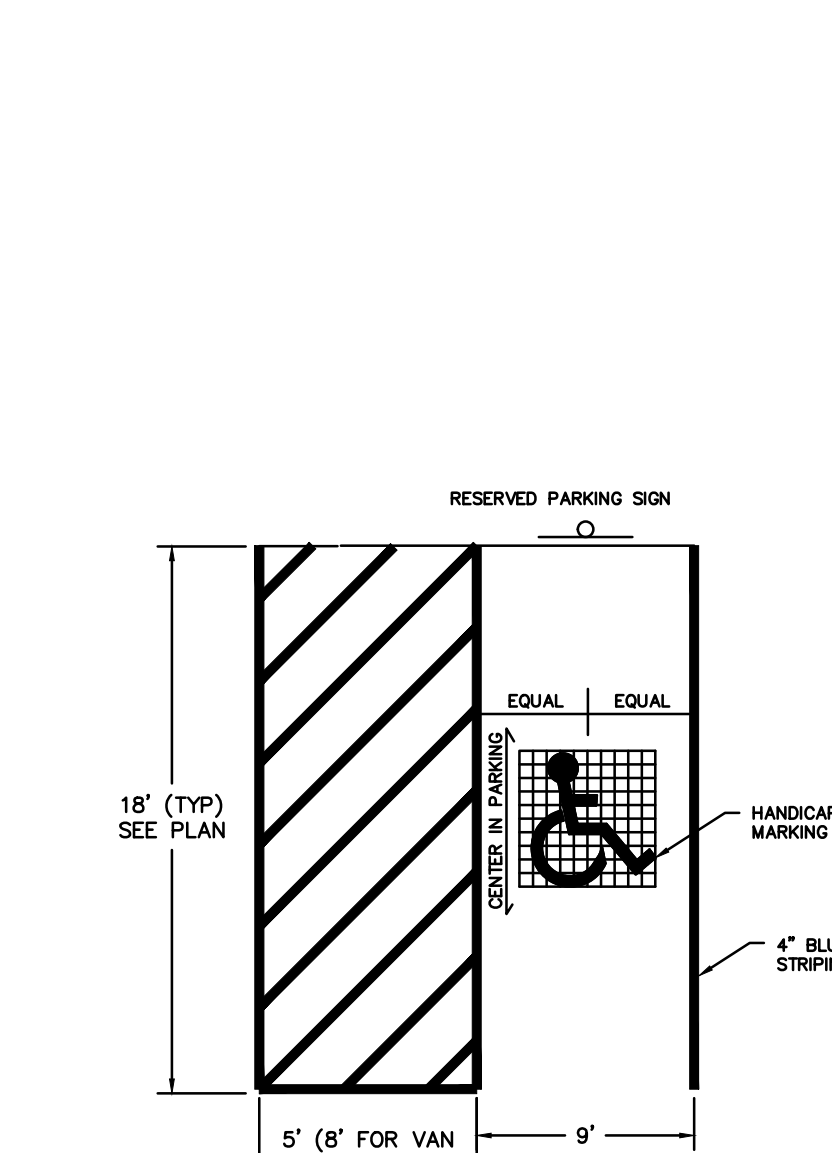


- NOTES:
- EXPANSION JOINTS SHALL BE PLACED EVERY THIRTY (30) FEET, WITH CONTRACTION JOINTS EVERY FIVE (5) FEET A MINIMUM OF ONE (1) INCH IN DEPTH.
 - EXPANSION MATERIALS SHALL BE PLACED BETWEEN ANY CURB AND DRIVEWAY APRON.
 - ALL MARKINGS SHALL HAVE A BROOM FINISH.
 - ALL CONCRETE IS TO BE PENNDOT CLASS AA, 3750 PSI AT 28 DAYS, 5-8% AIR-ENTRAPMENT, 0.45 MAX WATER TO CEMENT RATIO, AND CURING COMPOUND PLACED AFTER SETTING IN ACCORDANCE WITH ACI 318-11, LATEST EDITION.

- NOTES:
- ALL PAVEMENT MARKINGS WITHIN PUBLIC STREETS SHALL CONFORM TO PENNDOT SPECIFICATIONS, PUB. 408, LATEST EDITION.
 - PAVEMENT MARKINGS WITHIN THE SUBJECT PROPERTY SHALL BE SOLID WHITE EPoxy.
 - CUSTOM LETTERING FOR "BYPASS LANE" SHALL CONFORM TO PENNDOT'S PUB. 111, 10-8600 DETAIL.

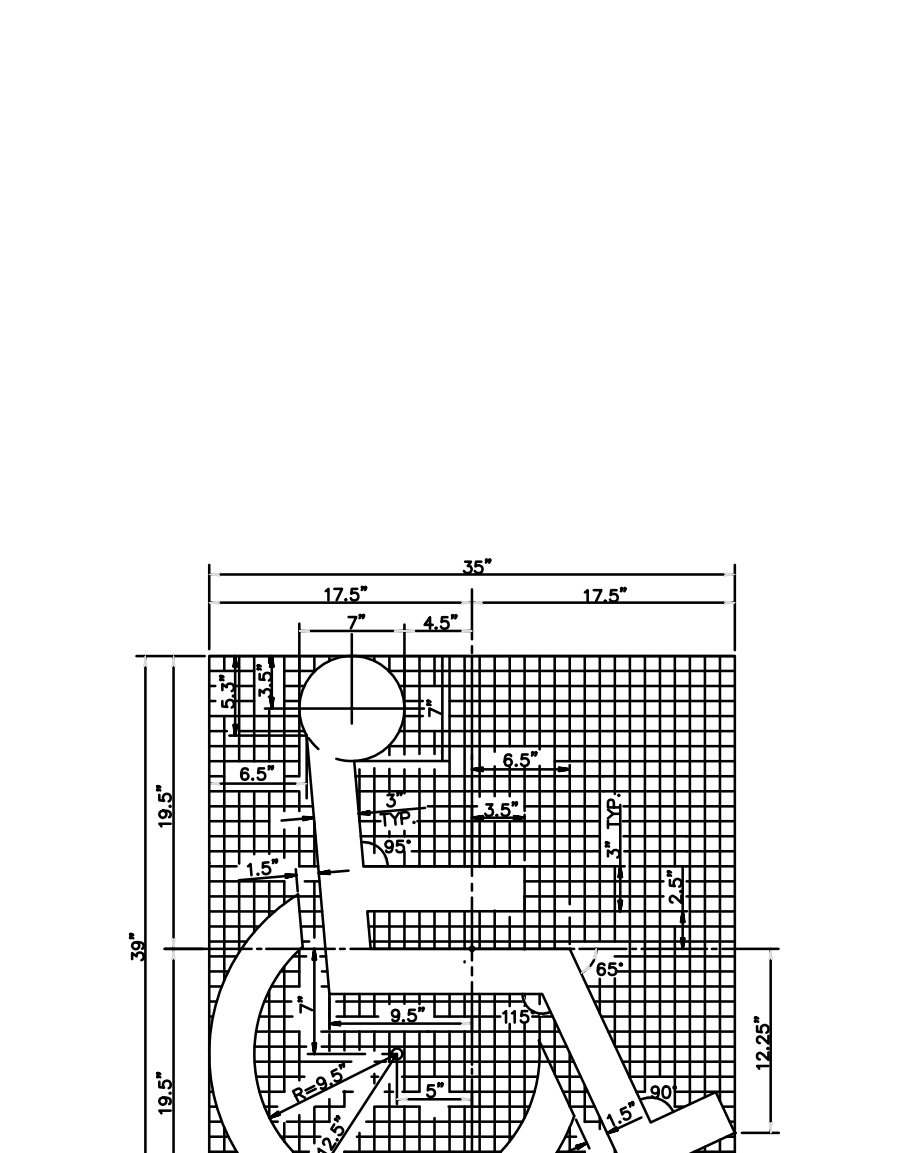
CONCRETE SIDEWALK DETAIL
N.T.S.

