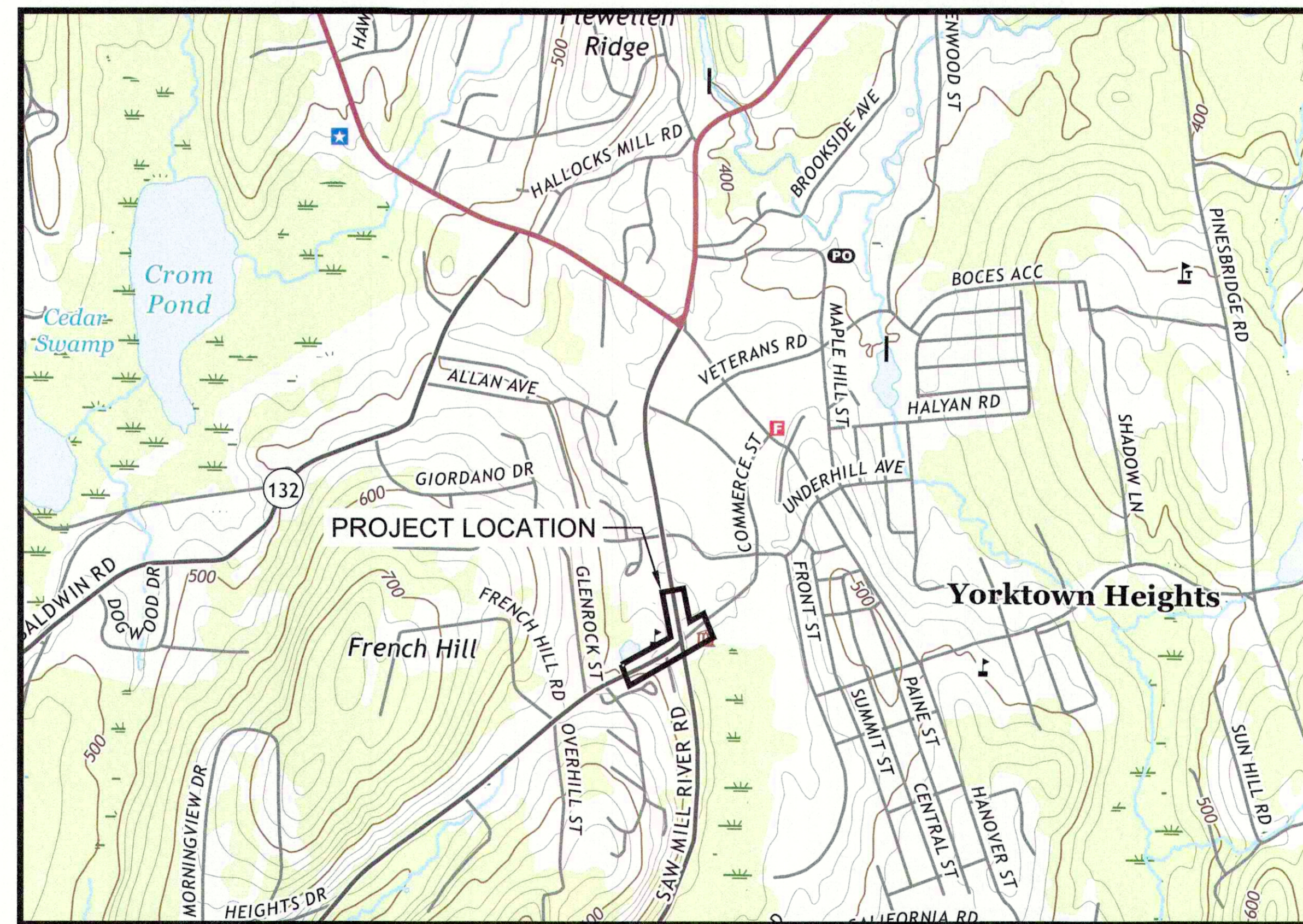


HIGHWAY IMPROVEMENT PLANS FOR UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092) NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK STATE

DESIGN TRAFFIC DATA NYS ROUTE 118	
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL
A.A.D.T.	3,862
POSTED SPEED LIMIT	40 MPH
DESIGN SPEED	45 MPH

DESIGN TRAFFIC DATA UNDERHILL AVENUE (WEST OF NYS ROUTE 118)	
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL
A.A.D.T.	9,132
POSTED SPEED LIMIT	40 MPH
DESIGN SPEED	45 MPH

DESIGN TRAFFIC DATA UNDERHILL AVENUE (EAST OF NYS ROUTE 118)	
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL
A.A.D.T.	5,540
POSTED SPEED LIMIT	30 MPH
DESIGN SPEED	35 MPH



KEY MAP

SCALE: 1" = 1000'

SOURCE: NEW YORK STATE GEOGRAPHIC INFORMATION SYSTEM (GIS)

THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS,
LATEST REVISION, TO GOVERN.

STANDARD SPECIFICATION §106-11 BUY AMERICA SHALL APPLY.

NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SHEETS DATED,
LATEST REVISION, ARE APPLICABLE TO THIS PROJECT.

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

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REV	DATE	DESCRIPTION	DRAWN BY	DATE	DESCRIPTION
1	4/24/24	REVISED PER NYS DOT COMMENTS RECEIVED 3/19/24	M.J.A.		
2	4/26/24	REVISED PER NYS DOT 4/26/24 COMMENTS	J.P.A.		
3	5/14/24	REVISED PER NYS DOT 5/14/24 COMMENTS	M.J.A.		



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PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE IMPROVEMENTS
(SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

TOWN OF YORKTOWN
WESTCHESTER COUNTY
NEW YORK

WESTCHESTER
400 Columbus Avenue,
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Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN
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SURVEYING, P.C.

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/8/23	M.J.A.	R.G.D.
PROJECT NUMBER:	DRAWING NAME:		
20006297A	R-PL01-COVR		

APPROVED
Resolution Number 22-13
Date July 17, 2023

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
CS-01

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

GENERAL NOTES

1. TOPOGRAPHIC SURVEY INFORMATION HAS BEEN OBTAINED FROM A SURVEY PREPARED BY COLLIER'S ENGINEERING & DESIGN, CT P.C., DATED 11/20/23. NYS DOT RECORD PLANS RC 58-097 MAY ALSO BE MADE AVAILABLE TO THE CONTRACTOR UPON REQUEST.
2. MATERIAL AND CONSTRUCTION SPECIFICATIONS: NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (US CUSTOMARY) CURRENT REVISION OFFICIALLY ADOPTED AS OF THE EFFECTIVE LETTING DATE, EXCEPT AS MODIFIED IN THE CONTRACT DOCUMENTS.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES, EXISTING STRUCTURE LOCATIONS AND OTHER EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE FOR FURTHER RESOLUTION.
4. THE CONTRACTOR SHALL COMPLETE SURVEY TASKS (I.E. STATION ROADWAY, MARK OUT EXISTING/PROPOSED RIGHT-OF-WAY LINES, MARK OUT UTILITIES, SURVEY MANHOLES, VALVES, AND CATCH BASINS REQUIRING ADJUSTMENT TO PROVIDE A SMOOTH RIDING SURFACE AND PROMOTE PROPER DRAINAGE, ETC.) AS DIRECTED BY THE ENGINEER PRIOR TO BEGINNING ANY CONSTRUCTION WORK. PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM 625.01. ALL SURVEY NOTES FOR EACH LOCATION SHALL BE SUBMITTED TO THE ENGINEER.
5. THE CONTRACTOR SHALL BE AWARE THAT OTHER CONTRACTORS MAY BE WORKING IN THE AREA ON OTHER CONSTRUCTION AT THE SAME TIME THAT WORK IS PERFORMED UNDER THIS CONTRACT. THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE PROJECT WORK WITH OTHER CONTRACTORS AND SHALL SCHEDULE ITS OPERATIONS SO AS TO CAUSE A MINIMUM DISRUPTION TO TRAFFIC.
6. THIS PROJECT INVOLVES CONSTRUCTION WITHIN AN ACTIVE ROADWAY. WORK SHALL BE PERFORMED SO AS TO ENSURE THAT PROPER TRAFFIC FLOW IS MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE WORK ZONE TRAFFIC CONTROL IN ACCORDANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) INCLUDING NEW YORK STATE SUPPLEMENT, THE CONTRACT DOCUMENTS AND AS DIRECTED BY THE ENGINEER.
7. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS AND SHALL BE RESPONSIBLE FOR FIELD FIT FINISH AND QUALITY OF WORK AND MATERIAL USED IN THE CONSTRUCTION. NO ALLOWANCE SHALL BE MADE ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS PART.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT AND RESTORATION OF ALL NATURAL AND MANMADE FEATURES WHETHER SHOWN ON THE PLANS OR ENCOUNTERED IN THE FIELD. IT IS THE INTENTION OF THE PLANS TO SHOW ONLY MAJOR FEATURES TO BE PROTECTED, RESTORED, OR REPLACED.
9. PROTECTION AND RESTORATION OF PROPERTY SHALL BE IN ACCORDANCE WITH THE NYS DOT STANDARD SPECIFICATIONS.
10. TOPSOIL (ITEM 610.1402 - TOPSOIL ROADSIDE) SHALL BE PLACED, AND AREAS SHALL BE SEEDED (ITEM 610.1601 - TURF ESTABLISHMENT ROADSIDE) AS SOON AS FINAL GRADES ARE ESTABLISHED ON PERMANENT SLOPES. SLOPES SHALL BE MULCHED (ITEM 209.100101 - MULCH TEMPORARY).
11. THE CONTRACTOR SHALL CONTACT ALL THE APPROPRIATE PARTIES WITH JURISDICTION OVER THE UTILITIES ENTERING ON OR NEAR THE PROJECT AREA PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES AND PROVIDE THOSE AGENCIES 72-HOURS NOTIFICATION.
12. THE CONTRACTOR SHALL VERIFY THE LOCATION OF AND SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE UNDERGROUND AND SURFACE UTILITIES AND STRUCTURES AT OR ADJACENT TO THE SITE OF CONSTRUCTION, IN SO FAR AS THEY MAY BE ENDANGERED BY HIS OPERATIONS. THIS SHALL HOLD TRUE WHETHER OR NOT THEY ARE SHOWN ON THE CONTRACT DRAWINGS. IF THEY ARE SHOWN ON THE DRAWINGS, THEIR LOCATIONS ARE NOT GUARANTEED EVEN THOUGH THE INFORMATION WAS OBTAINED FROM THE BEST AVAILABLE SOURCES, AND IN ANY EVENT, OTHER UTILITIES NOT SHOWN ON THESE PLANS MAY BE ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES THAT HE DAMAGES AND SHALL CONSTANTLY PROCEED WITH CAUTION TO PREVENT UNDUE INTERRUPTION OF UTILITY SERVICES.
13. IF TEMPORARY UTILITY SERVICES ARE REQUIRED, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL FURNISH AND MAINTAIN SUCH SERVICES UNTIL THE ENGINEER DEEMS THEY ARE NO LONGER REQUIRED. THE CONTRACTOR SHALL PROVIDE THE TEMPORARY UTILITY SERVICES AT NO ADDITIONAL COST TO THE PERMITTEE/OWNER. ALL PAVEMENT MARKINGS AND SIGNS SHALL BE IN CONFORMANCE WITH THE MUTCD AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
14. ALL DISTURBED AREAS WITHIN THE ROW SHALL BE RESTORED AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE MADE UNDER ITEM 610.1402 - TOPSOIL ROADSIDE, ITEM 610.1601 - TURF ESTABLISHMENT ROADSIDE AND ITEM 209.100101 - MULCH TEMPORARY.
15. THE CONTRACTOR SHALL INSTALL AND MAINTAIN SOIL EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH §209 OF THE NYS DOT STANDARD SPECIFICATION AND STANDARD SHEETS 209-01 THROUGH 209-07.
16. ALL MATERIALS, SHOP, ERECTION, DEMOLITION, TEMPORARY STRUCTURE, PROCEDURAL AND OTHER DRAWINGS WHICH NEED NYS DOT APPROVAL SHALL BE SUBMITTED TO THE ENGINEER FOR DISTRIBUTION TO THE APPROPRIATE APPROVAL OFFICE. THIS INCLUDES DRAWINGS FROM FABRICATORS AND PRE-CASTERS. THE CONTRACTOR IS CAUTIONED NOT TO ORDER EQUIPMENT AND/OR MATERIALS UNTIL THE REQUIRED DRAWINGS ARE APPROVED IN WRITING.

EXCAVATION SPECIAL NOTES

1. TRANSVERSE UTILITY CROSSINGS UNDER NYS DOT PAVEMENT SHALL BE A MINIMUM OF FIVE (5) FEET BETWEEN THE TOP OF THE PAVEMENT AND THE TOP OF UTILITY.
2. LONGITUDINAL UTILITY RUNS, OUTSIDE THE PAVEMENT LIMITS MUST BE A MINIMUM OF THREE (3) FEET FROM TOP OF GRADE TO TOP OF UTILITY. THE PAVEMENT LIMITS ARE 50 FEET FROM THE HIGHWAY CENTER LINE.
3. LONGITUDINAL UTILITY RUNS SHOULD BE KEPT AS CLOSE TO THE RIGHT OF WAY LINE OR AS FAR FROM THE PAVEMENT AS POSSIBLE.
4. ANY EXCAVATION WHICH EXCEEDS FIVE FEET IN DEPTH AND HAS LIVE TRAFFIC OR UTILITIES WITHIN 14:1H PROJECTION FROM THE BOTTOM EXCAVATION SHALL UTILIZE A SHEETING/SHORING SYSTEM WHICH PROVIDES DIRECT CONTACT AND SUPPORT OF THE EXCAVATION SIDES (A TRENCH BOX DOES NOT MEET THESE REQUIREMENTS). THE CONTRACTOR SHALL PROVIDE VERIFICATION (I.E. MANUFACTURER'S DATA SHEETS AND/OR P.E. DESIGN COMPUTATIONS) TO THE ENGINEER DEMONSTRATING THAT THE SYSTEM CHOSEN CAN ACCOMMODATE THE ANTICIPATED SOIL WATER, TRAFFIC AND SURCHARGE LOADINGS. PAYMENT SHALL BE MADE UNDER ITEM 552.17 - SHIELDS AND SHORING AS SPECIFIED IN THE CONTRACT DOCUMENTS
5. DESIGN DOCUMENTS FOR PREFABRICATED "SHEETING BOX," WHERE USED, SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK.

EXISTING UTILITIES

1. THE UTILITY LOCATION QUALITY LEVEL LABELING CONVENTION SHOWN ON THE PLANS DOES NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS UNDER SECTIONS 660 THROUGH 680 OF THE STANDARD SPECIFICATIONS.

THE QUALITY LEVEL DEFINITIONS ARE:

QUALITY LEVEL A - THE HIGHEST DEGREE OF ACCURACY; THE UTILITY INFORMATION ON THE CONTRACT PLANS HAS BEEN FIELD LOCATED AND VERIFIED BY EXCAVATION, WHEN APPROPRIATE. (SHOWN AS QLA)

QUALITY LEVEL B - SUBSURFACE GEOPHYSICAL LOCATING TECHNIQUES (THAT IS, UNDERGROUND CAMERAS, RADAR, SONAR, TONE OUTS, ETC.) AND EXISTING RECORD PLANS HAVE BEEN USED TO LOCATE UTILITIES. NO EXCAVATIONS WERE PERFORMED. (SHOWN AS QLB)

QUALITY LEVEL C - RECORD INFORMATION PROVIDED BY UTILITY OWNERS WAS PLOTTED ON THE CONTRACT PLANS. DEPTHS WERE NOT FIELD VERIFIED. PHYSICAL SURFACE FEATURES LIKE MANHOLES, VALVE BOXES AND HYDRANTS HAVE BEEN FIELD LOCATED. (SHOWN AS QLC)

QUALITY LEVEL D - EXISTING NYS DOT AND UTILITY COMPANY RECORDS WERE USED TO LOCATE SUBSURFACE UTILITIES. (SHOWN AS QLD)

THE UTILITY QUALITY LEVELS FOR ALL PLAN SHEETS IN THIS CONTRACT ARE AS FOLLOWS:

UTILITIES	QUALITY LEVEL
ELECTRIC	QLD
GAS	QLD
TELEPHONE	QLD
CABLE TV	QLD
SEWER	QLD
DRAINAGE	QLD
NYS DOT LIGHTING	QLD
WATER	QLD

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR, UNDER PART 753 OF THE NEW YORK STATE INDUSTRIAL CODE, TO DETERMINE THE EXACT LOCATION OF THE UNDERGROUND FACILITIES PRIOR TO WORKING IN THE AREA. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR IS ALERTED TO THE FACT THAT THE PROVISIONS OF NEW YORK STATE INDUSTRIAL CODE, PROTECTION OF UNDERGROUND FACILITIES, APPLY TO THIS PROJECT. NO DIRECT PAYMENT FOR ANY WORK REQUIRED BY THE CODE WILL BE MADE WHERE EXISTING UTILITIES ARE LOCATED WITHIN THE CONTRACT LIMITS. THE CONTRACTOR SHALL PROVIDE AT LEAST 72 HOURS NOTICE BEFORE PERFORMING ANY WORK AT OR NEAR UNDERGROUND FACILITIES. THE CONTRACTOR WILL BE RESPONSIBLE FOR ASSERTING THE ACTUAL LOCATION OF ALL UTILITIES NOT MARKED OUT THROUGH THE ONE CALL CENTER.
4. ALL EXISTING UTILITIES WITHIN THE LIMITS OF THE WORK ZONE WILL BE SERVICED AND MAINTAINED BY THE UTILITY COMPANY OR ORGANIZATION HAVING CONTROL AND JURISDICTION THEREOF. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES TO ACCOMMODATE THESE MAINTENANCE REQUIREMENTS. NO SEPARATE PAYMENT IS MADE FOR THIS WORK. THE COST OF THIS EFFORT IS TO BE INCLUDED UNDER THE VARIOUS ITEMS OF THE CONTRACT.
5. THE ENGINEER SHALL BE NOTIFIED A MINIMUM OF 5 WORKING DAYS IN ADVANCE OF ALL COMMUNICATION AND COORDINATION MEETINGS RELATED TO THIS PROJECT BETWEEN THE CONTRACTOR AND ANY UTILITY COMPANY.
6. THE CONTRACTOR IS ADVISED THAT DURING THE COURSE OF THIS WORK IT MAY BECOME NECESSARY TO DETERMINE THE PRESENCE OF EXISTING UNDERGROUND UTILITY TYPE, SIZE, PROXIMITY AND/OR CONDITION BY MEANS OF EXCAVATION WHICH IS NON-DESTRUCTIVE AND IS LOCALIZED AND DOES NOT CAUSE ANY DIRECT OR INDIRECT DAMAGE TO THE EXISTING UTILITY IN ANY WAY. AT ALL SUCH LOCATIONS OR AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL EXCAVATE AND BACKFILL TEST PITS OR EXAMINATION PITS BY HAND AND/OR VACUUM EXCAVATION IN A MANNER THAT IS APPROVED BY THE ENGINEER AND PREVENTS DAMAGE TO THE WRAPPING, COATING OR OTHER PROTECTIVE COVERING OF THE UTILITY LINE. THE SIZE OF THE EXCAVATION SHALL BE SUFFICIENT TO DETERMINE THE PRESENCE OF EXISTING UNDERGROUND UTILITY TYPE, SIZE, PROXIMITY AND/OR CONDITION. THE PAYMENT SHALL BE INCLUDED AT A SET QUANTITY OF 2.5 CY PER TEST HOLE REGARDLESS OF THE SIZE OF THE TEST PIT HOLE.