PAVEMENT MARKING DETAIL
N.T.S.



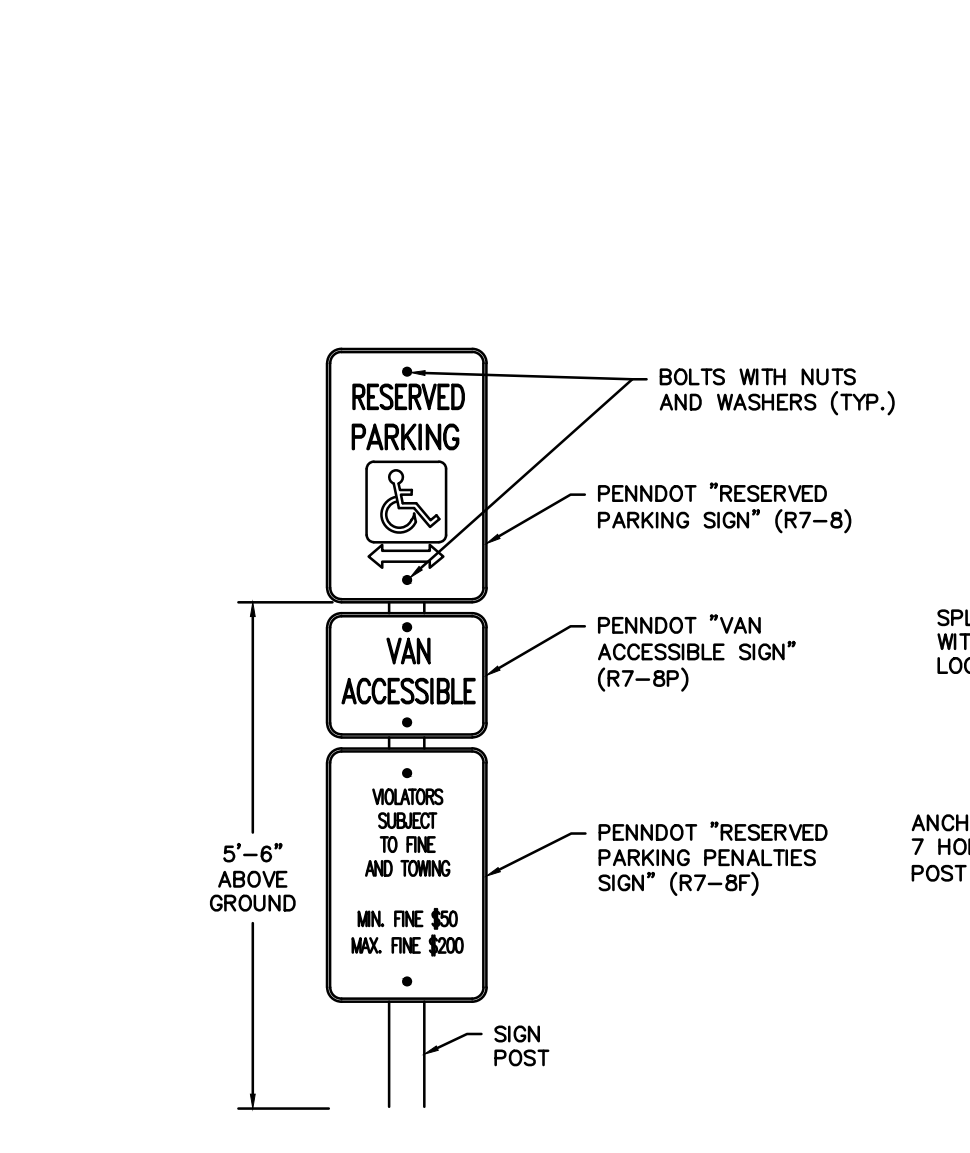
- NOTE:
- HANDICAPPED SYMBOL SHALL BE WHITE. IT MAY BE INSTALLED ALONE OR WITH A BLUE BACKGROUND WHICH EXTENDS A MINIMUM OF 3" BEYOND THE SYMBOL. IF MATERIAL THICKNESS OF SYMBOL IS GREATER THAN 20 MILS THE BLUE BACKGROUND MUST BE USED.

ACCESSIBLE PARKING DETAIL
N.T.S.



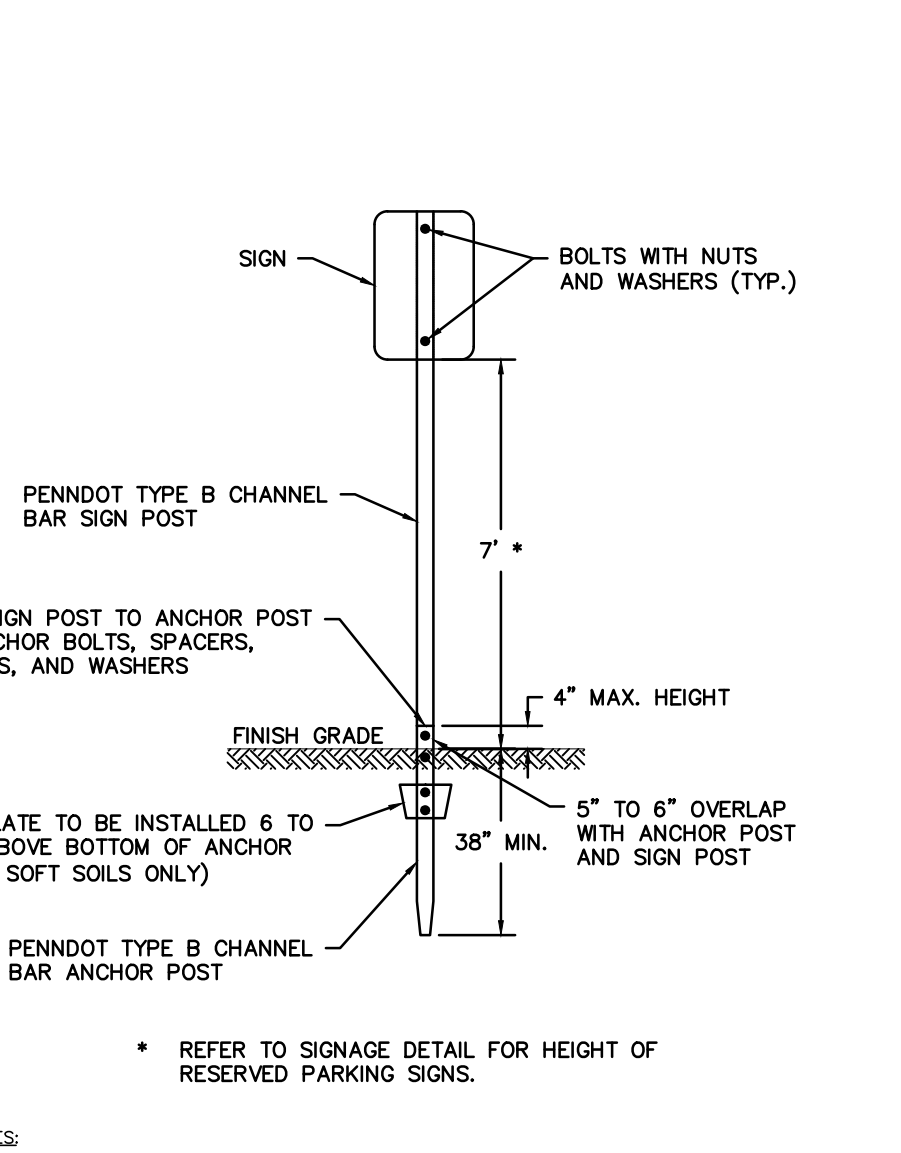
- NOTE:
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HANDICAPPED SYMBOL DETAIL
N.T.S.



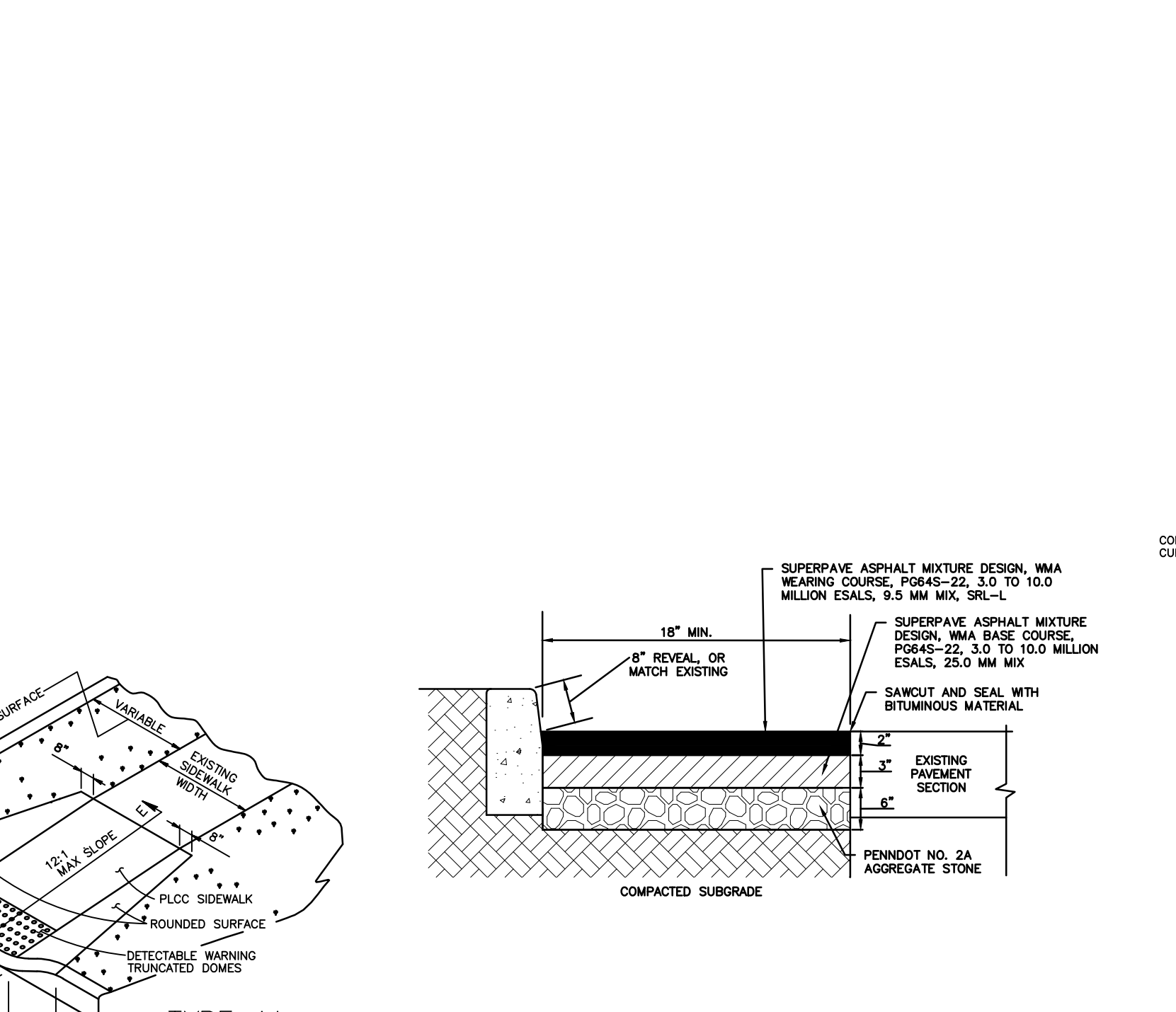
- NOTES:
- SEE SIGN POST DETAIL FOR INSTALLATION INSTRUCTIONS.
 - DIMENSIONS, COLOR, AND MATERIAL SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATIONS 236 AND 408.

SIGNAGE DETAIL
N.T.S.