SIGNING NOTES

1. IF EXISTING SIGNS ARE REMOVED BEFORE THE NEW ONES ARE INSTALLED, TEMPORARY SIGNS SHALL BE PROVIDED AT THESE LOCATIONS. THE REMOVAL OF EXISTING SIGNS THAT ARE BEING REPLACED SHALL BE DIRECTED BY THE ENGINEER. FURNISHING, MOUNTING AND REMOVAL OF TEMPORARY SIGNS SHALL BE INCLUDED IN THE BASIC WORK ZONE TRAFFIC CONTROL ITEM.
2. THE CONTRACTOR SHALL NOT REMOVE EXISTING GROUND-MOUNTED GUIDE SIGNS UNTIL PROPOSED GUIDE SIGNS ARE INSTALLED TO THE SATISFACTION OF THE ENGINEER.

GUIDE RAIL NOTES

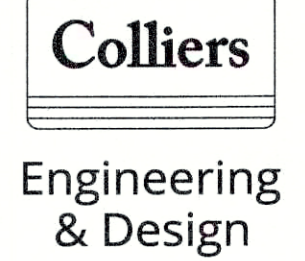
1. THE CONTRACTOR SHALL PROVIDE A SCHEDULE TO THE ENGINEER DETAILING WHEN GUIDE RAIL WILL BE REMOVED AND REPLACED. THE ENGINEER SHALL APPROVE THIS SCHEDULE BEFORE THE CONTRACTOR BEGINS WORK.

WHERE EXISTING GUIDE RAIL OR MEDIAN BARRIER IS TO BE REMOVED OR REPLACED, NO WORK SHALL BEGIN UNTIL THE CONTRACTOR HAS SATISFIED THE ENGINEER THAT ALL MATERIALS, LABOR AND EQUIPMENT ARE AVAILABLE, AND THAT WORK IS SCHEDULED SO THAT IT WILL PROCEED EFFICIENTLY AND WITHOUT INTERRUPTION FROM START TO COMPLETION.

REPLACEMENT OF GUIDE RAIL, MEDIAN RAIL AND/OR BRIDGE RAIL SHALL BE SCHEDULED AND PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND/OR RESTRICTIONS CONTAINED IN THE WORK ZONE TRAFFIC CONTROL NOTES.

2. THE LOCATION AND LENGTHS OF EXISTING GUIDE RAIL RUNS ARE BASED ON THE AVAILABLE SURVEY DATA AND ARE SUBJECT TO FIELD VERIFICATION BY THE CONTRACTOR. TO PROVIDE THE FLEXIBILITY NEEDED TO ADJUST RAIL RUNS TO MEET ACTUAL FIELD CONDITIONS, THE QUANTITIES FOR GUIDE RAIL, MEDIAN RAIL, BRIDGE RAIL, TRANSITION, AND ANCHOR ITEMS SHOULD BE INCREASED BY 5% IN THE CONTRACTOR'S BID PRICE OVER THE QUANTITIES SHOWN IN THE RAIL INSTALLATION TABLES.
4. ALL SHOP CURVE RADII REQUIRED SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
5. GRADING MAY BE REQUIRED PRIOR TO THE INSTALLATION OF RAIL, AS ORDERED BY THE ENGINEER. GRADING OF ROADSIDE AREAS (NON-LAWNS) SHALL BE PAID UNDER ITEM 621.05. CLEAN GRADE AND SHAPE EXISTING ROADWAY SECTION. GRADING OF LAWN AREAS SHALL BE PAID UNDER ITEMS 621.5101010. TRIMMING AND RESHAPING ROADSIDE TURF AREAS. SEEDING WILL BE PAID UNDER THE APPROPRIATE ITEM FOR ESTABLISHING TURF.
6. IN AREAS WHERE A FIXED OBJECT (I.E. UTILITY POLE OR CULVERT) IS LOCATED IN THE CLEAR ZONE AND CANNOT FEASIBLY BE RELOCATED OR REMOVED, THE RAIL POST SPACING MUST BE REDUCED TO OBTAIN AN APPROPRIATE RAIL DEFLECTION. IN THE EVENT THIS SITUATION ARISES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO ANY WORK BEING CONDUCTED. THE ENGINEER SHALL PROVIDE THE CONTRACTOR WITH THE REQUIRED POST SPACING. THE CONTRACTOR SHALL BE PAID AS PER TABLE 606-2 OF THE NYS DOT STANDARD SPECIFICATIONS FOR THE REDUCED POST SPACING.
7. NEW POSTS SHALL BE OFFSET FROM THE EXISTING POSTS BY A MINIMUM OF 1 FT. ALL OTHER HOLES SHALL BE BACKFILLED USING EITHER COMPACTED SAND BACKFILL MEETING THE REQUIREMENTS OF NYS DOT STANDARD SPECIFICATION §203-2.021 OR SUITABLE MATERIAL APPROVED BY THE ENGINEER. PAYMENT OF BACKFILLING HOLES WILL BE MADE UNDER THE VARIOUS RAIL ITEMS.
8. IN CASES WHERE SOUND ROCK IS ENCOUNTERED LESS THAN 3-FT BELOW GRADE, THE CONTRACTOR SHALL DRILL A 6-INCH DIAMETER HOLE THE NECESSARY DEPTH TO ACHIEVE A TOTAL POST PENETRATION OF 3-FT BELOW GRADE. THE CONTRACTOR SHALL THEN CUT THE STEEL PLATE OFF THE POSTS, FILL THE HOLE WITH SAND BACKFILL MEETING THE REQUIREMENTS OF NYS DOT STANDARD SPECIFICATION §203-2.021, AND DRIVE THE POST TO THE REQUIRED DEPTH. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE RESPECTIVE GUIDE RAIL ITEMS.
9. WHERE PROPOSED EQUIPMENT IS TO BE INSTALLED BEHIND EXISTING GUIDE RAIL, BEFORE INSTALLING ANY PROPOSED EQUIPMENT, THE CONTRACTOR SHALL EVALUATE EXISTING GUIDE RAIL AND IS TO AGREE WITH THE ENGINEER TO INSTALL EQUIPMENT BEYOND THE DEFLECTION OF THE EXISTING GUIDE RAIL DEFLECTION VALUES SHALL BE PER NYS DOT HDM CHAPTER 10 TABLE 10-3.
10. NEW EXTRA-LONG POST SHALL BE USED WHEREVER EXTRA-LONG POSTS ARE REMOVED, AND IN LOCATIONS DIRECTED BY THE ENGINEER. PAYMENT FOR GUIDE RAIL INSTALLED WITH EXTRA-LONG POSTS WILL BE MADE UNDER THE APPROPRIATE ITEMS.
 - ITEM 606.1001, BOX BEAM GUIDE RAILING WITH EXTRA LONG POSTS
 - ITEM 606.100102, BOX BEAM GUIDE RAILING WITH EXTRA LONG POSTS (SHOP BENT OR SHOP MITERED)
 - ITEM 606.100103, BOX BEAM GUIDE RAILING WITH EXTRA LONG POSTS (SHOP MITERED)
 - ITEM 606.1801, MODIFIED G2 WEAK-POST CORRUGATED BEAM GUIDE RAIL WITH EXTRA LONG POSTS
 - ITEM 606.180101, MODIFIED G2 WEAK-POST CORRUGATED BEAM GUIDE RAIL WITH EXTRA LONG POSTS (SHOP CURVED)

3% OF THE PAYMENT LENGTH OF EACH RAIL TYPE TO BE REMOVED, RESET, INSTALLED AS NEW SHALL BE ESTIMATED BY THE CONTRACTOR TO UTILIZE EXTRA-LONG POSTS AND INCLUDED IN THE CONTRACTOR'S BID PRICE.
11. THE CONTRACTOR SHALL REMOVE TREES, BRUSH AND VEGETATION BEHIND THE NEWLY INSTALLED GUIDE RAIL FOR A DISTANCE OF AT LEAST 1-FT MORE THAN THE STANDARD DEFLECTION DISTANCE SHOWN IN TABLE 619.5. GUIDE RAIL AND TEMPORARY CONCRETE BARRIER STANDARD DEFLECTION DISTANCES, IN NYS STANDARD SPECIFICATION §619. REMOVAL OF TREES, BRUSH AND VEGETATION SHALL BE PERFORMED BY CUTTING THE TREES, BRUSH AND/OR VEGETATION AS CLOSE TO THE GROUND AS PRACTICAL. THERE SHALL BE NO GRUBBING OF VEGETATION OR STUMPS CAUSING SOIL DISTURBANCE UNLESS OTHERWISE SPECIFIED IN THE CONTRACTOR DOCUMENTS OR DIRECTED BY THE ENGINEER. ALL WOOD, BRUSH AND OTHER DEBRIS RESULTING FROM THE WORK SHALL BE DISPOSED AS DESCRIBED IN THE NYS DOT STANDARD SPECIFICATION §201-3.03, DISPOSAL. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID.
12. THE CONTRACTOR SHALL INSTALL SNOWPLOWING MARKERS AT EACH GUIDE RAIL RUN IN ACCORDANCE WITH THE APPROPRIATE STANDARD SHEET(S). SNOW PLOWING MARKERS SHALL BE GREEN.
13. WHERE THE EXISTING ASPHALT VEGETATION CONTROL STRIP OR GUTTER IS DAMAGED BY RAIL REMOVAL OPERATIONS, THE CONTRACTOR SHALL REMOVE THE DAMAGE ASPHALT AND REPAIR THE VEGETATION CONTROL STRIP USING ITEM 608.020102, HOT MIX ASPHALT (HMA) SIDEWALKS, DRIVEWAYS AND BICYCLE PATHS, AND VEGETATION CONTROL STRIP OR GUTTER USING ITEM 624.020101, ASPHALT CONCRETE GUTTERS.



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REV	DATE	DESCRIPTION
1	4/29/24	ISSUED PER NYS DOT COMMENTS RECEIVED 3/19/24
2	4/29/24	REVISED PER NYS DOT 4/25/24 COMMENTS.
3	5/14/24	REVISED PER NYS DOT 5/24/24 COMMENTS.



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PRELIMINARY HIGHWAY IMPROVEMENT PLANS FOR UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE
TOWN OF YORKTOWN
WESTCHESTER COUNTY
NEW YORK



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APPROVED
Resolution Number 23-13
Date July 17, 2023

GENERAL NOTES

SHEET NUMBER: GN-01

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

WORK ZONE TRAFFIC CONTROL NOTES

1. GENERAL
THE CONTRACTOR SHALL MAINTAIN TRAFFIC THROUGHOUT THE LENGTH OF THE CONTRACT IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 619 OF THE NYS DOT STANDARD SPECIFICATIONS, MUTCD AND THE CONTRACT DOCUMENTS, WHERE PROVIDED, OR AS ORDERED BY ENGINEER (A.O.B.E.)

2. CONSTRUCTION EQUIPMENT & MATERIALS
CONTRACTOR EQUIPMENT, WHEN NOT IN USE, AND MATERIALS AWAITING INSTALLATION SHALL BE PROPERLY STORED, STOCKPILED, AND SITED IN A PROTECTED LOCATION (I.E., BEHIND A PHYSICAL BARRIER OR IN SUCH A MANNER THAT HORIZONTAL CLEARANCE OF AT LEAST 30 FEET IS PROVIDED FROM THE OUTSIDE EDGE OF THE TRAVELED WAY) AND SHALL NOT CONSTITUTE A TRAFFIC HAZARD NOR INTERFERE WITH DRAINAGE COURSES. MATERIALS OR EQUIPMENT SHALL NOT BE LEFT IN FRONT OF OR WITHIN THE DEFLECTION DISTANCE BEHIND GUIDE RAIL AND SAFETY APPURTENANCES SO AS TO COMPROMISE THEIR PERFORMANCE.

3. PARKING VEHICLES
PRIVATE VEHICLES OWNED BY THE CONTRACTOR AND ITS EMPLOYEES SHALL NOT BE PARKED ON THE PAVEMENT OR SHOULDERS, OR ANY OTHER AREAS DEEMED BY THE ENGINEER TO BE HAZARDOUS LOCATIONS.

4. WORK ZONES
WORK ZONES SHALL BE LIMITED TO ONE SIDE OF THE TRAVELED WAY AT A TIME, UNLESS APPROVED BY THE ENGINEER. WORK ZONES ON OPPOSITE SIDES OF THE ROAD SHALL NOT OVERLAP. A WORK ZONE IS DEFINED AS THE AREA IN WHICH TRAFFIC IS RESTRICTED BECAUSE OF CONSTRUCTION ACTIVITIES OR THAT AREA WHICH INVOLVES A DROP-OFF NEXT TO THE PAVEMENT. IN SPECIAL CASES THE LONGITUDINAL DISTANCE BETWEEN WORK ZONES OR THE LENGTH OF THE WORK ZONE MAY BE LIMITED BY THE ENGINEER.

5. OVERLAPPING WORK AREAS
THE CONTRACTOR SHALL COORDINATE HIS WORK SO THERE IS NO CONFLICT IN CONSTRUCTION SIGNING IN OVERLAPPING WORK AREAS AND SO THAT LANE CONTINUITY IS MAINTAINED BETWEEN WORK AREAS. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ANY OTHER CONTRACTORS, PUBLIC MAINTENANCE, OR UTILITIES COMPANY'S OPERATIONS IN THE AREA TO ENSURE PROPER WORK ZONE TRAFFIC CONTROL.

6. CONES, DRUMS, BARRICADES AND MARKERS
CHANNELIZING DEVICES AND THEIR PLACEMENT SHALL CONFORM WITH THE REQUIREMENTS OF NYS DOT STANDARD SPECIFICATION §619-3.02 AND THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL MAKE CERTAIN PLACEMENT OF THE CONES, DRUMS, AND MARKERS OR BARRICADES SHALL NOT INTERFERE WITH SIGHT DISTANCE.

7. VEHICLE RESTRICTIONS
WHENEVER CONSTRUCTION CONDITIONS RESTRICT PASSAGE BY OVERSIZED VEHICLES, THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE REGIONAL PERMIT ENGINEER. THE NOTICE SHALL INCLUDE THE EXACT LOCATION, NATURE AND MAXIMUM ALLOWABLE WIDTH, WEIGHT AND OTHER FACTORS. THIS WRITTEN NOTICE SHALL BE GIVEN ONE WEEK PRIOR TO THE BEGINNING OF THE RESTRICTION. VERBAL NOTICE SHALL BE GIVEN UPON TERMINATION OF THE RESTRICTION.

8. TAPER LENGTHS
TAPER LENGTHS FOR CLOSURES AND LATERAL SHIFTS OF TRAVEL LANES SHALL CONFORM TO STANDARD SHEET 619-011 TABLE 011-02 BASED ON THE PRECONSTRUCTION POSTED SPEED LIMIT OF 40 MPH OR AS DIRECTED BY THE ENGINEER.

9. TEMPORARY PAVEMENT MARKINGS
THE CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, USING PATTERNS AND COLORS SHOWN IN THE MUTCD TO ESTABLISH TEMPORARY TRAFFIC PATTERN(S) DURING CONSTRUCTION ON ANY PAVEMENT, INCLUDING MILLED OR GROOVED SURFACE, RESURFACED, NEW PAVEMENT, OR OTHER PAVED SURFACE WITHOUT PAVEMENT MARKINGS, FOR A MAXIMUM OF 14 CALENDAR DAYS. THIS SHALL INCLUDE AT ALL APPROPRIATE LOCATIONS, EDGE LINES, LANE LINES, (SOLID OR BROKEN), CHANNELIZING LINES, DOTTED LINES, PLUS ANY MARKINGS ORDERED BY THE ENGINEER. ALL MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE NYS DOT STANDARD SPECIFICATION §619-3.06 AND THE MUTCD AND SHALL INDICATE ACTUAL CONDITIONS AT ALL TIMES.

TRAFFIC PAINT NEED NOT BE REMOVED BEFORE PLACING A SUBSEQUENT PAVEMENT COURSE. REMOVABLE PAVEMENT TAPE, REMOVABLE WET-NIGHT REFLECTIVE TAPE, TEMPORARY OVERLAY MARKERS AND REMOVABLE RAISED PAVEMENT MARKERS SHALL BE REMOVED BEFORE PLACING A SUBSEQUENT PAVEMENT COURSE AT NO ADDITIONAL COST TO THE STATE.

TEMPORARY PAVEMENT MARKING STRIPES SHALL BE A MINIMUM OF 4 INCHES IN WIDTH. TEMPORARY PAVEMENT MARKINGS SHALL BE APPLIED TO A CLEAN, DRY PAVEMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. HATCH LINES AND SYMBOLS WILL NOT BE REQUIRED AS TEMPORARY PAVEMENT MARKINGS UNLESS REQUIRED BY THE CONTRACT DOCUMENTS.

10. SIGNS
THE CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION SIGNS IN GOOD CONDITION TO ADEQUATELY AND SAFELY INFORM AND DIRECT MOTORISTS, BICYCLISTS, AND PEDESTRIANS. EXISTING AND CONSTRUCTION SIGNS SHALL INDICATE ACTUAL ROADWAY CONDITIONS, AND SHALL BE COVERED, UNCOVERED, CHANGED, RELOCATED, OR REMOVED IMMEDIATELY TO REFLECT CURRENT CONDITIONS AT ALL TIMES AND AT THE DIRECTION OF THE ENGINEER. CONSTRUCTION SIGNS SHALL BE COVERED OR REMOVED WHEN THEY NO LONGER INDICATE ACTUAL CONDITIONS. THE CONTRACTOR SHALL PROVIDE MEASURES TO PROTECT WORKERS DURING PLACEMENT AND REMOVAL OF CONSTRUCTION SIGNS ADEQUATE FOR THE PREVAILING SPEED, VOLUME OF TRAFFIC AND ROADWAY GEOMETRY WHERE THE WORK IS TO OCCUR. SUCH PROTECTION MAY INCLUDE, BUT IS NOT LIMITED TO, THE USE OF FLAGGERS, SPOTTERS, AND SHADOW VEHICLES EQUIPPED WITH TRUCK-MOUNTED OR TRAILER MOUNTED ATTENUATORS, WHERE PEDESTRIAN ACCESS IS PROHIBITED, WORKERS SHALL NOT CROSS OR ENTER TRAVEL LANES OPEN TO TRAFFIC.

ALL SIGNS SHALL BE KEPT CLEAN, MOUNTED AT THE REQUIRED HEIGHT ON ACCEPTABLE SUPPORTS, AND INSTALLED IN THE PROPER POSITION, ALIGNMENT, AND ORIENTATION SO AS TO GIVE MAXIMUM VISIBILITY. CONSTRUCTION SIGNS WILL BE EVALUATED FOR ACCEPTABILITY IN ACCORDANCE WITH THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) QUALITY GUIDELINES FOR WORK ZONE TRAFFIC CONTROL DEVICES. WHEN AUXILIARY PANELS ARE MOUNTED ABOVE OR BELOW A WARNING OR REGULATORY SIGN, THEY SHALL NOT COVER ANY PART OF THE WARNING OR REGULATORY SIGN. SIGNS SHALL BE PLACED SO THAT EACH SIGN IS VISIBLE AT NIGHT, AT THE DESIRED DISTANCE, WITHOUT BEING OBSCURED BY ANOTHER SIGN, EXISTING FEATURES ON THE HIGHWAY, OR FOLIAGE. THE FACES OF STORED SIGNS SHALL NOT BE VISIBLE TO TRAFFIC IN ANY DIRECTION, REGARDLESS OF THE ORIENTATION OF THE SIGN. SIGN PANELS, MOUNTINGS, AND SIGN COVERINGS SHALL BE IN ACCORDANCE WITH NYS DOT STANDARD SPECIFICATIONS §619-3.02H.

11. GUIDE RAIL WORK
ANY FREE ENDS OF GUIDE RAIL SHALL BE PROTECTED FROM IMPACT AT THE DIRECTION OF THE ENGINEER. THE COST OF TEMPORARILY TERMINATING GUIDE RAIL SHALL BE INCLUDED IN THE BASIC WORK ZONE TRAFFIC CONTROL ITEM. WHEN CONSTRUCTION OPERATIONS REQUIRE THE TEMPORARY REMOVAL OF GUIDE RAIL OR MEDIAN BARRIER, OR WHEN EXISTING RAIL WILL BE REMOVED AND REPLACED WITH NEW RAIL, THE CONTRACTOR SHALL SCHEDULE OPERATIONS TO MINIMIZE THE TIME PERIOD THAT RAIL IS NOT INSTALLED. GUIDE RAIL OR MEDIAN BARRIER SHALL BE REPLACED, OR THE LOCATION OTHERWISE PROTECTED WITHIN 14 CALENDAR DAYS.

DURING NON-WORK HOURS WHEN TRAFFIC IS BEING MAINTAINED ON THE FACILITY, ALL TEMPORARY ENDS (FREE ENDS) OF GUIDE RAIL AND MEDIAN BARRIER SHALL BE TEMPORARILY TERMINATED AND MARKED WITH A CHANNELIZING DRUM OR OBJECT MARKER EQUIPPED WITH A TYPE A FLASHING WARNING LIGHT. CORRUGATED BEAM GUIDE RAIL AND MEDIAN BARRIER, AND HEAVY-POST, BLOCKED-OUT, CORRUGATED BEAM GUIDE RAIL AND MEDIAN BARRIER SHALL BE TEMPORARILY TERMINATED BY HAVING THE EXPOSED ENDS (FREE ENDS) DROPPED TO THE GROUND AND PINNED. THE APPROACH ENDS OF BOX BEAM GUIDE RAIL AND MEDIAN BARRIER SHALL BE TEMPORARILY TERMINATED WITH BOX BEAM GUIDE RAIL END ASSEMBLIES UTILIZING TWO SPLICE PLATES AND THE PROPER NUMBER OF BOLTS PER CONNECTION. NO POSTS FOR ANCHORAGES WILL BE REQUIRED. SPECIAL TEMPORARY SPLICE PLATES ARE REQUIRED TO ADAPT BOX BEAM GUIDE RAIL END ASSEMBLIES TO BOX BEAM MEDIAN BARRIERS.

DURING ANY OVERNIGHT PERIOD WHEN EXISTING GUIDE RAIL OR MEDIAN BARRIER IS TEMPORARILY REMOVED, THE CONTRACTOR SHALL INSTALL CHANNELIZING DEVICES IN THE LOCATION WHERE THE GUIDE RAIL OR MEDIAN BARRIER WAS REMOVED IN ACCORDANCE WITH NYS DOT STANDARD SPECIFICATIONS §619-3.02j.6.

FOR EACH CALENDAR DAY WHICH THERE ARE SUBSTANTIAL DEFICIENCIES IN COMPLIANCE WITH THE REQUIREMENTS OF THIS SECTION, NO PAYMENT WILL BE MADE UNDER THE BASIC WORK ZONE TRAFFIC CONTROL ITEM.

11. PRELIMINARY WORK
PRIOR TO THE START OF ANY CONSTRUCTION PHASE, ALL PROPOSED WORK ZONE TRAFFIC CONTROL RELATED WORK FOR THAT PHASE, AS DETERMINED BY THE ENGINEER, SHALL BE COMPLETE. THIS INCLUDES WHERE APPLICABLE, ALL SIGNS, SIGNALS, PAVEMENT MARKINGS, BARRIERS, DELINEATION (CONES, DRUMS, ETC.) PAVEMENT MODIFICATION AND ANY OTHER RELATED WORK.

12. MISCELLANEOUS
IN THE EVENT THE CONTRACTOR SHUTS DOWN HIS OPERATION FOR THE WINTER MONTHS, THE ENTIRE HIGHWAY SYSTEM SHALL BE OPENED TO TRAFFIC. ALL EXISTING SIGNS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND/OR LOCATION AT THE DIRECTION OF THE ENGINEER. ALL CONSTRUCTION SIGNS SHALL BE REMOVED OR COVERED.

ROADWAY AREAS TEMPORARILY CLOSED FOR TRENCH, CULVERT OR CONDUIT EXCAVATION SHALL BE REOPENED AT THE END OF THE WORK SHIFT. WHEN WORK IS NOT IN PROGRESS ALL OPENINGS IN THE ROADWAY SHALL BE COVERED WITH ANCHORED STEEL PLATES OR SHALL BE BACKFILLED IN ACCORDANCE WITH § 680-3.09 TO A DEPTH OF 3 INCHES BELOW THE ADJACENT UNEXCAVATED AREA OR TO A DEPTH AS DIRECTED BY THE ENGINEER. THE TEMPORARY RESTORATION SHALL BE COMPLETED WITH A LAYER OF PLANT BITUMINOUS MATERIAL UP TO THE LEVEL OF THE ADJACENT UNEXCAVATED AREA TO THE SATISFACTION OF THE ENGINEER. THE TEMPORARY RESTORATION SHALL BE MAINTAINED UNTIL ITS REMOVAL AT NO ADDITIONAL COST TO THE OWNER/PERMITTEE. ANY RE-EXCAVATION OF TEMPORARY RESTORATION AREAS SHALL BE INCLUDED IN THE PRICE BID FOR RESPECTIVE EXCAVATION ITEM WITH NO EXTRA PAYMENT.

IF STEEL PLATES ARE USE, THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD OF ANCHORING THE STEEL PLATES TO THE ENGINEER FOR HIS APPROVAL PRIOR TO THE STARTING OF ANY ROADWAY EXCAVATION. THE STEEL PLATES SHALL BE RAMPED WITH A BITUMINOUS MATERIAL PRIOR TO OPENING THE LANE.

THE CONTRACTOR MUST NOTIFY PROPERTY OWNERS AT LEAST ONE DAY IN ADVANCE OF CLOSING DRIVEWAYS AND HAS THE RESPONSIBILITY TO MAINTAIN SAFE AND PROPER ACCESS TO BUILDINGS IN THE VICINITY OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN ACCESS TO AND FROM FIRE HOUSES AT ALL TIMES.

THE CONTRACTOR SHALL PROVIDE FLAGGERS WHERE SIGHT DISTANCES ARE IMPAIRED BY HIS OPERATION OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL NOT WORK ON BOTH SIDES OF THE ROADWAY AT THE SAME TIMES.

THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS TO MINIMIZE THE INTERRUPTION OF PEDESTRIAN TRAFFIC. ANY CLOSURE OF PEDESTRIAN ROUTES SHALL BE ACCOMPANIED BY A PEDESTRIAN DETOUR IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE ENGINEER.

IN ACCORDANCE WITH NYS DOT STANDARD SPECIFICATION §107-05.F THE CONTRACTOR SHALL IDENTIFY, GUARD AND PROTECT RESTRICTED AREAS SUCH AS OPEN AND UNATTENDED EXCAVATIONS, AREAS SUBJECT TO FALLING DEBRIS AND OTHER POTENTIALLY HAZARDOUS LOCATIONS IN AND ADJACENT TO AREAS LAWFULLY FREQUENTED BY ANY PERSON IN ACCORDANCE WITH THE REQUIREMENTS OF 29 CFR 1926 SUBPART G. PAYMENT FOR INSTALLATION AND REMOVAL OF THIS ITEM SHALL BE INCLUDED THE BASIC WORK ZONE TRAFFIC CONTROL ITEM.

13. FLAGGING
FLAGGING, INCLUDING FLAGGER TRAINING, FLAGGER EQUIPMENT, AND OPERATIONAL CONTROL, SHALL BE PROVIDED IN ACCORDANCE WITH STANDARD SPECIFICATION §619-3.02L. ALL COSTS ASSOCIATED WITH FLAGGING SHALL BE INCLUDED IN THE BASIC WORK ZONE TRAFFIC CONTROL ITEM.

14. LANE CLOSURES
THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION AND SHALL PROVIDE FLAGGERS AS NECESSARY AS DIRECTED BY THE ENGINEER. THE MINIMUM WIDTH OF A TRAVELED LANE SHALL BE 10 FEET UNLESS OTHERWISE SHOWN IN THE CONTRACT DOCUMENTS.

AT THE SITE OF PAVING OR OTHER WORK OPERATION REQUIRING TEMPORARY CLOSURE OF PORTIONS OF THE TRAVELED WAY, THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC AND SHALL PROVIDE FLAGGERS TO CONTROL TRAFFIC MOVEMENT.

THE CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT ALL TRAVEL LANES IN EACH DIRECTION ARE OPEN WHEN THE CONTRACTOR'S OPERATIONS ARE CLOSED DOWN OR SUBSTANTIALLY CLOSED DOWN, AND DURING WEEKDAY HOURS OF 6:30 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM, THE CONTRACTOR SHALL CONTACT THE TRANSPORTATION MANAGEMENT CENTER AT 914-742-6100 ONE WEEK PRIOR TO ANY POSSIBLE LANE CLOSURE.

THE CONTRACTOR SHALL ALSO BE AWARE OF THE STATES LANE CLOSURE RESTRICTIONS FOR MAJOR HOLIDAYS. CONSTRUCTION ACTIVITIES THAT WILL RESULT IN TEMPORARY LANE CLOSURES SHALL BE SUSPENDED TO MINIMIZE TRAVEL DELAYS ASSOCIATED WITH ROAD WORK FOR MAJOR HOLIDAYS AS FOLLOWS:

HOLIDAY	FALLS ON	TEMPORARY LANE CLOSURES ARE NOT ALLOWED FROM
NEW YEAR'S DAY INDEPENDENCE DAY CHRISTMAS DAY	SUNDAY OR MONDAY	6:00 AM FRIDAY BEFORE TO 6:00 AM TUESDAY AFTER
	TUESDAY	6:00 AM SATURDAY BEFORE TO 6:00 AM WEDNESDAY AFTER (STARTING AT 6:00 AM FRIDAY BEFORE TO 6:00 AM WEDNESDAY AFTER FOR CHRISTMAS DAY)
	WEDNESDAY	6:00 AM TUESDAY BEFORE TO 6:00 AM THURSDAY AFTER (STARTING AT 6:00 AM SATURDAY BEFORE TO 6:00 AM THURSDAY AFTER FOR CHRISTMAS DAY)
	THURSDAY	6:00 AM THURSDAY TO 6:00 AM MONDAY AFTER (STARTING AT 6:00 AM WEDNESDAY BEFORE TO 6:00 AM MONDAY AFTER FOR CHRISTMAS DAY)
	FRIDAY OR SATURDAY	6:00 AM THURSDAY BEFORE TO 6:00 AM MONDAY AFTER
MEMORIAL DAY LABOR DAY	MONDAY	6:00 AM FRIDAY BEFORE TO 6:00 AM TUESDAY AFTER
THANKSGIVING DAY	THURSDAY	6:00 AM WEDNESDAY BEFORE TO 6:00 AM MONDAY AFTER

15. PUBLIC INGRESS AND EGRESS
AS SPECIFIED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROVIDE PROPERTY OWNERS WITH PROPER ACCESS TO AND MINIMUM WIDTHS FOR THEIR DRIVEWAYS AND SHALL MAINTAIN THEM THROUGH ALL PHASES OF WORK. DRIVEWAYS SHALL BE DELINEATED IN ACCORDANCE WITH NYS DOT STANDARD SPECIFICATIONS §619-3.02j OR AS DIRECTED BY THE ENGINEER.

WHERE DIRECT ACCESS TO DRIVEWAYS IS NOT POSSIBLE DUE TO NECESSARY CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL PLAN ALTERNATE MEANS OF ACCESS AND SUBMIT SUCH A PLAN TO THE ENGINEER FOR APPROVAL BEFORE OPERATIONS COMMENCE. COST FOR THIS WORK SHALL BE INCLUDED IN THE BASIC WORK ZONE TRAFFIC CONTROL ITEM. ACCESS SHALL BE PROVIDED TO ALL DRIVEWAYS BEHIND TEMPORARY CONCRETE BARRIER WHEN USED AS DIRECTED BY THE ENGINEER. SIGNS DENOTING COMMERCIAL ESTABLISHMENTS SHALL BE PROVIDED AND PLACED NEXT TO THESE DRIVEWAYS. SIGNS SHALL BE AS APPROVED BY THE ENGINEER.

THE COST FOR ALL DELINEATION AND CHANNELIZING DEVICES (CONES, DRUMS, ETC.) SHALL BE IN THE BASIC WORK ZONE TRAFFIC CONTROL ITEM.

16. CONSTRUCTION INGRESS AND EGRESS
THE CONTRACTOR SHALL KEEP TO A MINIMUM MOVEMENT IN AND OUT OF DESIGNATED TRAVEL LANES WITH CONSTRUCTION VEHICLES AND EQUIPMENT. SEE ALSO NYS DOT STANDARD SPECIFICATION §619-3.02F.

17. DELINEATORS
SINGLE UNIT LARGE DELINEATORS AT 40-FOOT SPACING SHALL BE INSTALLED WITHIN THE LIMITS OF THE WORK ZONE WHERE EXISTING TRAVEL LANE WIDTHS ARE REDUCED AND TRAFFIC IS ADJACENT TO TEMPORARY POSITIVE BARRIER, GUIDE RAILING, OR BOTH. WHITE DELINEATORS SHALL BE DISPLAYED ON THE RIGHT SIDE OF THE TRAVELED WAY AND YELLOW SHALL BE DISPLAYED ON THE LEFT. TEMPORARY POSITIVE BARRIER SECTIONS SEPARATING TWO-WAY TRAFFIC SHALL HAVE YELLOW DELINEATORS INSTALLED BACK-TO-BACK. DELINEATORS, POSTS, AND BRACKETS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE NYS DOT STANDARD SPECIFICATIONS AND CURRENT 646 STANDARD SHEETS. PAYMENT WILL BE MADE UNDER ITEM 646.23, ITEM 646.31, AND ITEM 646.50. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL POSTS INSTALLED FOR THE WORK ZONE AT NO ADDITIONAL COST TO THE OWNER/PERMITTEE. REMOVED POSTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE WORK SITE IN A NEAT MANNER.

18. CHANGES TO WORK ZONE TRAFFIC CONTROL PLAN
THE CONTRACTOR MUST SUBMIT TO THE ENGINEER, IN WRITING, PROPOSED REVISIONS TO THE WORK ZONE TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL A MINIMUM OF SEVEN (7) CALENDAR DAYS PRIOR TO THE PLANNED IMPLEMENTATION OF SUCH PROPOSED REVISIONS, EXCEPT FOR CHANGES THAT ALTER THE BASIC CONCEPT OR SCOPE OF THE WORK ZONE TRAFFIC CONTROL PLAN. SUCH CHANGES TO THE BASIC CONCEPT OR SCOPE MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL A MINIMUM OF THIRTY (30) CALENDAR DAYS PRIOR TO IMPLEMENTATION OF SUCH REVISIONS.

19. REQUIREMENTS FOR PORTABLE VARIABLE MESSAGE SIGNS
WHERE TRAFFIC WILL BE RIDING ON MILLED OR GROOVED PAVEMENT AND THE POSTED SPEED LIMIT IS 40 MPH OR GREATER, THE CONTRACTOR SHALL PLACE A PORTABLE VARIABLE MESSAGE SIGN IN ADVANCE OF THE MILLED OR GROOVED PAVEMENT WARNING MOTORCYCLE RIDERS TO USE CAUTION. PAYMENT SHALL BE MADE UNDER ITEM 619.110512.

20. ENFORCEABLE REDUCED REGULATORY SPEED LIMIT AND ADVISORY SPEED SIGNS
ALL REDUCTIONS IN REGULATORY SPEED LIMITS AND ADVISORY SPEEDS ASSOCIATED WITH WORK ZONES MUST BE APPROVED, IN WRITING AND IN ADVANCE, BY THE REGIONAL TRAFFIC ENGINEER OR HIS/HER DESIGNEE.

THE CONTRACTOR MAY REQUEST APPROVAL OF REDUCED REGULATORY SPEED LIMITS AND ADVISORY SPEEDS FOR SHORT-TERM STATIONARY WORK ZONE WHERE SUCH PROVISIONS ARE NOT OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS. REQUEST MUST BE SUBMITTED THROUGH THE ENGINEER TO THE REGIONAL TRAFFIC ENGINEER A MINIMUM OF FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF THE SCHEDULED IMPLEMENTATION OF ANY WORK ZONE CONTAINING THE REQUESTED REDUCED REGULATORY SPEED LIMITS AND/OR ADVISORY SPEEDS.

GENERALLY, TO QUALIFY FOR A REDUCTION IN REGULATORY SPEED LIMIT AT A SHORT-TERM STATIONARY WORK ZONE, THE WORK ZONE MUST CONTAIN AN ACTIVITY AREA THAT IS GREATER THAN 1/2 MILE ON A HIGHWAY WITH A PRECONSTRUCTION POST SPEED LIMIT OF 55 MPH OR GREATER AND BE OF A DURATION EXCEEDING FOUR (4) HOURS WHERE WORKERS ARE ON FOOT IN THE ACTIVITY AREA AND ARE NOT PREDOMINANTLY SEPARATED FROM TRAFFIC BY A POSITIVE BARRIER. IF APPROVED, THE REDUCED REGULATORY SPEED SHALL BE NO MORE THAN 10 MPH BELOW THE PRECONSTRUCTION POSTED SPEED LIMIT. IN LONG WORK ZONES WITH SEVERAL INTERMITTENT ACTIVITY AREAS, THE PRECONSTRUCTION POSTED SPEED LIMIT SHALL BE RESTORED BETWEEN ACTIVITY AREAS THAT ARE SEPARATED BY TWO (2) OR MORE MILES.

TO QUALIFY FOR AN ADVISORY SPEED AT A SHORT-TERM STATIONARY WORK ZONE, HAZARDOUS WORK ZONE CONDITIONS MUST EXIST THAT WARRANT A LOCALIZED REDUCTION IN SPEED. SUCH CONDITIONS INCLUDE, BUT ARE NOT LIMITED TO, NARROW LANES, BUMPS, GROOVED PAVEMENT, LOW OR NO SHOULDERS, ROADWAY DROP-OFFS, POOR ROADWAY SURFACE, POOR SIGHT DISTANCE, GEOMETRIC CONSTRAINTS AND EXPOSED WORKERS ADJACENT TO ACTIVE TRAFFIC.

IF A REDUCTION IN REGULATORY SPEED LIMIT AND/OR ADVISORY SPEED IS APPROVED, THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN REGULATORY SPEED LIMIT AND/OR ADVISORY SPEED SIGNS IN ACCORDANCE WITH NYS DOT STANDARD SPECIFICATION §619-3.02.H.4 & 5 AND THE MUTCD, AND AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE USED IN CONJUNCTION WITH THE LANE CLOSURE OR OTHER WORK ZONE TRAFFIC CONTROL SIGNS AND SHALL BE COVERED OR REMOVED WHEN WORK ZONE TRAFFIC CONTROL PATTERN IS REMOVED EACH DAY. ANY EXISTING REGULATORY SPEED LIMIT SIGNS WITHIN THE WORK ZONE SHALL BE COVERED DURING THE TIME THE WORK ZONE TRAFFIC CONTROL IS IN PLACE AND UNCOVERED WHEN THE WORK ZONE TRAFFIC CONTROL PATTERN IS REMOVED.

REDUCTIONS IN REGULATORY SPEED LIMITS AND ADVISORY SPEEDS SHALL NOT BE PERMITTED FOR MOBILE OR SHORT DURATION WORK ZONES.

THE COST OF UTILIZING APPROVED REGULATORY OR ADVISORY SPEED ZONE SIGNS, AND COVERING EXISTING SIGNS, SHALL BE INCLUDED IN THE PRICE BID FOR BASIC WORK ZONE TRAFFIC CONTROL.

APPROVED
Resolution Number 23-13
Date July 17, 2023

SPECIAL NOTES

1. WORK ZONE TRAFFIC CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL SUBCONTRACTORS WORKING FOR THE CONTRACTOR MUST HAVE A COPY OF THE HIGHWAY WORK PERMIT ON THE SITE AND MUST BE FAMILIAR WITH THE TRAFFIC CONTROL REQUIREMENTS. IT IS STRONGLY ADVISED THAT A "TAILGATE" SAFETY MEETING WITH EACH WORK CREW BE INITIATED BEFORE THE START OF ALL WORK.