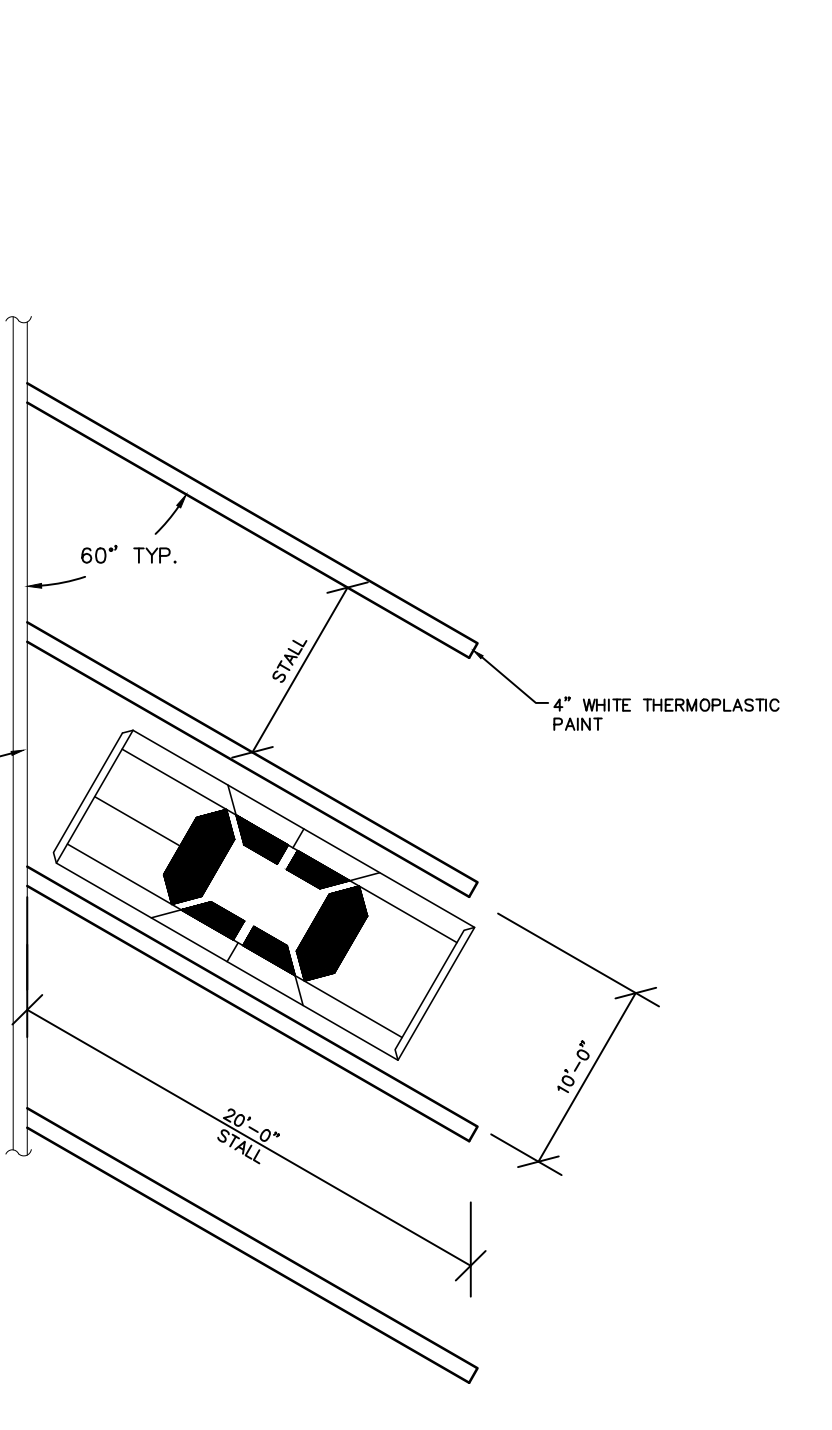


- NOTES:
- INSTALLATION SHALL FOLLOW GUIDELINES INCLUDED IN PENNDOT PUB. 111, SERIES 10-87008.
 - SEE PLAN FOR SIGN TYPE AND LOCATION.
 - SIGNS SHALL BE SET BACK 2 FEET FROM THE EDGE OF PAVING OR OBSTRUCTIONS, SUCH AS CURBS OR GUIDE RAILS, AS MEASURED FROM THE EDGE OF THE SIGN.
 - SIGN POSTS TO BE BREAKAWAY CONNECTION STYLE.
 - DIRECT DRIVE POSTS SHALL BE INSTALLED IN LIEU OF CONCRETE FOOTING (NOT SHOWN), UNLESS DIRECTED OTHERWISE BY MUNICIPAL ENGINEER.

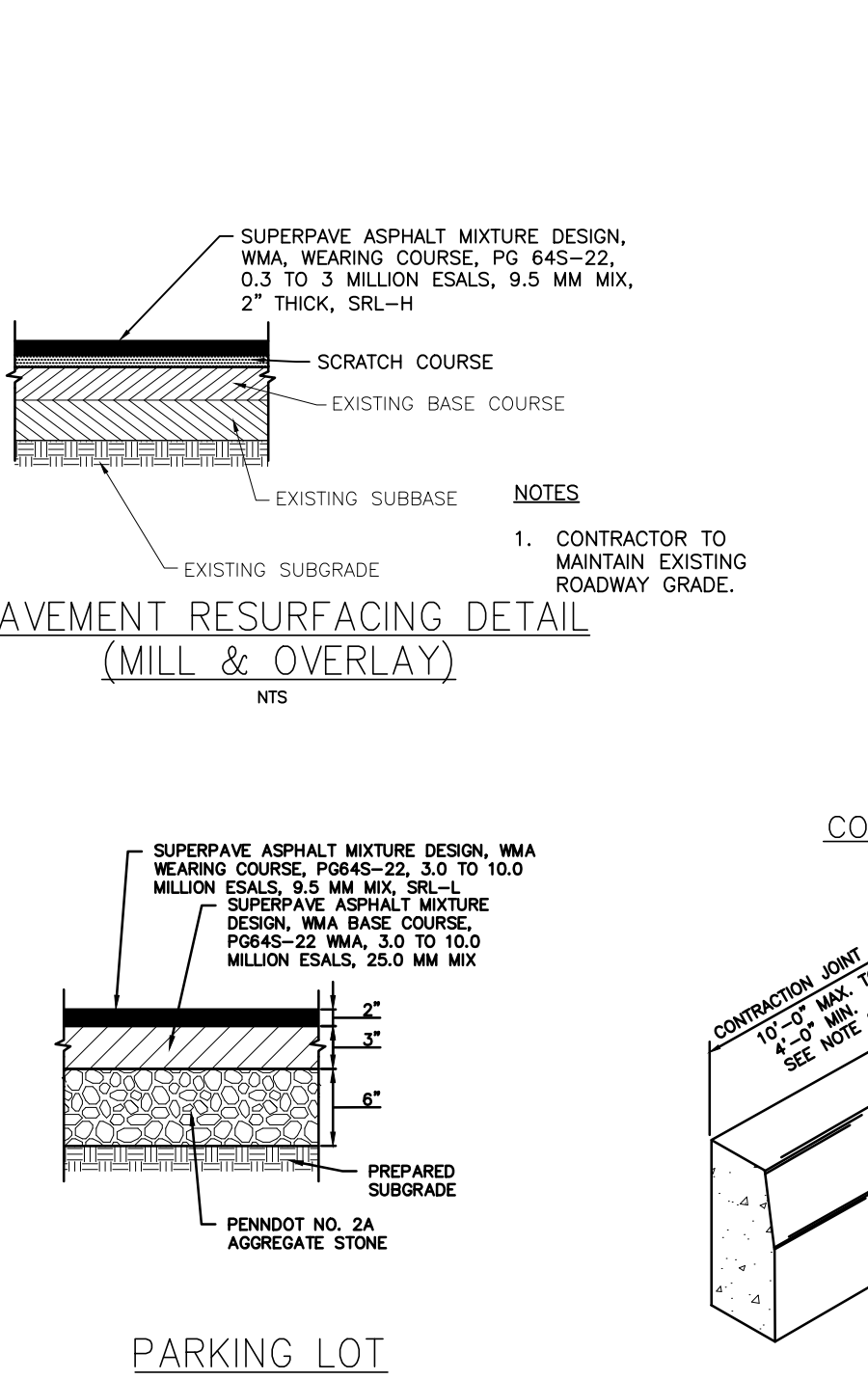
SIGN POST DETAIL
N.T.S.



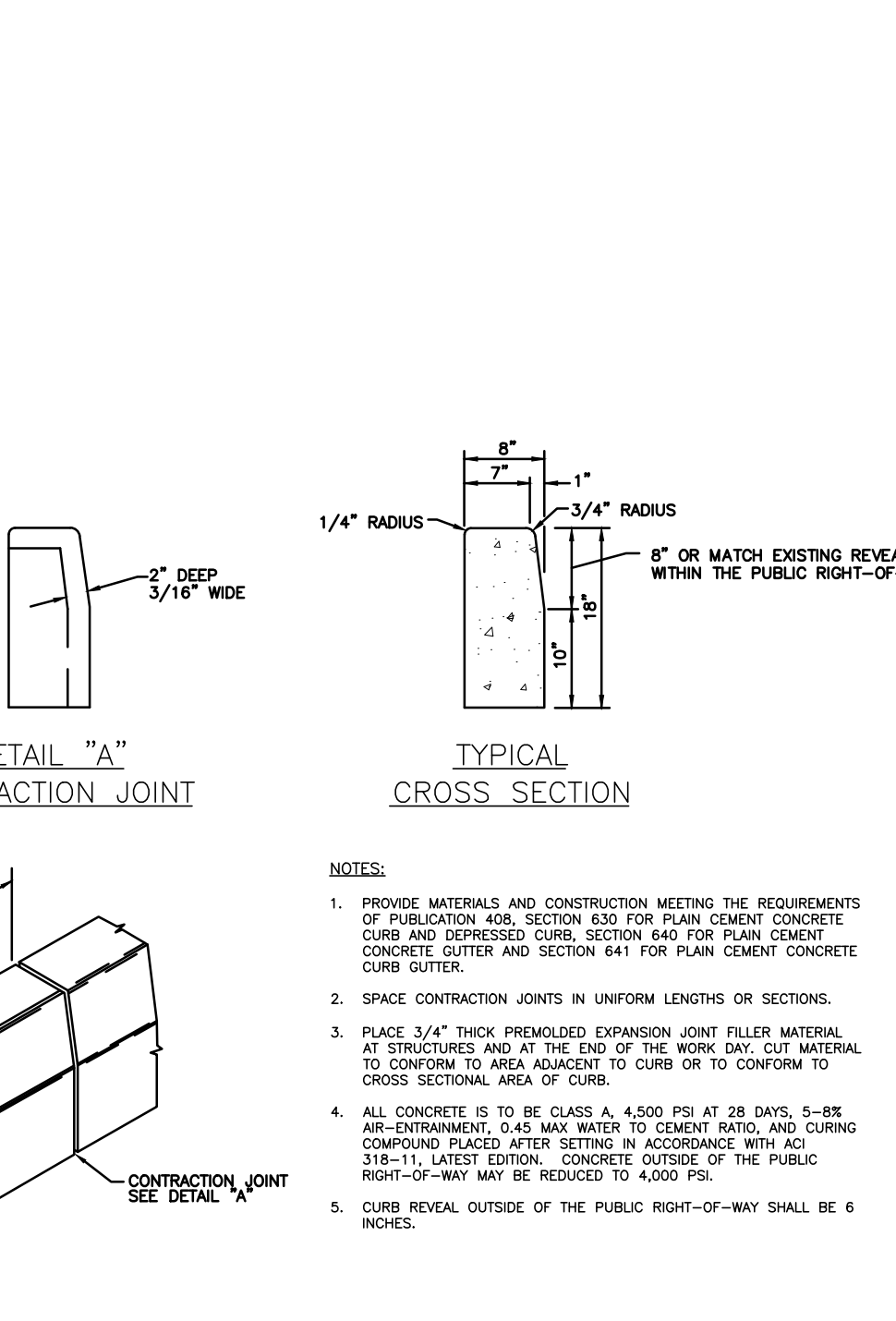
ROADWAY RESTORATION DETAIL
N.T.S.



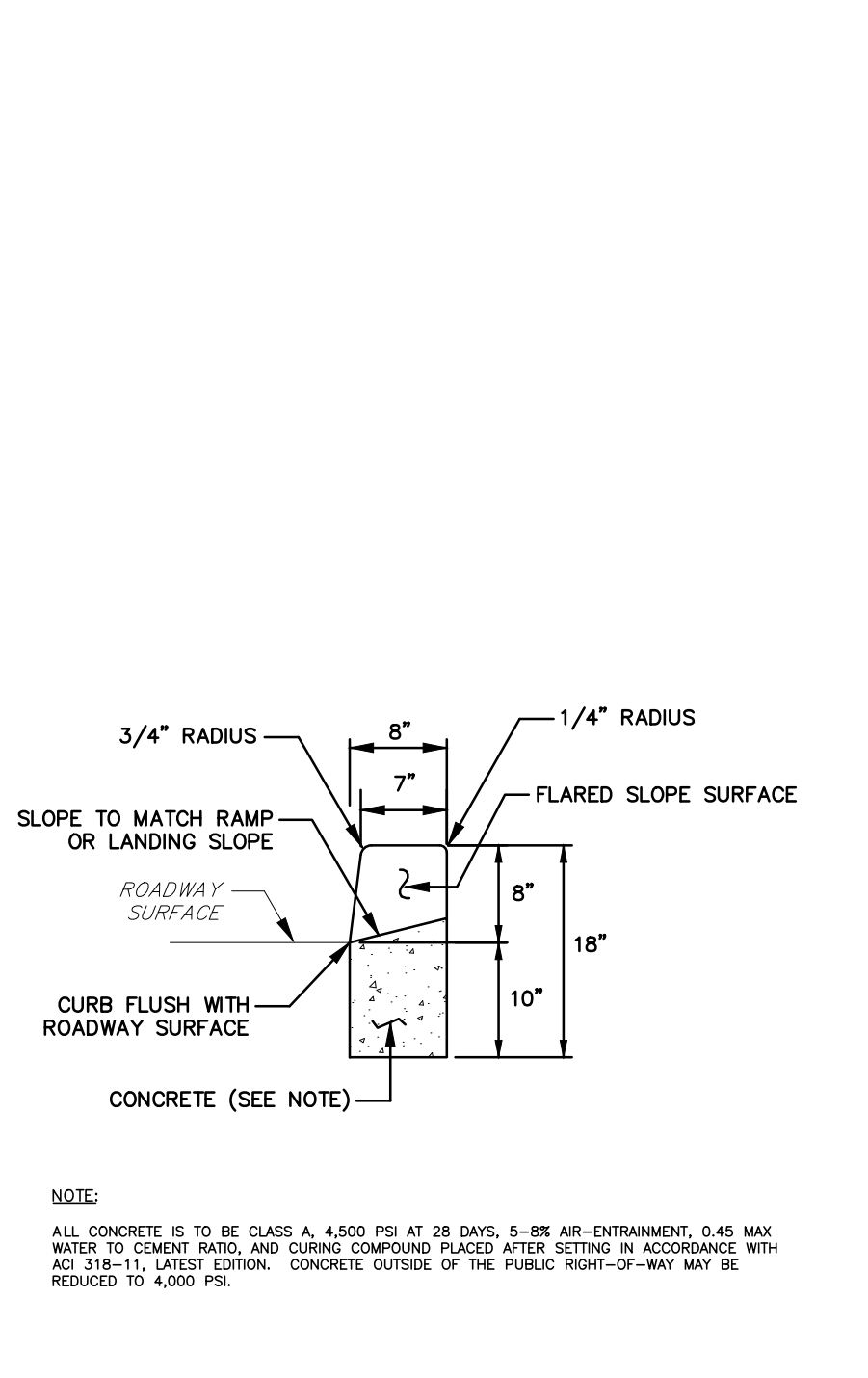
PARKING LAYOUT AND STRIPING DETAIL
N.T.S.