2. WORK ZONE TRAFFIC CONTROL SCHEMES MUST BE IN PLACE AND MAINTAINED THROUGHOUT THE DURATION OF WORK.

3. ALL WORKERS WITHIN THE HIGHWAY ROW SHALL WEAR HIGH-VISIBILITY APPAREL MEETING THE ANSI 107 CLASS II STANDARDS AND AN OSHA APPROVED HARD HAT AS SPECIFIED IN NYS DOT STANDARD SPECIFICATIONS §107-05.A.

4. AT THE START OF WORK ON THE PROJECT ALL WORK ZONE TRAFFIC CONTROL DEVICES WILL BE EVALUATED BY THE ENGINEER FOR ACCEPTABILITY IN ACCORDANCE WITH THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) QUALITY GUIDELINES FOR WORK ZONE TRAFFIC CONTROL DEVICES. THESE DEVICES SHALL NOT BE ALLOWED TO FALL BELOW THE "MARGINAL" CONDITION AT ANY TIME DURING THE LIFE OF THE PROJECT. FADED AND DETERIORATED PANELS AND NON-STANDARD LEGENDS ARE NOT ACCEPTABLE.

5. FLAGGER SIGNS ARE TO BE USED ONLY WHEN A FLAGGER IS ACTUALLY PRESENT AND VISIBLE TO THE MOTORIST. THEY SHALL BE COVERED OR REMOVED AT ALL OTHER TIMES. STOP/SLOW PADDLES ARE REQUIRED. THE COST OF FLAGGER SIGNS AND STOP/SLOW PADDLES SHALL BE INCLUDED IN THE WORK ZONE TRAFFIC CONTROL ITEM.

6. FLEXIBLE PANEL AND LIGHTWEIGHT RIGID PANEL SIGNS SHALL BE MOUNTED AT THE SAME HEIGHT AS RIGID PANEL SIGNS, EXCEPT THEY MAY BE MOUNTED, WHEN APPROVED BY THE ENGINEER, AS LOW AS 1 FOOT WHEN ALL CONDITIONS OF NYS DOT STANDARD SPECIFICATION §619-302H.1 ARE MET.

7. NO WORK WITHIN THE STATE R.O.W. SHALL COMMENCE WITHOUT A PRE-CONSTRUCTION MEETING, WITH NYS DOT REPRESENTATIVES PRESENT.

8. AS-BUILT PLANS SHALL BE SENT TO THE NYS DOT IN HARD COPY AND ELECTRONIC FORMAT COMPATIBLE WITH THE SYSTEM CURRENTLY USED BY NYS DOT.

9. THE PERMITTEE IS RESPONSIBLE FOR HIRING AN INSPECTOR TO BE ON SITE DURING ALL CONSTRUCTION OPERATIONS ON THE STATE R.O.W. TO ENSURE ALL WORK IS PERFORMED IN ACCORDANCE WITH NYS DOT SPECIFICATIONS. THE INSPECTOR MUST BE EXPERIENCED IN NYS DOT WORK AND SHALL BE APPROVED BY THE STATE PRIOR TO HIRING. THE PERMITTEE IS RESPONSIBLE FOR REIMBURSING THE COST OF SITE VISITS BY A NYS DOT REPRESENTATIVE (RESIDING PERMIT ENGINEER) AS NEEDED.

PAVEMENT EDGE DROP-OFF PROTECTION

A DROP-OFF IS AN ABRUPT DIFFERENCE IN SURFACE ELEVATION OF MORE THAN 2 INCHES AT APPROXIMATELY 1/4H OR STEEPER. IN THE ABSENCE OF ADEQUATE TRAFFIC CONTROL PLANS IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SUBMIT ALTERNATE TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL AT LEAST 30 CALENDAR DAYS PRIOR TO PROPOSED WORK WHICH WILL CREATE A DROP-OFF OF OVER 24 INCHES WITHIN 10 FEET FROM THE EDGE OF THE TRAVELED WAY FOR DURATIONS LONGER THAN ONE SHIFT.

THE CONTRACTOR SHALL PROVIDE PAVEMENT EDGE DROP-OFF PROTECTION IN ACCORDANCE WITH TABLE 619-3 PAVEMENT EDGE DROP-OFF PROTECTION. CHANNELIZING DEVICES USED TO MARK DROP-OFFS SHALL BE PLACED, AS PRACTICABLE, TO NOT REDUCE THE AVAILABLE TRAVEL LANE WIDTH, AT THE ELEVATION OF THE OPEN TRAVEL LANE IN ORDER TO PROVIDE MAXIMUM TARGET VALUE AND VISIBILITY FOR MOTORISTS.

A DROP-OFF OF GREATER THAN 24 INCHES WITHIN 10 FEET FROM THE EDGE OF THE TRAVELED WAY TO REMAIN AT THE END OF THE WORK SHIFT SHALL BE SEPARATED FROM TRAFFIC WITH TEMPORARY OR PERMANENT BARRIER. FOR POSTED SPEED LIMIT OF 45 MPH AND LESS, A DROP-OFF OF GREATER THAN 24 INCHES WITHIN 10 FEET FROM THE EDGE OF THE TRAVELED WAY THAT IS 100 FEET OR LESS IN LENGTH WILL BE ALLOWED WITH CHANNELIZING DEVICES CONSISTING OF DRUMS, EXTRA TALL CONES, OR OVERSIZED VERTICAL PANELS ONLY AT A MAXIMUM SPACING OF 20 FEET FOR SHORT DURATIONS NOT TO EXCEED ONE WORK SHIFT.

UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BEGIN WORK TO ELIMINATE UNPROTECTED DROP-OFFS CREATED BY CONTRACT WORK WITHIN 7 CALENDAR DAYS OF THE COMPLETION OF THE WORK CREATING THE DROP-OFF. WORK SHALL CONTINUE IN A TIMELY MANNER UNTIL SUCH TIME AS THE UNPROTECTED DROP-OFF CONDITION IS ELIMINATED. WHERE PAVEMENT EDGE LINES ARE NOT PROVIDED, CHANNELIZING DEVICES SHALL BE PRECEDED BY A NO SHOULDER (W8-23) SIGN, REPEATED AT ALL RAMPS AND ROADWAY INTERSECTIONS. SIGNS SHALL BE REPEATED EVERY 1/2 MILE AND SUPPLEMENTED WITH A NEXT [X] MILES (W7-3AP) PLAQUE WHERE APPLICABLE.

WHERE PAVEMENT EDGE LINES ARE PROVIDED, CHANNELIZING DEVICES SHALL BE PRECEDED BY SHOULDER DROP-OFF (W8-17) SIGNS, REPEATED AT ALL RAMPS AND ROADWAY INTERSECTIONS. SIGNING SHALL BE REPEATED EVERY 1/2 MILE AND SUPPLEMENTED WITH NEXT [X] MILES (W7-3AP) PLAQUE WHERE APPLICABLE.

TABLE 619-3 PAVEMENT EDGE DROP-OFF PROTECTION						
DROP-OFF HEIGHT	EDGE LINE PAVEMENT MARKINGS	DRUM SPACING (FT.)	VERTICAL PANEL SPACING (FT.)	TUBULAR MARKER SPACING (FT.)	TALL CONE SPACING (FT.)	SIGNS
DROP-OFF AT OR WITHIN SHOULDER AREA						
WITHIN 4 FT. FROM TRAVEL LANE						
2 - 6 IN.	YES	100	100	N/A	N/A	SHOULDER DROP-OFF
	NO	40	40	N/A	N/A	NO SHOULDER
6 - 24 IN.	YES	40	40	N/A	N/A	SHOULDER DROP-OFF
	NO	20	20	N/A	N/A	NO SHOULDER
MORE THAN 4 FT. FROM TRAVEL LANE						
2 - 6 IN.	YES	200	200	100	100	SHOULDER DROP-OFF
	NO	100	100	40	40	NO SHOULDER
6 - 24 IN.	YES	40	40	N/A	N/A	SHOULDER DROP-OFF
	NO	40	40	N/A	N/A	NO SHOULDER
DROP-OFF OUTSIDE OF SHOULDER AREA						
SHOULDER WIDTH < 4 FT.						
2 - 6 IN.	YES	100	100	N/A	N/A	SHOULDER DROP-OFF
	NO	100	100	N/A	N/A	NO SHOULDER
6 - 24 IN.	YES	40	40	N/A	N/A	SHOULDER DROP-OFF
	NO	40	40	N/A	N/A	NO SHOULDER
SHOULDER WIDTH ≥ 4 FT.						
2 - 6 IN.	YES	200	200	100	100	SHOULDER DROP-OFF
	NO	100	100	40	40	NO SHOULDER
6 - 24 IN.	YES	100	100	40	40	SHOULDER DROP-OFF
	NO	40	40	N/A	N/A	NO SHOULDER

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1	4/20/24	JPK								
2	4/20/24	JPK								
3	5/14/24	JPK								

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PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)
NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE
TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK

Colliers
Engineering & Design
WESTCHESTER 400 Columbus Avenue, Suite 180E Valhalla, NY 10595
Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C.

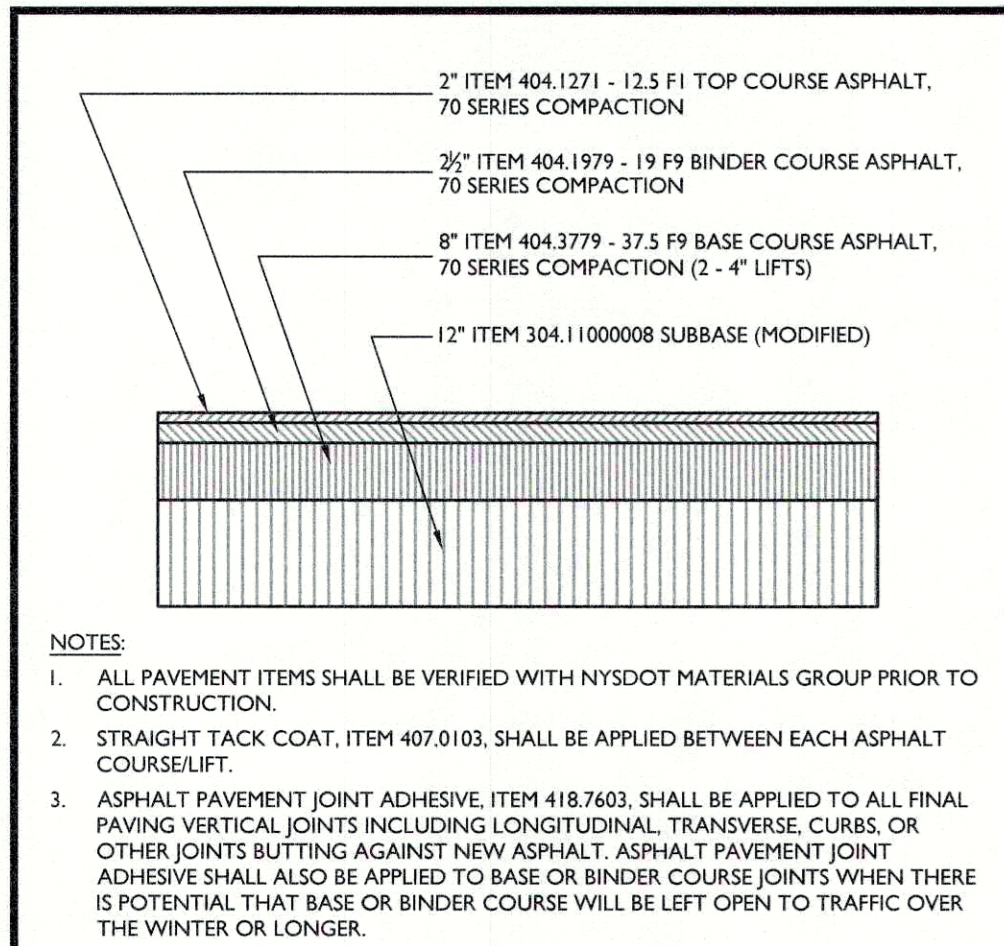
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AS SHOWN	1/8/23	M.J.A.	R.G.D.
PROJECT NUMBER:	DRAWING NAME:		
20096297A	R-PL02-NOTE		

GENERAL NOTES
SHEET NUMBER: GN-02

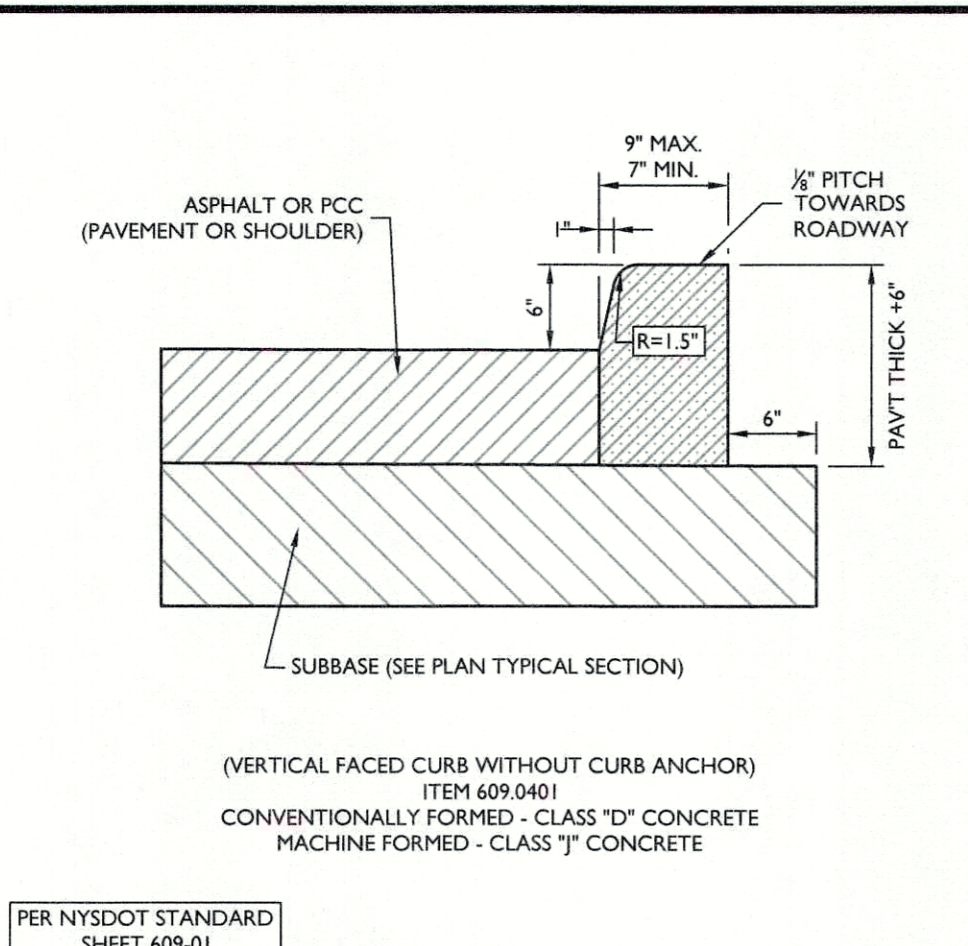
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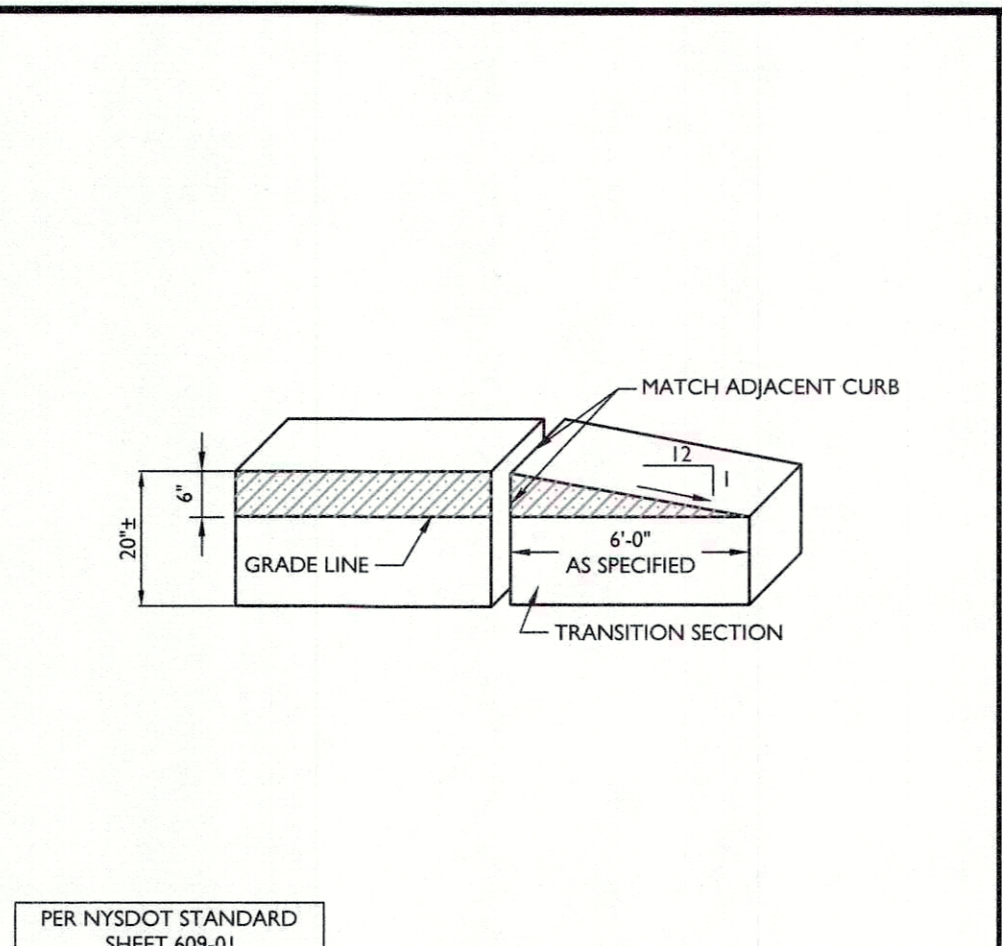
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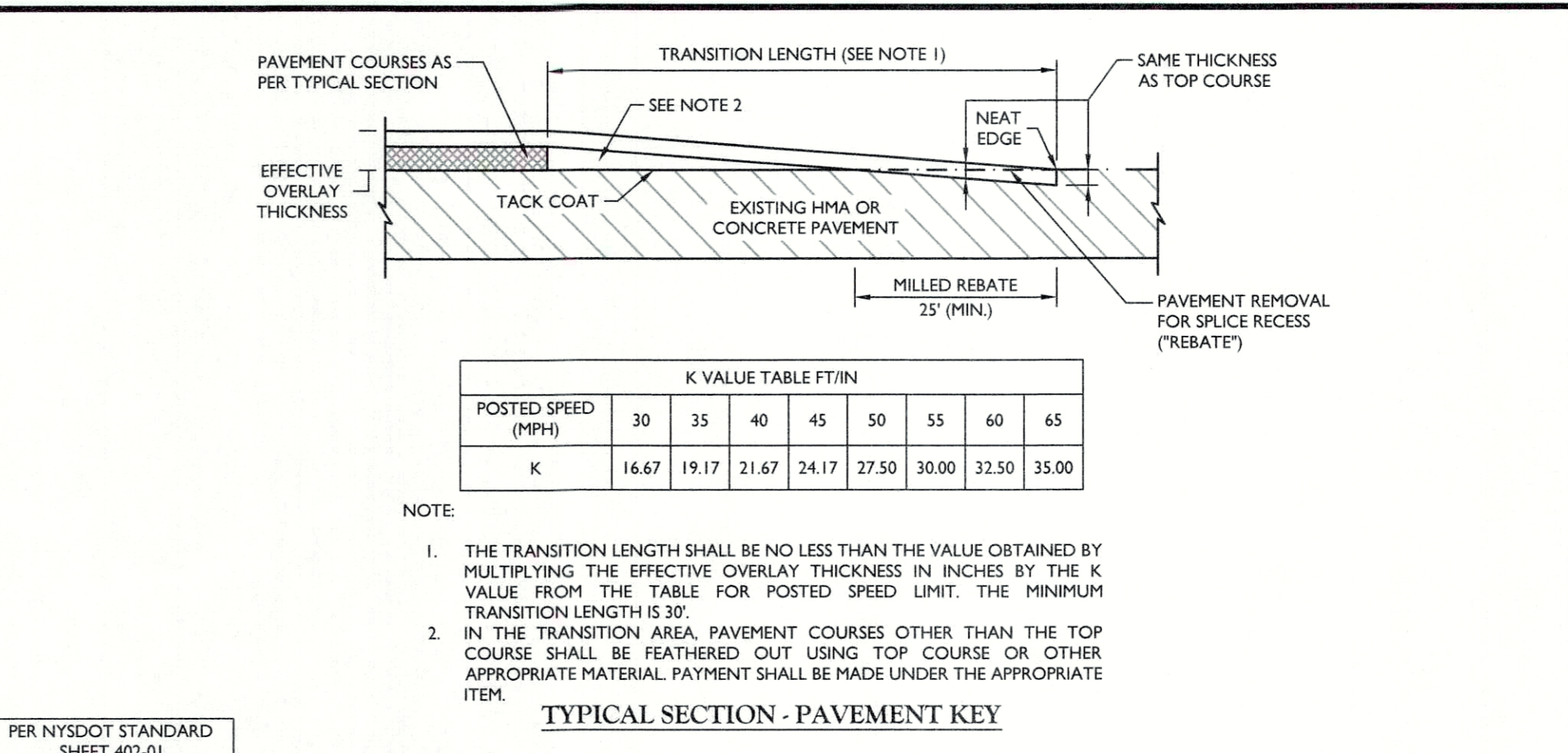
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NOT TO SCALE NYDT-PAVE-1000 3/15/21