PAVEMENT RESURFACING DETAIL (MILL & OVERLAY)
N.T.S.



PLAIN CEMENT CONCRETE CURB
N.T.S.



DEPRESSED CURB FOR CURB RAMP
N.T.S.



TYPE 4A CURB RAMP
N.T.S.



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NO.	REVISION	DATE	BY / CHK

CONSTRUCTION DETAILS
PENNSBURGH SCHOOL DISTRICT
ADMINISTRATION BUILDING
ELEVATOR LOBBY ADDITION
FALLS TOWNSHIP BUCKS COUNTY PENNSYLVANIA
DRAWN BY: JMB DESIGN BY: LMC CHECKED BY: CJF SCALE: AS NOTED
DATE: 7/15/2020 SHEET NO.: 10 OF 15
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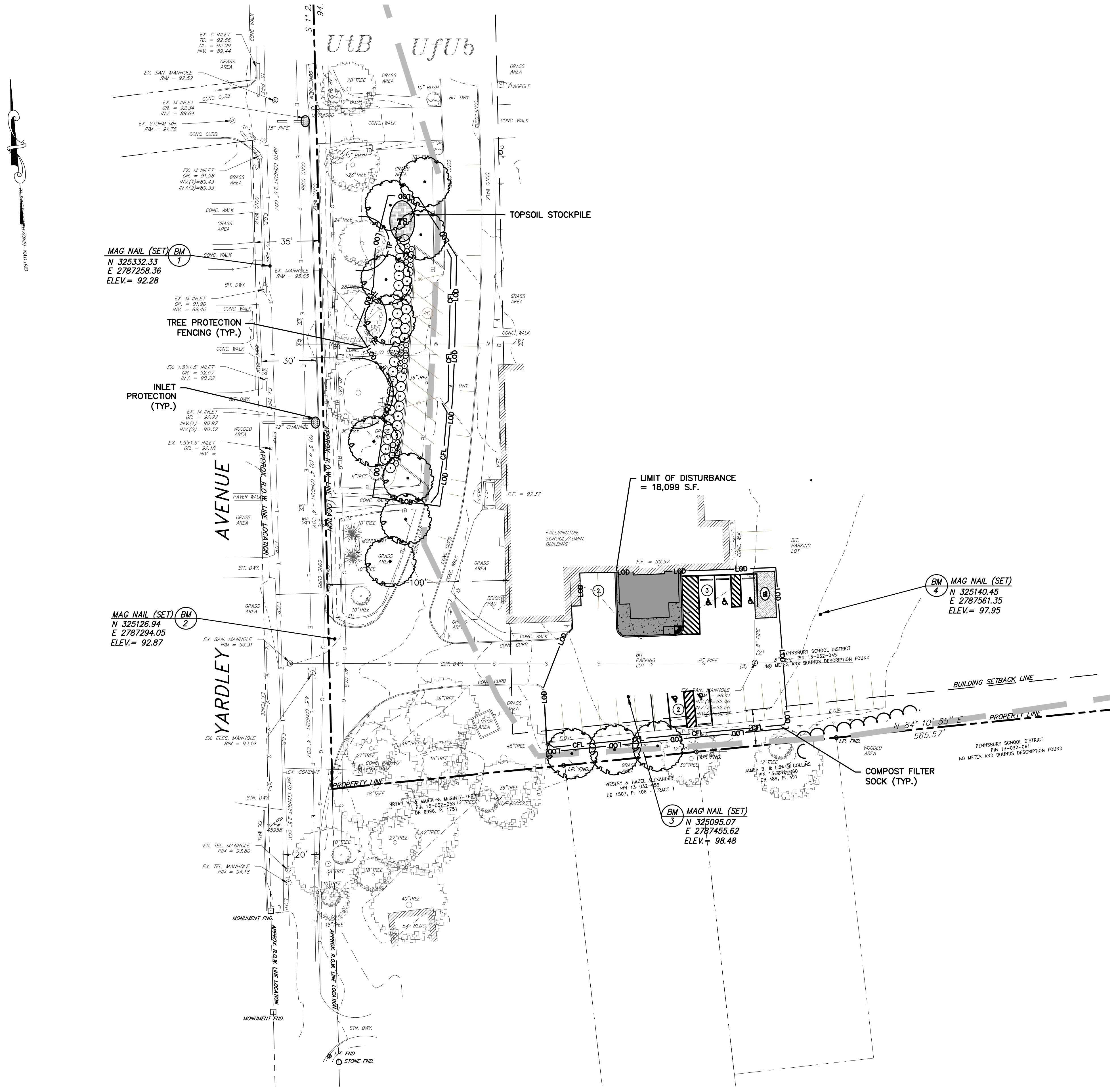
DATE: 7/15/2020
CHRISTOPHER J. FAZIO
 PROFESSIONAL ENGINEER NO. PE0055338-E
 PENNSYLVANIA

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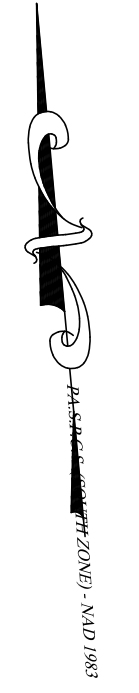
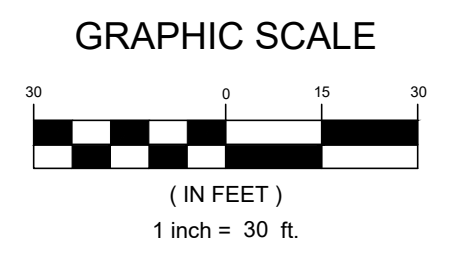
EROSION & SEDIMENT CONTROL PLAN
 PENNSYLVANIA SCHOOL DISTRICT
 ADMINISTRATION BUILDING
 ELEVATOR LOBBY ADDITION
 FALLS TOWNSHIP
 BUCKS COUNTY
 PENNSYLVANIA

DRAWN BY	DESIGN BY	CHECKED BY	SCALE
JMB	LMC	CJF	AS NOTED
DATE:	7/15/2020	SHEET No.:	11 of 15
JOB No.:	P081X010		



LEGEND

- LOD ——— LIMIT OF DISTURBANCE / NPDES BOUNDARY
- CFL ——— COMPOST FILTER LOG (18")
- TP ——— TREE PROTECTION FENCE
- INLET PROTECTION DEVICE
- TS ——— TEMPORARY STOCKPILE
- Soil Boundary & I.D. (BeB2, ByB2)



INTENT OF EROSION & SEDIMENT CONTROL PROGRAM:

THE INTENT OF THIS PROGRAM IS TO PREVENT ACCELERATED EROSION OF THE EXPOSED SITE SOILS DURING THE CONSTRUCTION AND PERMANENT LIFE PERIODS OF THE DEVELOPMENT...

STANDARD EROSION & SEDIMENT CONTROL PLAN NOTES

- 1. ALL EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS, SHALL BE DONE IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLAN (E&S PLAN)...

CONSTRUCTION SEQUENCE NOTES

- 1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE APPROVED E&S PLAN. DEVIATION FROM THE SEQUENCE MUST BE APPROVED BY THE LOCAL CONSERVATION DISTRICT OR PADEP PRIOR TO IMPLEMENTATION...

SEQUENCE OF CONSTRUCTION:

- 1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE APPROVED E&S PLAN. DEVIATION FROM THE SEQUENCE MUST BE APPROVED BY THE LOCAL CONSERVATION DISTRICT OR PADEP PRIOR TO IMPLEMENTATION...

E&S PLAN PLANNING & DESIGN NOTES (102.4(b)(4)):

THE E&S PLAN HAS BEEN DESIGNED TO:

- 1. MINIMIZE EXTENT AND DURATION OF EARTH DISTURBANCE;
2. MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION;
3. MINIMIZE SOIL COMPACTION;

GEOLOGIC FORMATIONS/SOIL CONDITIONS (102.4(b)(5)(xiii)):

THERE ARE NO KNOWN GEOLOGIC/SOIL CONDITIONS ON THE SITE THAT MAY HAVE THE POTENTIAL TO CAUSE POLLUTION.

POTENTIAL THERMAL IMPACTS TO SURFACE WATER (102.4(b)(5)(xiii)):

POTENTIAL THERMAL IMPACTS ARE MITIGATED BY MAINTAINING EXISTING DRAINAGE PATTERNS AND UTILIZING PERIMETER E&S CONTROLS SUCH AS COMPOST FILTER LOG PRIOR TO DISCHARGING AS OVERLAND FLOW OVER VEGETATED AREAS WHICH PROMOTES COOLING.

EROSION AND SEDIMENT CONTROL DEVICES INSPECTION AND MAINTENANCE REQUIREMENTS

NOTE: INSPECTION AND MAINTENANCE ACTIVITIES SHALL BE DOCUMENTED IN A WRITTEN REPORT TO BE MADE AVAILABLE FOR REVIEW UPON REQUEST OF MUNICIPALITY, CONSERVATION DISTRICT OR PADEP.

COMPOST FILTER LOG

THE CONTRACTOR SHALL INSPECT THE COMPOST FILTER LOG WEEKLY AND AFTER EVERY RAINFALL EVENT. ACCUMULATED SEDIMENT SHALL BE REMOVED AS REQUIRED TO KEEP THE COMPOST FILTER LOG FUNCTIONING...

TEMPORARY STOCKPILE

THE CONTRACTOR SHALL INSPECT THE TEMPORARY TOPSOIL STOCKPILE AFTER EVERY STORM EVENT. IF STOCKPILES ARE LEFT IN PLACE FOR EXTENDED PERIODS, RE-APPLY TEMPORARY SEED AND MULCH AS NEEDED TO PREVENT EROSION.

EROSION CONTROL MATING

THE CONTRACTOR SHALL INSPECT EROSION CONTROL MATING WEEKLY AND AFTER EVERY STORM EVENT. IF MATING BECOMES DAMAGED OR SLIDES, REPAIR IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

INLET PROTECTION DEVICES

THE CONTRACTOR SHALL INSPECT THE INLET PROTECTION DEVICES WEEKLY AND AFTER EACH STORM EVENT. INLET FILTER BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED 50% AS TO CAUSE FLOODING OR BYPASSING OF THE INLET...

SURFACE STABILIZATION CRITERIA:

NOTE: THE FOLLOWING SPECIFICATIONS ARE GENERAL IN NATURE AND ARE ACCEPTABLE FOR MANY SOIL TYPES, HOWEVER, IT IS RECOMMENDED THAT SOIL EVALUATION/TESTING BE DONE PRIOR TO SEEDING AND MULCHING TO DETERMINE PROPER SOIL AMENDMENTS AND APPLICATION RATES FOR THE PROPOSED SEED MIXTURES.

TEMPORARY COVER FOR EXPOSURE PERIODS UP TO 12 MONTHS:

- 1. SEED - RATES BASED ON PURE LIVE SEED
FROM MARCH 15 TO OCTOBER 15: ANNUAL RYEGRASS AT 10 LBS/ACRE (0.23 LB/1,000 SF)
PERENNIAL RYEGRASS AT 15 LBS/ACRE (0.34 LB/1,000 SF)
FROM OCTOBER 16 TO MARCH 14: ANNUAL RYEGRASS AT 10 LBS/ACRE (0.23 LB/1,000 SF)
2. 10-10-10 FERTILIZER: 500 LB/ACRE (12.5 LB/1,000 SF)
3. AGRICULTURAL LIME: 1 TON/ACRE (40 LB/1,000 SF)
4. MULCH: REFER TO MULCH SPECIFICATIONS

PERMANENT COVER FOR EXPOSURE PERIODS OVER 12 MONTHS:

- 1. SEED - RATES BASED ON PURE LIVE SEED
FROM MARCH 15 TO MAY 31 & AUGUST 15 TO OCTOBER 15: KENTUCKY BLUEGRASS AT 25 LBS/ACRE (0.57 LB/1,000 SF)
PERENNIAL RYEGRASS AT 15 LBS/ACRE (0.34 LB/1,000 SF)
FROM JUNE 1 TO AUGUST 14 AND OCTOBER 16 TO MARCH 14: USE TEMPORARY COVER AND RESEED WITH PERMANENT COVER FROM MARCH 15 TO MAY 31 AND AUGUST 15 TO OCTOBER 15.
2. 10-10-10 FERTILIZER: 1,000 LB/ACRE (25 LB/1,000 SF)
3. AGRICULTURAL LIME: 6 TONS/ACRE (240 LB/1,000 SF)
4. MULCH: REFER TO MULCH SPECIFICATIONS
5. SOOD: INSTALL WHERE SPECIFIED ON THE PLANS AND/OR WHERE DESIRED. FOR SPECIFICATIONS AND INSTALLATION PROCEDURES, REFER TO PENNDOT PUBLICATION 408, SECTION 809.