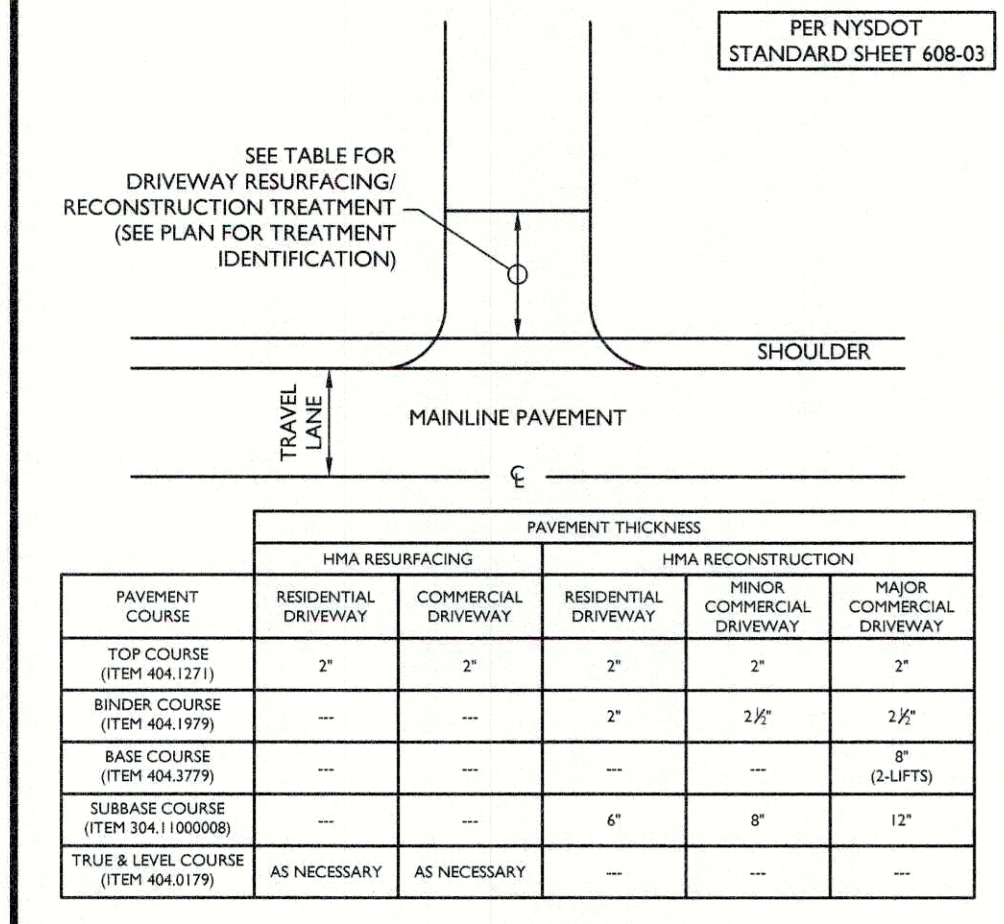
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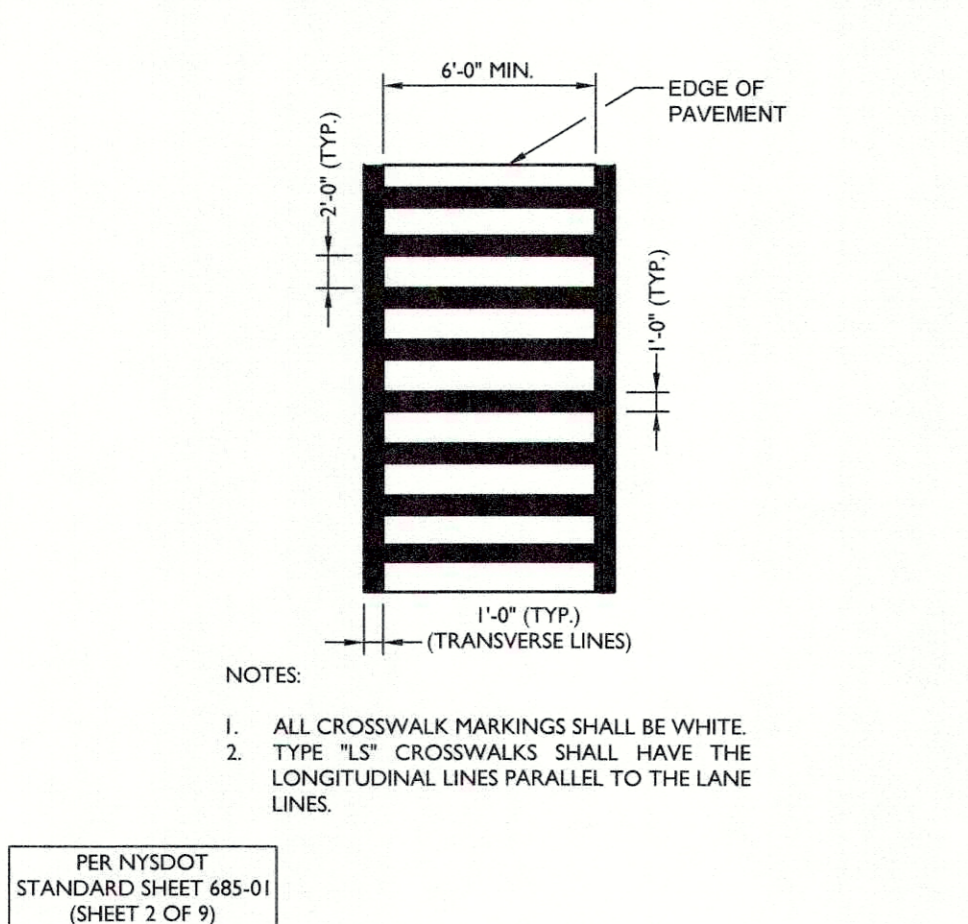
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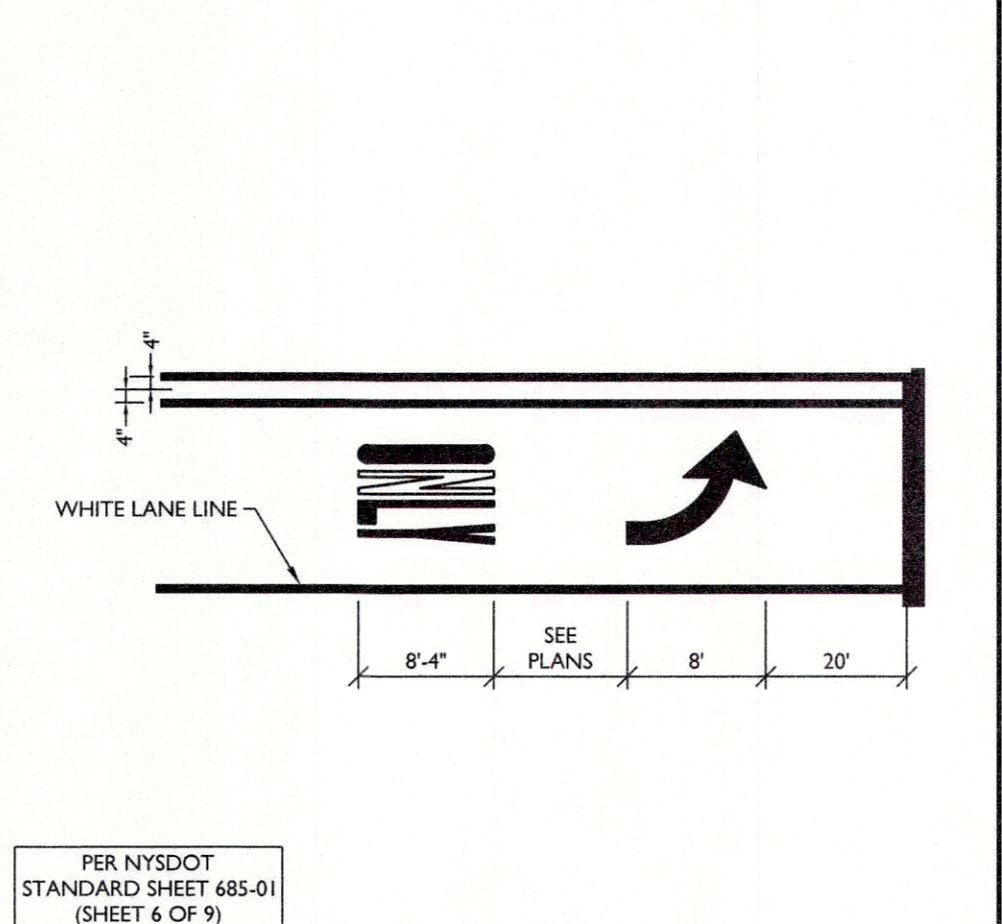
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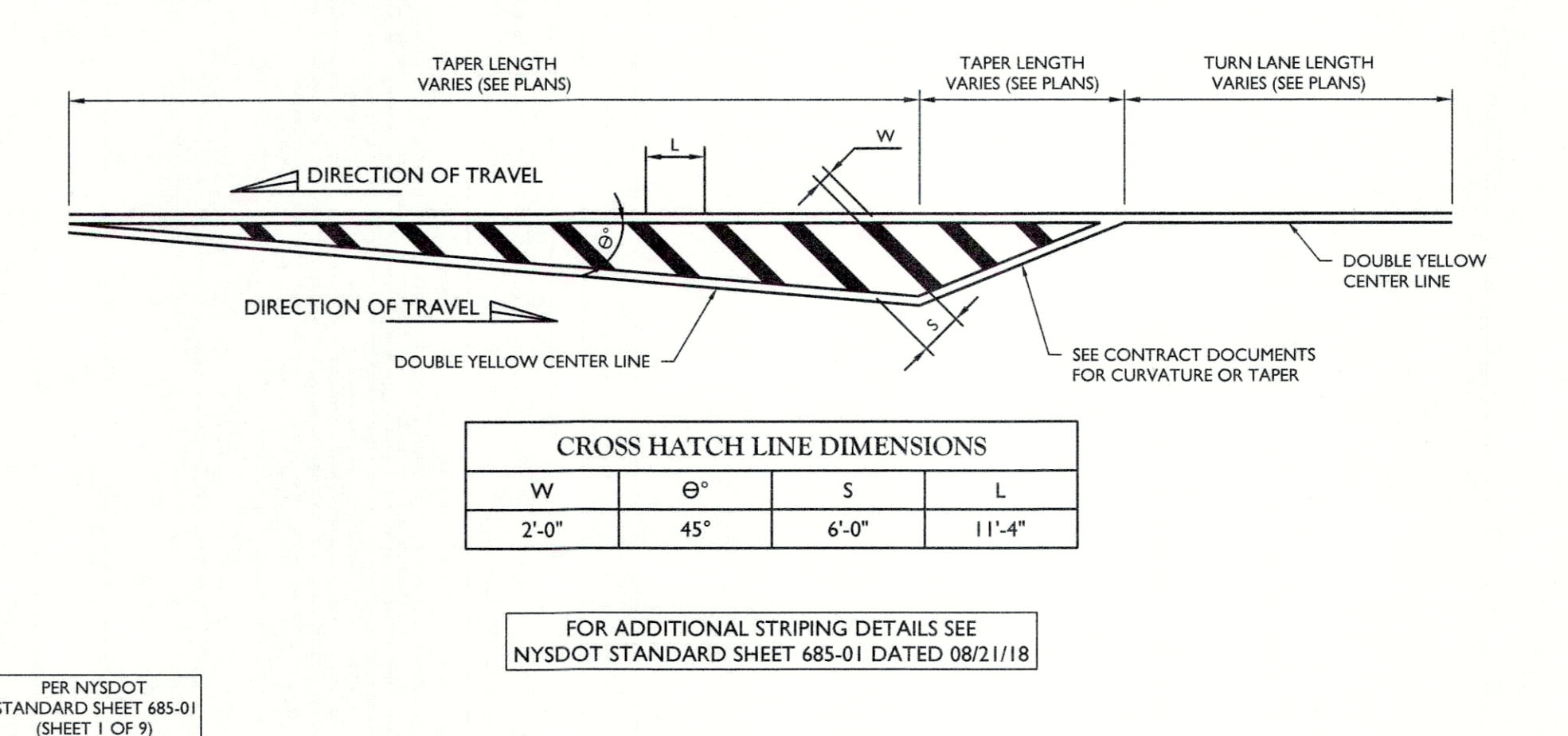
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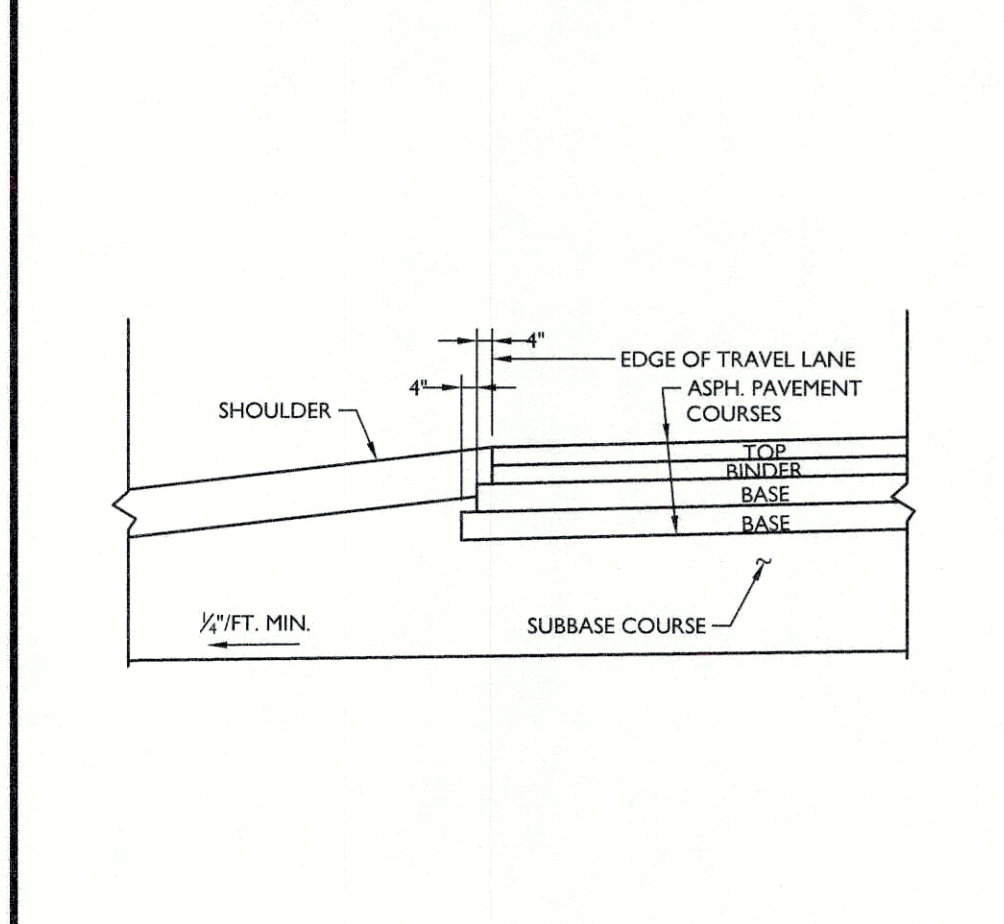
COMBINED TYPE 'LS' CROSSWALK
NOT TO SCALE GNRL-DTL5-STND-GRID 05/02/13



TYPICAL LEFT TURN LANE STRIPING
NOT TO SCALE NYDT-MRKG-1100 05/02/13



HATCHED ISLAND DETAIL
NOT TO SCALE NYDT-MRKG-1101 08/21/18



EDGE OF PAVEMENT DETAIL (AT SHOULDER)
NOT TO SCALE NYDT-PAVE-1403 11/01/17



TURNING ARROW
NOT TO SCALE NYDT-MRKG-1200 05/02/13



"ONLY" LETTERS
NOT TO SCALE NYDT-MRKG-1201 05/01/21

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2	4/26/24	REVISED PER NYSDOT 4/25/24 COMMENTS
3	5/14/24	REVISED PER NYSDOT 5/10/24 COMMENTS

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PRELIMINARY HIGHWAY IMPROVEMENT PLANS FOR UNDERHILL AVENUE IMPROVEMENTS (SEQ# 22-092)
NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE
TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK

Colliers Engineering & Design
400 Columbus Avenue, Suite 180E, Valhalla, NY 10595
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SCALE: AS SHOWN	DATE: 1/8/23	DRAWN BY: M.J.A.	CHECKED BY: R.G.D.
PROJECT NUMBER: 20006297A	DRAWING NAME: R-PL03-DTL5		

SHEET TITLE: CONSTRUCTION DETAILS
SHEET NUMBER: DTL-01

APPROVED
Resolution Number 23-13
Date 3-17-2023

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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1	4/2/24	M.J.A.	REVISED PER NYSDOT COMMENTS RECEIVED 3/19/24
2	4/2/24	J.P.A.	REVISED PER NYSDOT 4/2/24 COMMENTS
3	5/1/24	M.J.A.	REVISED PER NYSDOT 5/2/24 COMMENTS