TOP SOIL SPECIFICATIONS:

GRADED AREAS SHOULD BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREAS AND TO PROVIDE A ROUGHENED SURFACE TO PREVENT TOPSOIL FROM SLIDING DOWN...

SEED

Table with 2 columns: SEED, MIN. % PASSING. Rows for 2 inches, 4, and 10.

MULCH SPECIFICATIONS:

ALL SEEDED AREAS SHALL BE MULCHED OR BLANKETED TO MINIMIZE THE POTENTIAL FOR FAILURE TO ESTABLISH AN ADEQUATE VEGETATIVE COVER. MULCHING MAY ALSO BE USED AS A TEMPORARY STABILIZATION OF SOME DISTURBED AREAS IN NON-GERMINATING PERIODS.

EROSION CONTROL MATING SPECIFICATIONS:

NORTH AMERICAN GREEN MODEL S150, OR APPROVED EQUAL, SHALL BE USED ON SLOPES EQUAL TO OR STEEPER THAN 3:1 (H:V), OR AT LOCATION SHOWN ON THE PLAN. MATING, INCLUDING STAPLE PATTERN, SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.

Table with 4 columns: SYMBOL, NAME, HYDROLOGIC SOIL GROUP, ASSUMED INFILTRATION RATE. Rows for U6/B and U/B.

Table with 3 columns: CATEGORY, REASON FOR LIMITATION, RESOLUTION. Rows for SMALL COMMERCIAL BUILDINGS, LOCAL ROADS AND STREETS, SHALLOW EXCAVATIONS, SURFACE WATER MANAGEMENT SYSTEMS, EMBANKMENTS, LAWN AND LANDSCAPING, ROADFILL SOURCE.

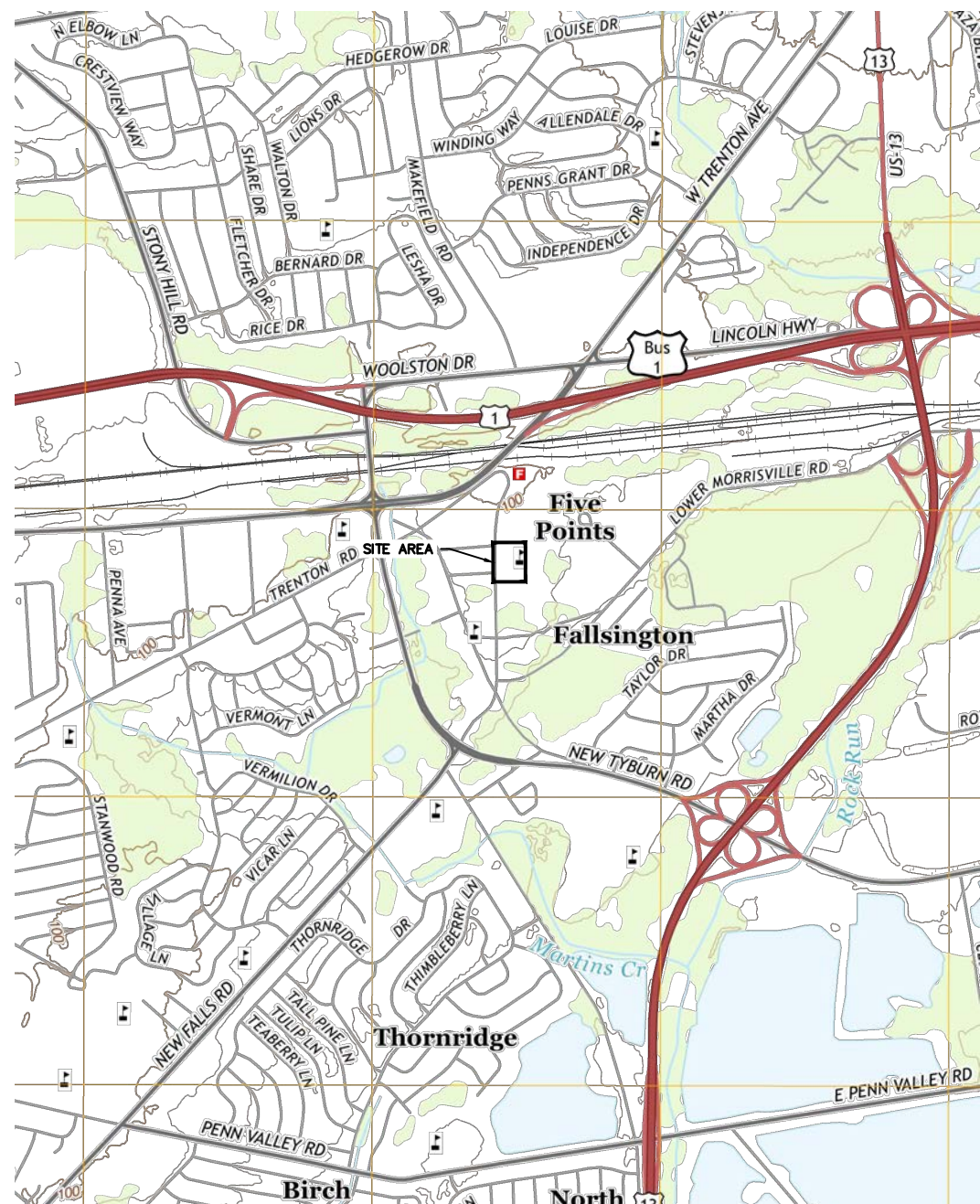
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Professional Engineer seal for Christopher J. Fazio, License No. PE0055339-E.

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Table with 2 columns: DATE, REVISION. Includes a grid for tracking changes.

EROSION & SEDIMENT CONTROL NOTES title block. Includes project name: ADMINISTRATOR BUILDING ELEVATOR LOBBY ADDITION, location: FALLS TOWNSHIP, PENNSYLVANIA, and drawing details.



USGS MAP SCALE: 1" = 2,000 FEET