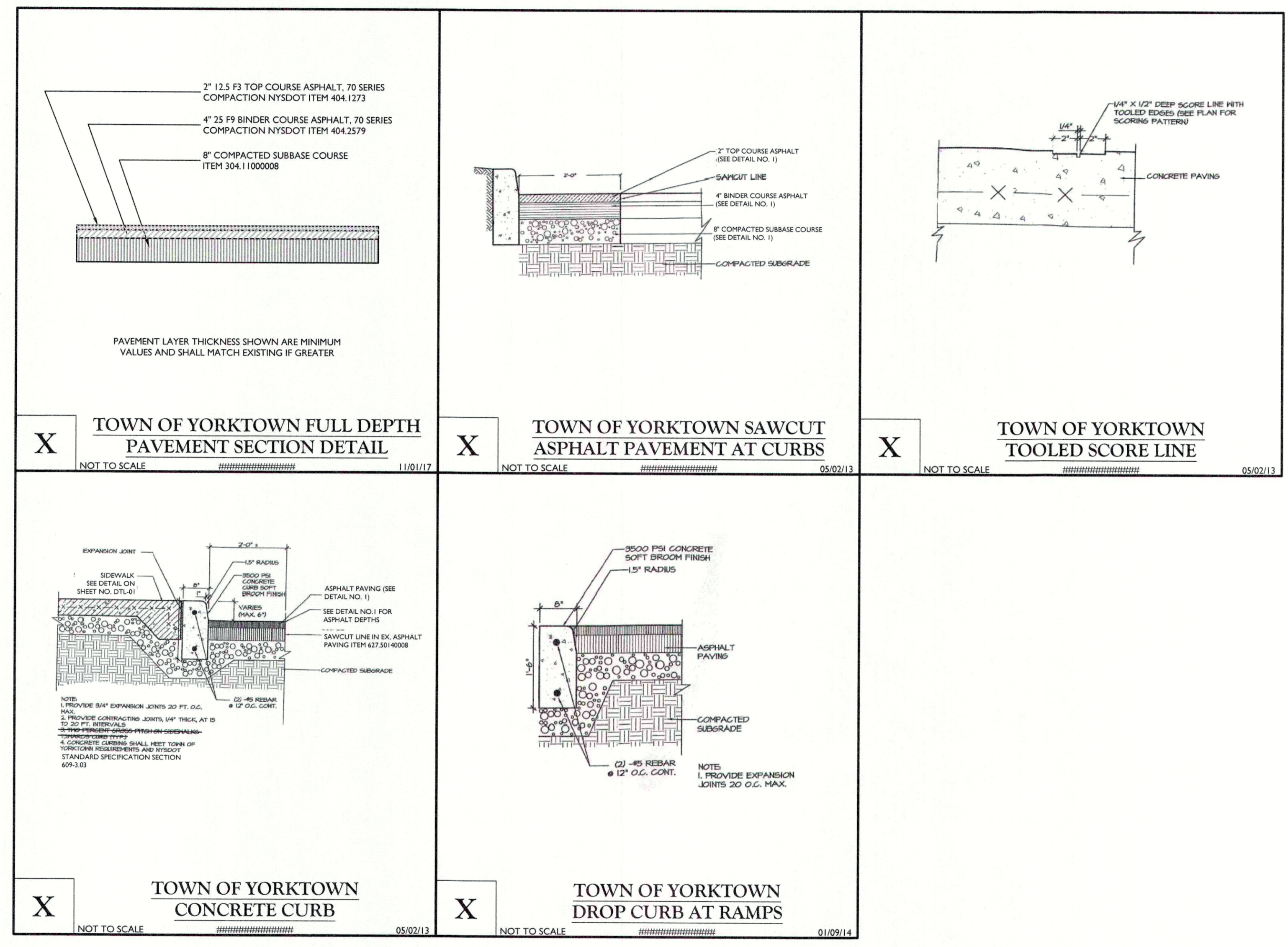
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N.Y. C.O.A.#: 0017609

PRELIMINARY HIGHWAY
IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE
IMPROVEMENTS
(SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT
UNDERHILL AVENUE
TOWN OF YORKTOWN
WESTCHESTER COUNTY
NEW YORK

WESTCHESTER
400 Columbus Avenue,
Suite 100E
Valhalla, NY 10595
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COLLIERS ENGINEERING & DESIGN
ARCHITECTURAL, LANDSCAPE ARCHITECTURE,
SURVEYING CT, P.C.

APPROVED
Resolution Number 23-13
Date July 17, 2023



TOWN OF YORKTOWN FULL DEPTH
PAVEMENT SECTION DETAIL
NOT TO SCALE 11/01/17

TOWN OF YORKTOWN SAWCUT
ASPHALT PAVEMENT AT CURBS
NOT TO SCALE 05/02/13

TOWN OF YORKTOWN
TOOLED SCORE LINE
NOT TO SCALE 05/02/13

TOWN OF YORKTOWN
CONCRETE CURB
NOT TO SCALE 05/02/13

TOWN OF YORKTOWN
DROP CURB AT RAMPS
NOT TO SCALE 01/09/14

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SIDEWALK CURB RAMP NOTES

GNRL-NOTE-STND-GRID

08/18/21

GENERAL NOTES:

- THESE SHEETS ARE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), AND THE REQUIREMENTS OF THE 2013 PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROWAG).
- THE DIMENSIONS SHOWN IN THE DETAILS AS MINIMUMS AND MAXIMUMS ARE THE LIMITS FOR DESIGN AND FIELD LAYOUT. FOR WORK ACCEPTANCE VALUES SEE "CRITICAL ELEMENTS FOR THE DESIGN, LAYOUT, AND ACCEPTANCE OF PEDESTRIAN FACILITIES" ON SHEET 11 OF 12 AND SHEET 12 OF 12.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL ELEVATIONS AND DIMENSIONS TO ENSURE THAT THE FINAL LAYOUT OF PEDESTRIAN FACILITIES MEETS DESIGN CONSTRAINTS, SHALL BE CONSTRUCTED TO MEET THE STANDARDS TO THE GREATEST EXTENT PRACTICABLE. FEATURES THAT CANNOT MEET THE VALUES FOR WORK ACCEPTANCE SHALL BE JUSTIFIED AS NONSTANDARD PER HIGHWAY DESIGN MANUAL CHAPTER 7.
- TO CHECK FIELD LAYOUT AND TO VERIFY WORK ACCEPTANCE, ALL MEASUREMENTS SHALL BE MADE IN ACCORDANCE WITH THE "NOTES ON INSPECTION METHODS (MEASUREMENT)" ON SHEET 11 OF 12.
- JOINTS BETWEEN SIDEWALKS, CURB RAMPS, TURNING SPACES AND ROADWAYS SHALL BE FLUSH AND FREE FROM ABRUPT VERTICAL CHANGES GREATER THAN 1/8" VERTICAL SURFACE DISCONTINUITIES BETWEEN "X" AND "Y" SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2. THE BEVEL SHALL BE APPLIED ACROSS THE ENTIRE JOINT. SEE "VERTICAL SURFACE DISCONTINUITIES" DETAIL ON SHEET 2 OF 12.
- SIDEWALKS ARE CONNECTED TO ROADWAYS BY BLENDED TRANSITIONS OR CURB RAMPS. BLENDED TRANSITIONS ARE CONNECTIONS BETWEEN THE SIDEWALK LEVEL AND THE ROADWAY LEVEL THAT HAVE A MAXIMUM GRADE (RUNNING SLOPE) OF 5%. CONNECTIONS WITH A MAXIMUM GRADE (RUNNING SLOPE) GREATER THAN 5% ARE CONSIDERED CURB RAMPS.
- CURB RAMPS AND BLENDED TRANSITIONS MAY REQUIRE THE INSTALLATION OF DETECTABLE WARNING SURFACES (DWS) AND "DETECTABLE WARNING NOTES" AND THE DETAILS ON DIMENSIONS AND ORIENTATION ON SHEET 2 OF 12.
- GRADE BREAKS WITHIN THE PEDESTRIAN ACCESS ROUTE SHOULD BE PERPENDICULAR TO THE DIRECTION OF TRAVEL AND SHALL NOT BE ROUND. VERTICAL ALIGNMENT SHALL BE GENERALLY FLANAR.
- MATERIAL DEPTHS SHOWN ON THESE SHEETS ARE TYPICAL MINIMUM VALUES AND MAY BE DIFFERENT IN THE CONTRACT DOCUMENTS.
- SIDEWALK GRADE (RUNNING SLOPE) SHALL NOT EXCEED 4.5% FOR DESIGN AND LAYOUT OR 5% FOR WORK ACCEPTANCE, EXCEPT WHEN MATCHING INTO EXISTING SIDEWALK OR WHEN THE ADJACENT HIGHWAY GRADE IS STEEPER THAN 5%. WHEN THE ADJACENT HIGHWAY GRADE IS GREATER THAN 5%, THE SIDEWALK GRADE SHALL NOT EXCEED THE HIGHWAY GRADE.
- THE CROSS SLOPE OF PEDESTRIAN ACCESS ROUTE SHALL BE 1.5% MAXIMUM FOR DESIGN AND LAYOUT, AND 2% MAXIMUM FOR WORK ACCEPTANCE. THE FOLLOWING EXCEPTIONS ARE ALLOWED:
 - WHERE PEDESTRIAN STREET CROSSINGS ARE PROVIDED AT INTERSECTIONS WHERE THERE IS NO YIELD OR STOP SIGN, OR WHERE THERE IS A TRAFFIC SIGNAL THAT IS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK CROSSINGS, THE CROSS SLOPE OF THE TURNING SPACE SHALL BE 4'-0" X 5'-0" MINIMUM. THE 5'-0" DIMENSION SHALL BE IN THE DIRECTION OF THE RAMP RUN.
 - WHERE MIDBLOCK PEDESTRIAN STREET CROSSINGS ARE PROVIDED, THE CROSS SLOPE OF A PEDESTRIAN ACCESS ROUTE CONTAINED WITHIN A MIDBLOCK STREET CROSSING SHALL BE PERMITTED TO EQUAL THE STREET OR HIGHWAY GRADE.
- THE MINIMUM CLEAR WIDTH FOR PEDESTRIAN ACCESS ROUTES IS 4'-0", EXCLUSIVE OF THE CURB. THE DEPARTMENT'S PREFERRED CLEAR WIDTH IS 5'-0". WHEN WALKWAY WIDTHS ARE LESS THAN 5'-0", 5'-0" X 5'-0" PASSING SPACES (SHOWN IN DETAIL A OR B ON THIS SHEET), OR A FEATURE OF EQUAL OR GREATER DIMENSIONS THAT MEETS THE SLOPE AND SURFACE CRITERIA, SHALL BE PROVIDED AT A MAXIMUM INTERVAL OF 200'. EXISTING DRIVEWAYS AND STREET CROSSINGS MAY SERVE AS PASSING SPACES, PROVIDED THEY MEET SLOPE AND SURFACE REQUIREMENTS FOR A PEDESTRIAN ACCESS ROUTE.
- THE BUFFER ZONE IS A PHYSICAL DISTANCE SEPARATING THE PEDESTRIAN ACCESS ROUTE FROM THE VEHICLE TRAVELED WAY. THE BUFFER ZONE MAY BE PLANTED OR PAVED. WHERE THE BUFFER ZONE WIDTH, EXCLUSIVE OF CURB, IS LESS THAN 3'-0", THE SURFACE SHOULD BE PAVED OR CONSTRUCTED WITH HARDSCAPE MATERIALS.
- THE MAXIMUM RECOMMENDED CROSS SLOPE OF A TURF BUFFER ZONE OR SLOPE TRANSITION BEHIND SIDEWALK IS 25%. BUFFER ZONES WITH A CROSS SLOPE GREATER THAN 25% SHOULD BE PAVED, PLANTED OR CONSTRUCTED WITH HARDSCAPE MATERIALS.
- WHEN CROSSING DRIVEWAYS, THE WORK SHALL BE IN CONFORMANCE WITH STANDARD SHEET 608-05.
- FOR PEDESTRIAN SIGNALS AND ROADWAY PUSH BUTTONS, REFER TO SHEET 12 OF 12 AND STANDARD SHEET 680-10 FOR DETAILS.
- WHERE EXISTING ROADWAYS ARE SAWCUT TO INSTALL CURBING AND/OR SIDEWALK, THE ROADWAY SHOULD BE SAWCUT AT LEAST 3'-0" FROM THE PROPOSED CURB LINE TO ALLOW FOR ADEQUATE COMPACTION OF ASPHALT. IF THE SAWCUT IS LESS THAN 2'-0" FROM THE PROPOSED CURB LINE, THE ROADWAY SHALL BE REBUILT USING CLASS A, C, OR D CONCRETE. SEE DETAILS ON SHEET 9 OF 12.

CURB RAMP NOTES

- THE MINIMUM CLEAR WIDTH OF A CURB RAMP SHALL BE 4'-0". THE DEPARTMENT'S PREFERRED CLEAR WIDTH IS 5'-0".
- THE MAXIMUM GRADE (RUNNING SLOPE) FOR DESIGN AND LAYOUT OF A CURB RAMP SHALL BE 7.5%. THE GRADE FOR WORK ACCEPTANCE SHALL BE A MAXIMUM OF 8.3%.
- WHERE THE TERRAIN DOES NOT ALLOW CONSTRUCTION OF A CURB RAMP WITH A GRADE (RUNNING SLOPE) OF 8.3% OR LESS WITHIN 15'-0", THE RAMP LENGTH SHALL NOT BE REQUIRED TO EXCEED 15'-0" FOR DESIGN AND LAYOUT OR 15'-0" FOR WORK ACCEPTANCE.

- THE CROSS SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS POSSIBLE AND STILL PROVIDE POSITIVE DRAINAGE. THE CROSS SLOPE OF A CURB RAMP SHALL BE 1.5% MAXIMUM FOR DESIGN AND LAYOUT, AND 2% MAXIMUM FOR WORK ACCEPTANCE. THE FOLLOWING EXCEPTIONS ARE ALLOWED:
 - WHERE PEDESTRIAN STREET CROSSINGS ARE PROVIDED AT INTERSECTIONS WHERE THERE IS NO YIELD OR STOP SIGN, OR WHERE THERE IS A TRAFFIC SIGNAL THAT IS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK CROSSINGS, THE CROSS SLOPE OF THE CURB RAMP SHALL BE PERMITTED TO EQUAL THE STREET OR HIGHWAY GRADE.
 - WHERE THE EXISTING ROADWAY GRADE EXCEEDS THE MAXIMUM ALLOWABLE CROSS SLOPE FOR A CURB RAMP, AND CANNOT BE CORRECTED WITHIN THE SCOPE OF THE PROJECT, THE RAMP SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE "CURB RAMP CROSS SLOPE TRANSITION" DETAIL ON SHEET 8 OF 12. THE RAMP MAY NEED TO BE JUSTIFIED AS A NONSTANDARD FEATURE. SEE NOTE 3 ON THIS SHEET.
 - RAMP SIDE OPTIONS ARE DETAILED ON SHEET 3 OF 12. WHERE A PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP, FLARED SIDES SHALL BE INSTALLED WITH A MAXIMUM SLOPE OF 5.5% FOR DESIGN AND LAYOUT, AND 10% MAXIMUM FOR WORK ACCEPTANCE. A PEDESTRIAN CIRCULATION PATH IS ASSUMED TO CROSS THE CURB RAMP WHEN AREA ADJACENT TO THE RAMP IS PAVED AND FREE OF VERTICAL OBSTRUCTIONS THAT WOULD PREVENT PEDESTRIAN PASSAGE. THERE IS NO MAXIMUM FLARE SLOPE FOR A RAMP THAT IS NOT CROSSED BY A PEDESTRIAN CIRCULATION PATH.
 - THE BACK GRADE OF A PARALLEL RAMP SHOULD BE GRADED TO A MAXIMUM SLOPE OF 25% TO MATCH EXISTING TERRAIN, UNLESS OTHERWISE SHOWN IN THE CONTRACT DOCUMENTS. WHERE GRADING IS NOT FEASIBLE DUE TO LIMITED ROW OR PHYSICAL CONSTRAINTS, A BACK CURB MAY BE INSTALLED. SEE DETAILS ON SHEET 3 OF 12 AND SHEET 9 OF 12.
 - THE DEPARTMENT'S PREFERENCE IS TO INSTALL TWO SEPARATE CURB RAMPS AT A STREET CORNER THAT SERVES TWO SEPARATE PEDESTRIAN CROSSINGS, WITH EACH RAMP ALIGNED TO THE CROSSING THAT IT SERVES. WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT SEPARATE RAMPS, A SINGLE CURB RAMP (I.E., A DIAGONAL CURB RAMP) IS PERMITTED TO SERVE PEDESTRIAN CROSSINGS.
- TURNING SPACE AND CLEAR SPACE NOTES:
 - WHERE A CHANGE IN DIRECTION IS REQUIRED TO UTILIZE A CURB RAMP, A TURNING SPACE SHALL BE PROVIDED AT THE BASE OR THE TOP OF CURB RAMP, AS APPLICABLE. TURNING SPACES SHALL BE PERMITTED TO OVERLAP CLEAR SPACES.
 - WHERE THERE ARE NO VERTICAL CONSTRAINTS AT THE BACK OF SIDEWALK (E.G., VERTICAL CURBS, BUILDING FENCES) THE TURNING SPACE DIMENSIONS SHALL BE 4'-0" X 4'-0" MINIMUM. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4'-0" X 5'-0" MINIMUM. THE 5'-0" DIMENSION SHALL BE IN THE DIRECTION OF THE RAMP RUN.
 - TURNING SPACES SHALL NOT BE DESIGNED WITH A SLOPE GREATER THAN 1.5% IN ANY DIRECTION, WHILE PROVIDING POSITIVE DRAINAGE. THE MAXIMUM SLOPE FOR WORK ACCEPTANCE IS 2.0%. THE FOLLOWING EXCEPTIONS ARE ALLOWED:
 - WHERE PEDESTRIAN STREET CROSSINGS ARE PROVIDED AT INTERSECTIONS WHERE THERE IS NO YIELD OR STOP SIGN, OR WHERE THERE IS A TRAFFIC SIGNAL THAT IS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK CROSSINGS, THE CROSS SLOPE OF THE TURNING SPACE SHALL BE PERMITTED TO EQUAL THE STREET OR HIGHWAY GRADE. WHEN A RAMP EXISTS BETWEEN THE TURNING SPACE AND THE CURB, THE CROSS SLOPE OF THE TURNING SPACE SHOULD BE LESS STEEP THAN THE ROADWAY GRADE AND AS FLAT AS PRACTICABLE WHENEVER POSSIBLE.
 - BELOW THE BOTTOM GRADE BREAK OF A CURB RAMP, A CLEAR SPACE OF 4'-0" X 4'-0" MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN CROSSWALK, AND OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. THE CLEAR SPACE MAY OVERLAP TURNING SPACES, DETECTABLE WARNING SURFACES, AND DROP CURBS.

DEFINITION OF TERMS:

ACCESSIBLE ROUTE. SEE "PEDESTRIAN ACCESS ROUTE", BELOW.

CLEAR SPACE. AN UNOBSTRUCTED FLOOR OR GROUND SPACE THAT WILL ACCOMMODATE A SINGLE, STATIONARY WHEELCHAIR AND OCCUPANT.

CROSS SLOPE. THE GRADE THAT IS PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. IN REGARDS TO NOTES 21 AND 26, CROSS SLOPE PERMITTED TO EQUAL STREET OR HIGHWAY GRADE IS THE SLOPE PARALLEL TO THE HIGHWAY. THE SLOPE PERPENDICULAR TO THE HIGHWAY SHALL BE 1.5% MAXIMUM FOR DESIGN AND 2% MAXIMUM FOR WORK ACCEPTANCE.

PARALLEL CURB RAMP. A CURB RAMP WITH THE RAMP SLOPE ORIENTED PARALLEL TO THE CURB OR EDGE OF PAVEMENT.

PEDESTRIAN ACCESS ROUTE (PAR). A CONTINUOUS AND UNOBSTRUCTED PATH OF TRAVEL PROVIDED FOR PEDESTRIANS WITH DISABILITIES WITHIN OR COINCIDING WITH A PEDESTRIAN CIRCULATION PATH.

PEDESTRIAN CIRCULATION PATH. A PREPARED EXTERIOR OR INTERIOR SURFACE PROVIDED FOR PEDESTRIAN TRAVEL IN THE PUBLIC RIGHT-OF-WAY.

PERPENDICULAR CURB RAMP. A CURB RAMP WITH THE RAMP SLOPE ORIENTED PERPENDICULAR TO THE CURB OR EDGE OF PAVEMENT.

RUNNING SLOPE. THE GRADE THAT IS PARALLEL TO THE DIRECTION OF PEDESTRIAN TRAVEL.

STOP-OR-YIELD CONTROLLED LOCATION. AN INTERSECTION, DRIVEWAY OR PEDESTRIAN CROSSING WHERE VEHICULAR TRAFFIC IS CONTROLLED BY A YIELD SIGN, A STOP SIGN, OR A TRAFFIC SIGNAL THAT FLASHES RED. VEHICULAR TRAFFIC DOES NOT PASS THROUGH A STOP-OR-YIELD CONTROLLED LOCATION WITHOUT STOPPING OR SLOWING.

TRAFFIC SIGNAL THAT IS DESIGNED FOR THE GREEN PHASE. A TRAFFIC SIGNAL OTHER THAN A FLASHING RED OR FLASHING YELLOW.

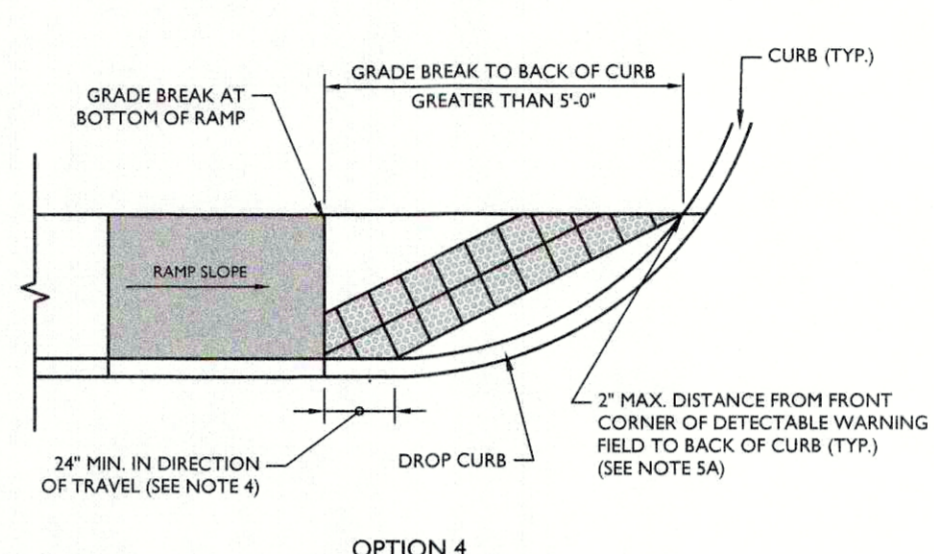
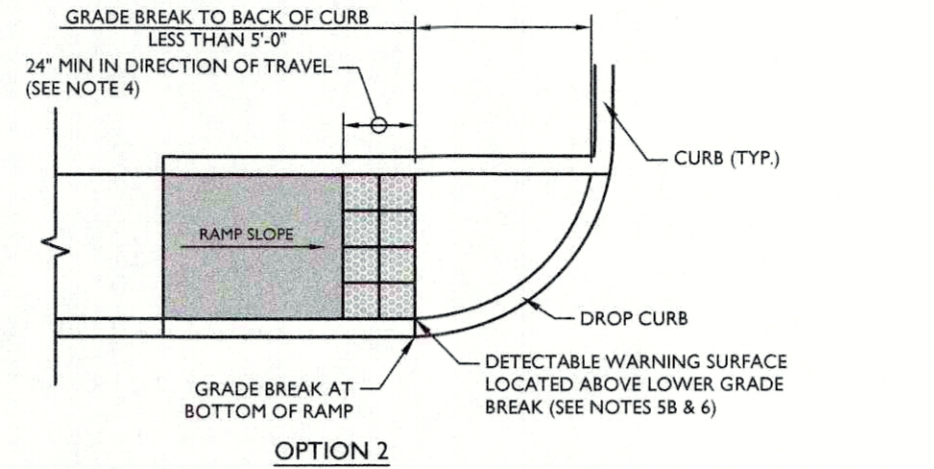
TURNING SPACE. A RELATIVELY LEVEL SPACE PROVIDED WHERE A TURNING MANEUVER IS REQUIRED FOR A PEDESTRIAN TO ORIENT TO A CURB RAMP OR STREET CROSSING.

DETECTABLE WARNING NOTES:

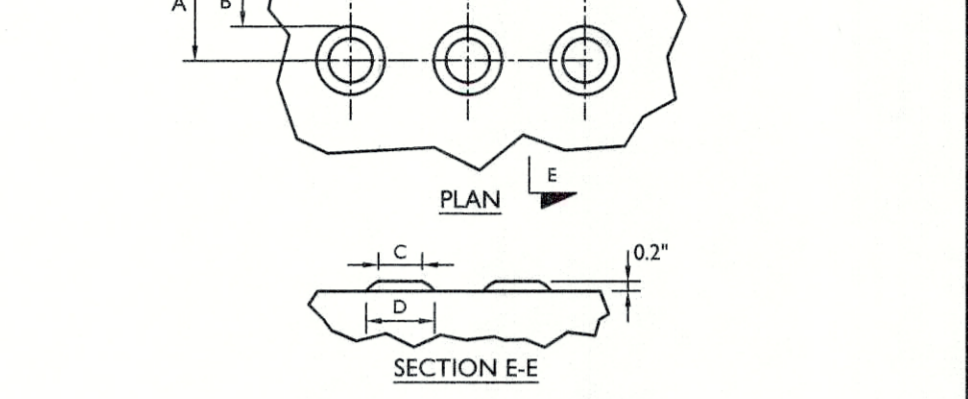
GNRL-NOTE-STND-DTWS

08/18/21

- DETECTABLE WARNING SURFACES (DWS) SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS ON PEDESTRIAN ACCESS ROUTES:
 - CURB RAMPS AND BLENDED TRANSITIONS AT PEDESTRIAN STREET CROSSINGS.
 - PEDESTRIAN REFUGE ISLANDS (WHERE LENGTH OF THE PEDESTRIAN ACCESS ROUTE ACROSS THE REFUGE ISLAND IS GREATER THAN OR EQUAL TO 5').
 - PEDESTRIAN AT-GRADE RAIL CROSSINGS NOT LOCATED WITHIN A STREET OR HIGHWAY.
- DETECTABLE WARNING SURFACES SHALL BE PROVIDED WHERE THE PEDESTRIAN ACCESS ROUTE CROSSES DRIVEWAYS WITH SIGNAL, YIELD OR STOP CONTROL. DETECTABLE WARNING SURFACES SHALL NOT BE PROVIDED AT CROSSINGS OF UNCONTROLLED DRIVEWAYS.
- WITH THE EXCEPTION OF THE "DETECTABLE WARNING SURFACE TRUNCATED DOME DETAILS" DETECTABLE WARNING DOMES ON THIS SHEET ARE NOT DEPICTED TO SCALE.
- DETECTABLE WARNING FIELDS SHALL EXTEND 24" MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL ACROSS THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE, EXCLUDING ANY FAREDS SIDES.
- SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. BORDERS CANNOT BE INCLUDED AS PART OF THE 24" MINIMUM DIMENSION DESCRIBED IN NOTE 4.
 - WHEN PLACED AT THE BACK OF CURB, DETECTABLE WARNING FIELDS SHOULD BE PLACED AS CLOSE TO THE BACK OF CURB AS PRACTICABLE. BOTH FRONT CORNERS OF THE DETECTABLE WARNING FIELD SHALL NOT BE LOCATED MORE THAN 2" FROM THE BACK OF CURB. WHERE THE BACK OF THE CURB EDGE IS TOOLED TO PROVIDE A RADIUS, THE BORDER DIMENSION SHALL BE MEASURED FROM THE INSIDE EDGE OF THE CURB RADIUS. WHERE CURB IS NOT USED, THE EDGE OF PAVEMENT SHALL BE SUBSTITUTED FOR THE BACK OF CURB FOR PLACEMENT OF DETECTABLE WARNINGS.
 - WHEN PLACED ABOVE THE LOWER GRADE BREAK OF A CURB RAMP, DETECTABLE WARNING UNITS SHOULD BE PLACED AS CLOSE TO THE JOINT AS PRACTICABLE. BOTH FRONT CORNERS OF RECTILINEAR DETECTABLE WARNING FIELDS SHALL NOT BE LOCATED MORE THAN 2" FROM THE JOINT.
 - WHEN RADIAL DWS UNITS ARE PLACED AT THE BACK OF CURB, THE FRONT EDGE OF THE DWS FIELD SHOULD BE AS CLOSE AS POSSIBLE TO THE BACK OF CURB, I.E., THE RADIUS OF THE FRONT OF THE DWS FIELD SHOULD MATCH THE RADIUS ALONG THE BACK OF CURB AS CLOSELY AS POSSIBLE. THE OUTSIDE CORNERS OF THE DWS FIELD MUST BE LOCATED NO MORE THAN 2 INCHES FROM THE BACK OF CURB.
- ON SLOPES OF 5% OR GREATER, THE ROWS OF DOMES SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE LOWER GRADE BREAK ON THE RAMP RUN. WHERE DOMES ARE ARRANGED RADIAL, THEY MAY DIFFER IN DIAMETER AND CENTER-TO-CENTER SPACING WITHIN THE RANGES SPECIFIED ON THIS SHEET. DOME ALIGNMENT THAT IS PERPENDICULAR OR RADIAL TO THE LOWER GRADE BREAK IS NOT REQUIRED ON SLOPES OF LESS THAN 5%.
- THE DETECTABLE WARNING FIELD SHALL BE THE COLOR SPECIFIED IN THE CONTRACT DOCUMENTS OR MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. DETECTABLE WARNING SURFACES CONTRAST VISUALLY WITH ADJACENT GUTTER, STREET OR HIGHWAY, OR PEDESTRIAN ACCESS ROUTE SURFACE, EITHER LIGHT-OR-DARK OR DARK-OR-LIGHT.



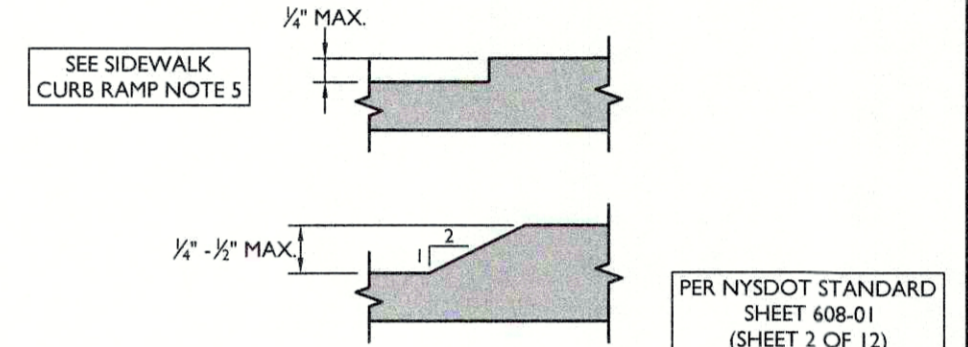
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NOT TO SCALE NYDT-SWLK-1100 08/18/21



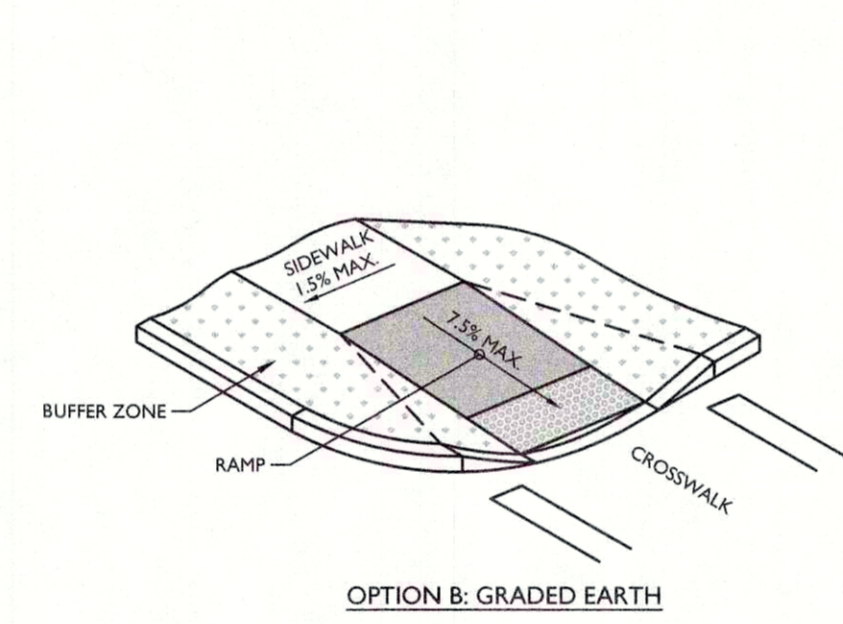
DIM	MIN. (IN)	MAX. (IN)
A	1.6"	2.4"
B	0.65"	1.5"
C	50% - 65% OF D DIM.	
D	0.9"	1.4"

PER NYS DOT STANDARD SHEET 608-01 (SHEET 2 OF 12)

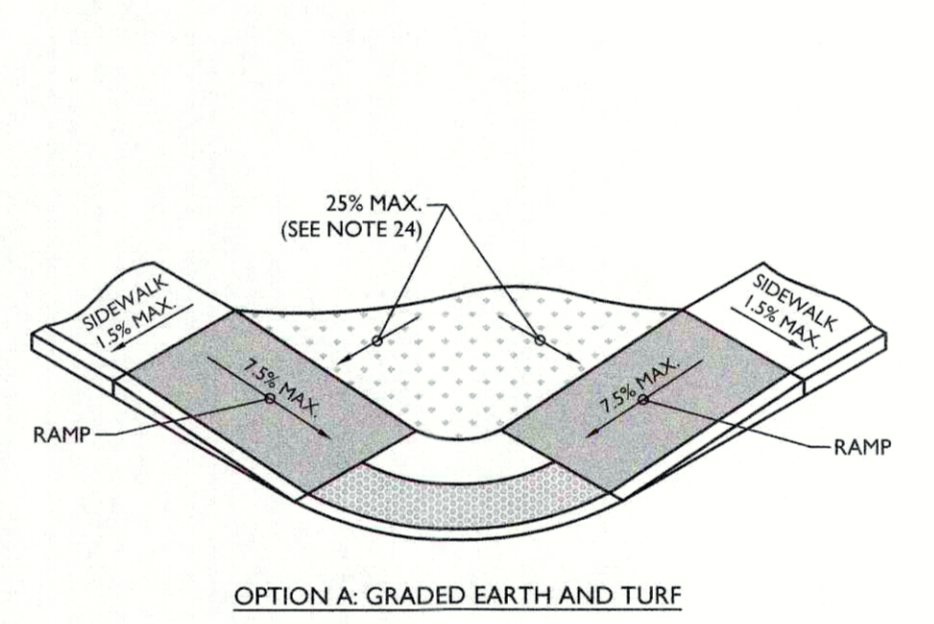
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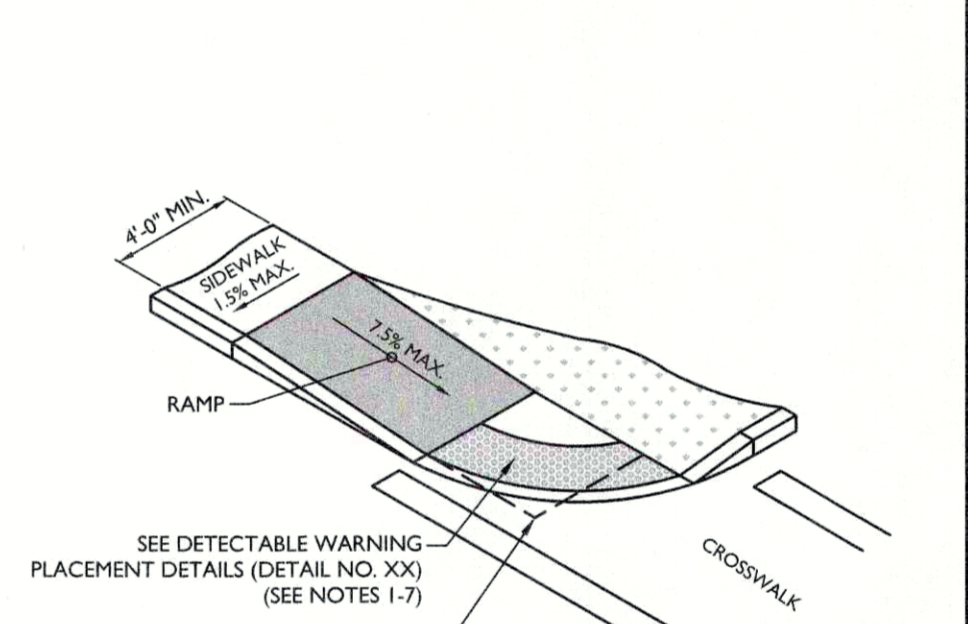
VERTICAL SURFACE DISCONTINUITIES
NOT TO SCALE NYDT-SWLK-1102 08/18/21



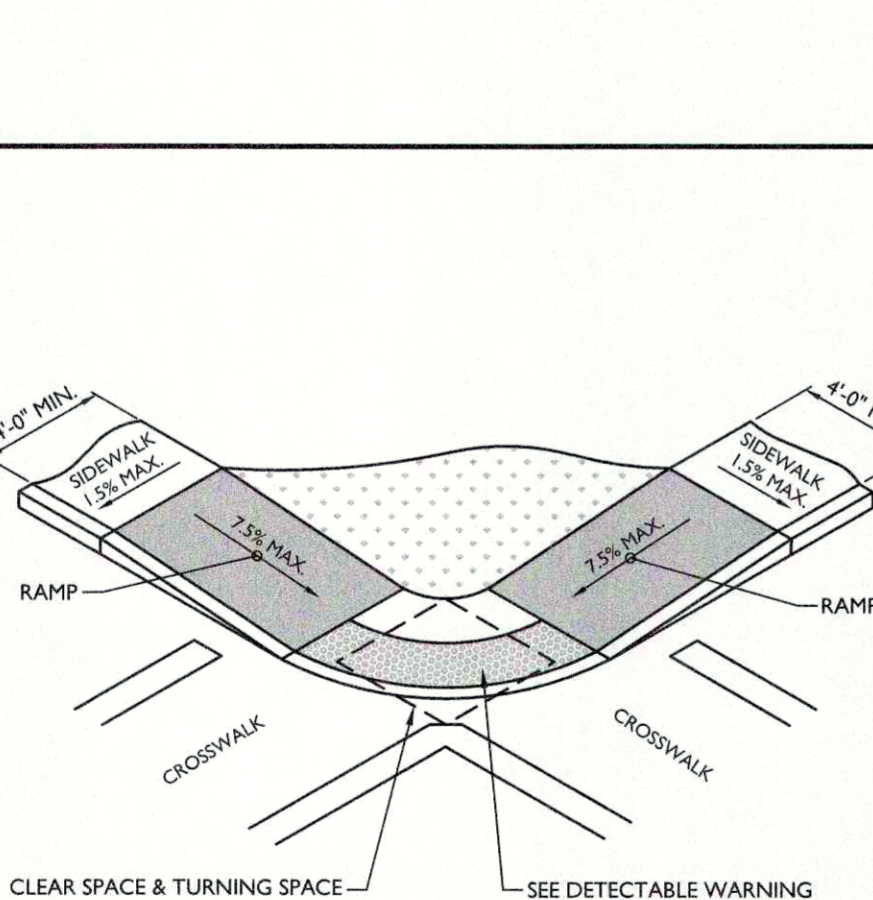
RAMP SIDE CONFIGURATIONS
NOT TO SCALE NYDT-SWLK-1200 08/18/21



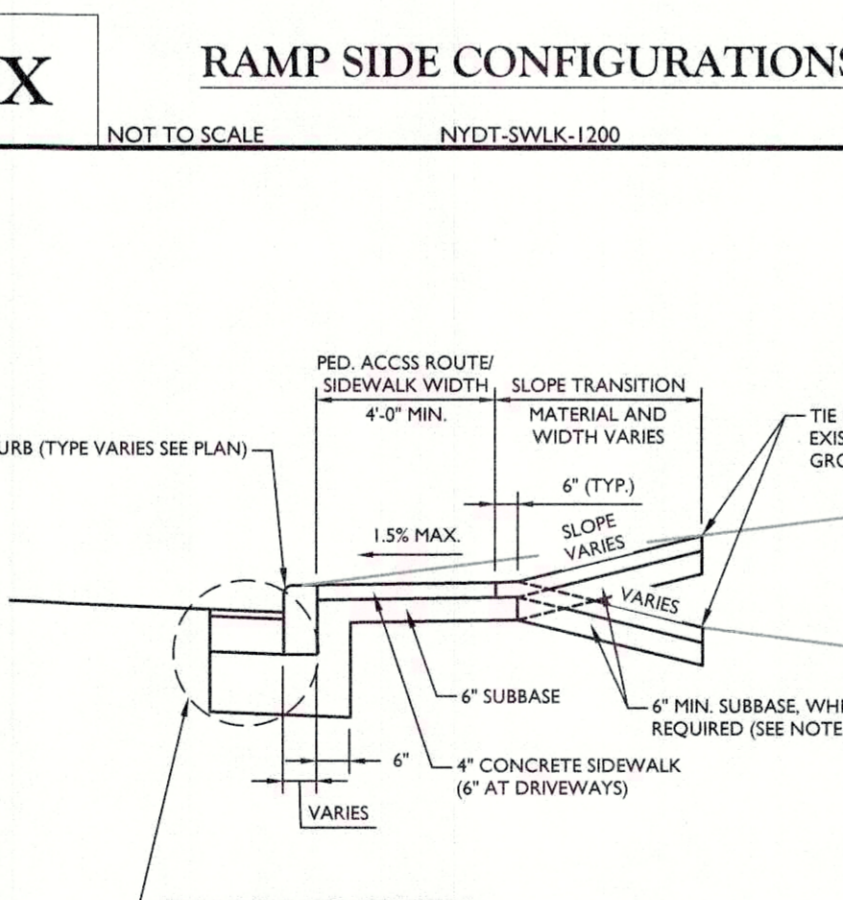
PARALLEL RAMP BACK TREATMENTS
NOT TO SCALE NYDT-SWLK-1201 08/18/21



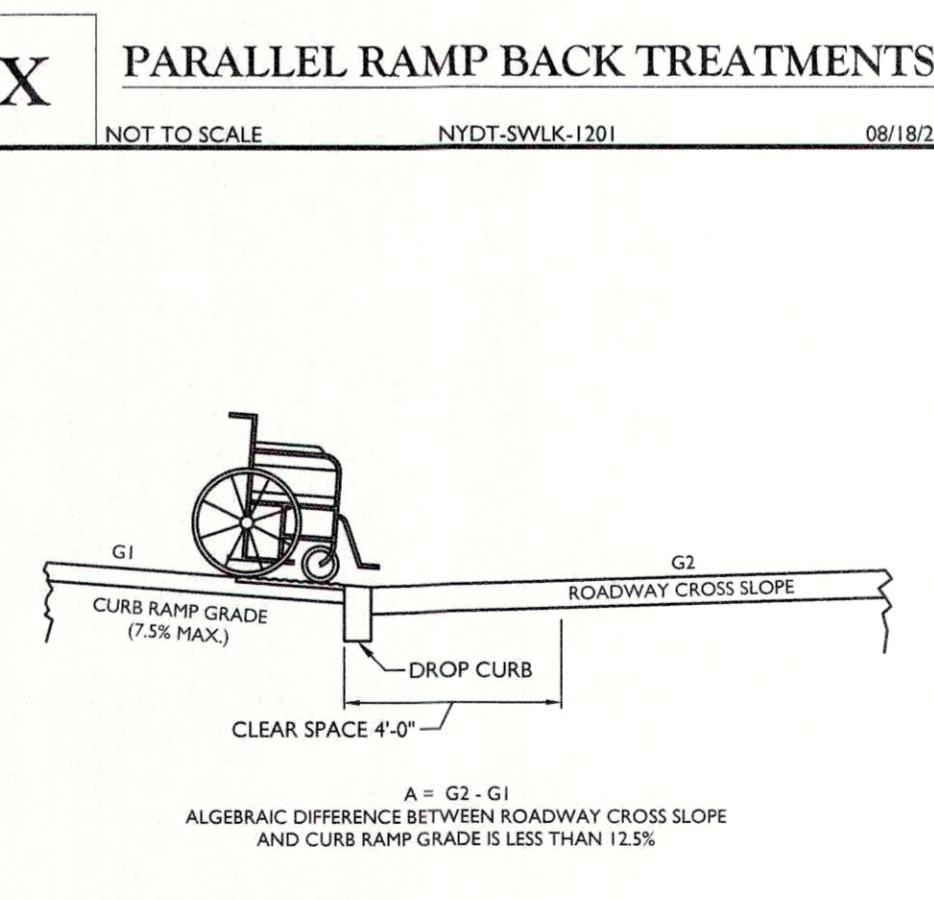
CURB RAMP CONFIGURATION: TYPE 2
NOT TO SCALE NYDT-SWLK-1301 08/18/21



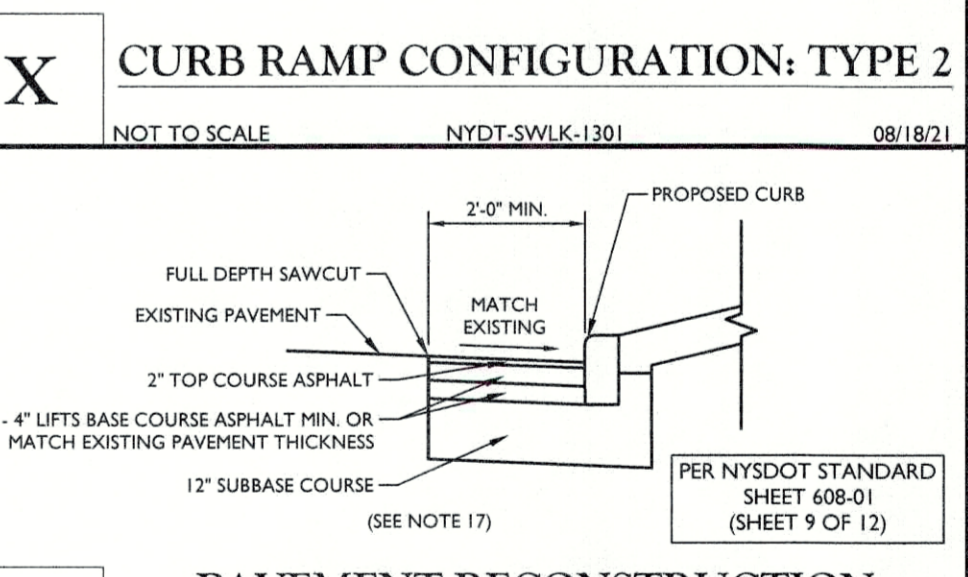
CURB RAMP CONFIGURATION: TYPE 4
NOT TO SCALE NYDT-SWLK-1303 08/18/21



TYPICAL SIDEWALK CROSS SECTION CURBED WITHOUT BUFFER ZONE
NOT TO SCALE NYDT-SWLK-1303 08/18/21



COUNTER SLOPE CONDITION 1
NOT TO SCALE NYDT-SWLK-1404 08/18/21



PAVEMENT RECONSTRUCTION OPTION A: ASPHALT
NOT TO SCALE NYDT-SWLK-1504 08/18/21

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2	4/26/24	REVISED PER NYS DOT 4/25/24 COMMENTS	M.J.A.	J.F.M.
3	5/14/24	REVISED PER NYS DOT 5/7/24 COMMENTS	M.J.A.	J.F.M.

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PRELIMINARY HIGHWAY IMPROVEMENT PLANS FOR UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

NYS ROUTE 118 (S.H. 14.8) AT UNDERHILL AVENUE

TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK

Colliers Engineering & Design
WESTCHESTER
400 Columbus Avenue, Suite 180E
Valhalla, NY 10595
Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN ARCHITECTS, LANDSCAPE ARCHITECTS, SURVEYORS, P.C.

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/8/23	M.J.A.	R.G.D.
PROJECT NUMBER:		DRAWING NAME:	
20006297A		R.FL03-DTLS	

SHEET TITLE: **CONSTRUCTION DETAILS**

SHEET NUMBER: **DTL-04**

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3	5/14/24	REVISED PER NYS DOT 5/2/24 COMMENTS	M.J.A.	



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PRELIMINARY HIGHWAY IMPROVEMENT PLANS

FOR
UNDERHILL AVENUE IMPROVEMENTS
(SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

TOWN OF YORKTOWN
WESTCHESTER COUNTY
NEW YORK

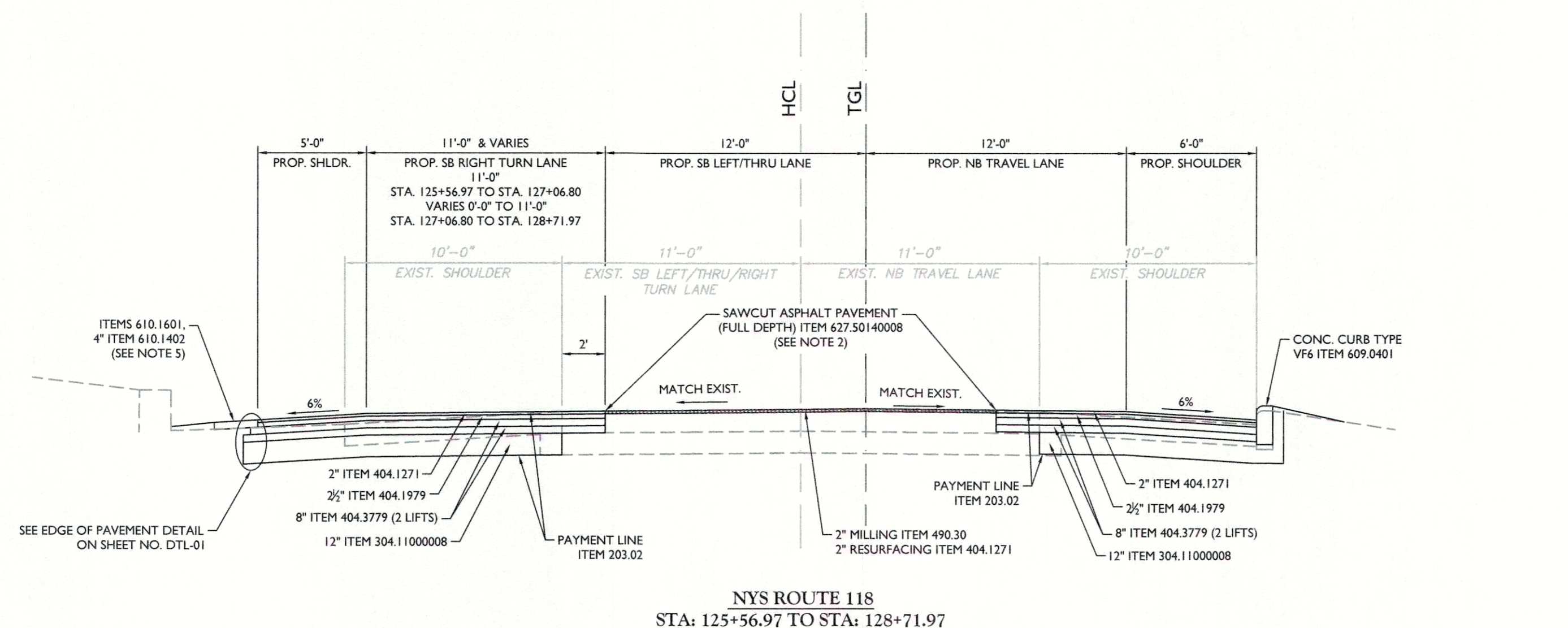
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ARCHITECTURE, LANDSCAPE ARCHITECTURE,
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PROJECT NUMBER: 20006297A DRAWING NAME: R-PL04-TYPS

SHEET TITLE: TYPICAL SECTIONS

SHEET NUMBER: TYP-01

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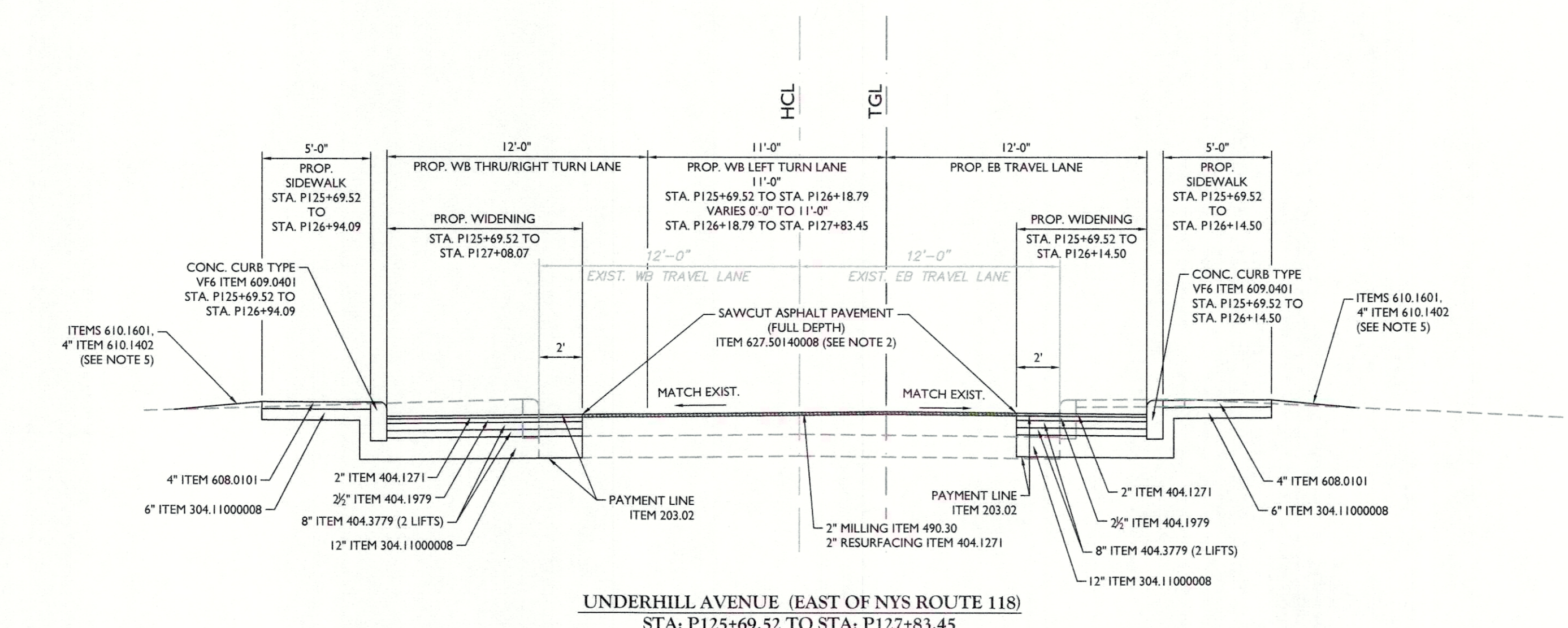
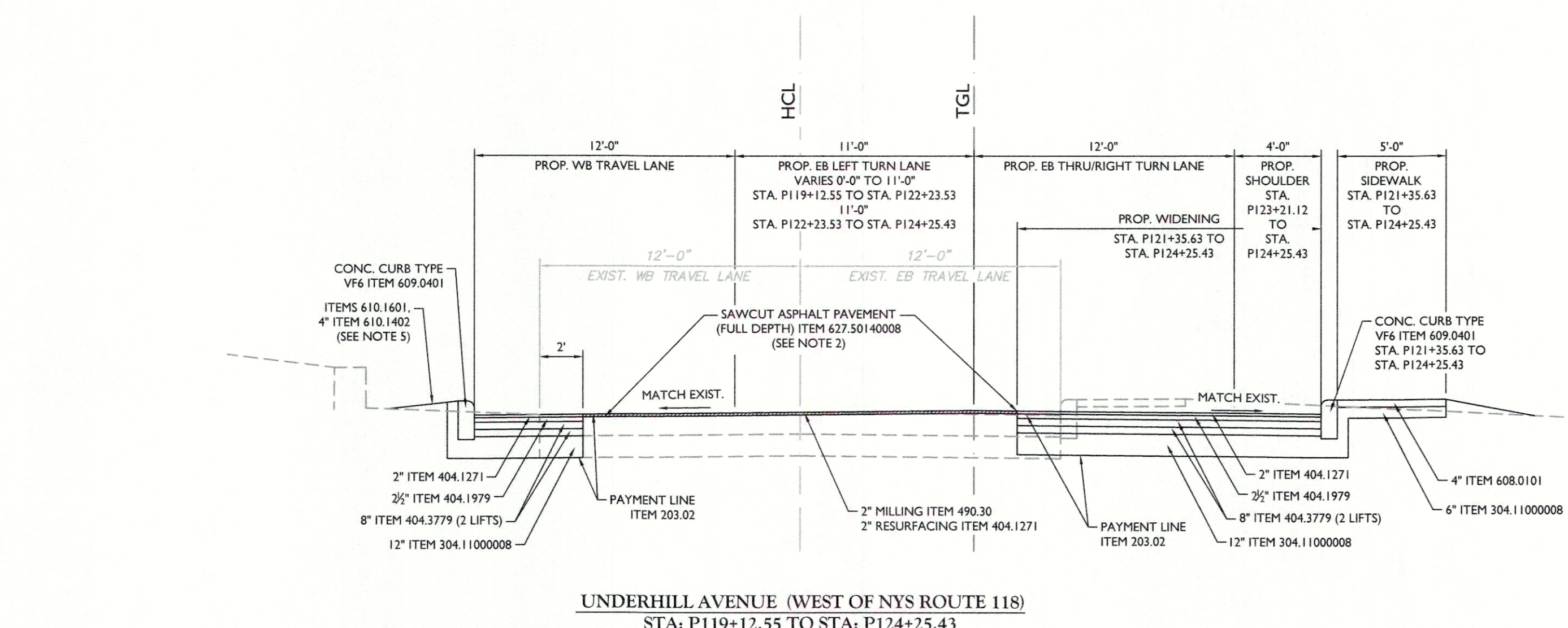


ITEMS

- 203.02
- 203.03
- 304.11000008
- 404.0179
- 404.1271
- 404.1979
- 404.3779
- 407.0103
- 418.7603
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- 502.1011
- 608.0101
- 609.0401
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- 610.1601
- 627.50140008

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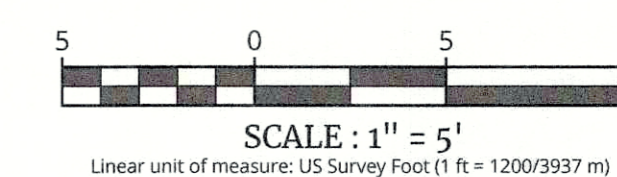
- UNCLASSIFIED EXCAVATION AND DISPOSAL
- EMBANKMENT IN PLACE
- SUBBASE BASE COURSE TYPE I (MODIFIED) TRILING & LEVELING P9. 70 SERIES COMPACTION
- 12.5 FT TOP COURSE ASPHALT, 70 SERIES COMPACTION
- 19 P9 BINDER COURSE ASPHALT, 70 SERIES COMPACTION
- 37.5 P9 BASE COURSE ASPHALT, 70 SERIES COMPACTION
- STRAIGHT TACK COAT
- ASPHALT PAVEMENT JOINT ADHESIVE
- MISC. COLD MILLING
- PCC PAVEMENT - MESH REINFORCED, NONPROFLOGRAPHED, CLASS C, FRICTION TYPE I
- CONCRETE SIDEWALKS AND DRIVEWAYS
- CAST-IN-PLACE CONCRETE CURB TYPE V66
- TOPSOIL - ROADSIDE
- TURF ESTABLISHMENT (ROADSIDE)
- CUTTING PAVEMENT



TYPICAL SECTION NOTES

- STRAIGHT TACK COAT ITEM 407.0103 SHALL BE APPLIED BETWEEN EACH ASPHALT COURSE/LIFT.
- WHERE CONCRETE PAVEMENT IS LOCATED UNDER ASPHALT OVERLAY AND IS LOCATED WITHIN 3 FT. OF THE PROPOSED WIDENING SECTION, THE WIDENING SHALL EXTEND TO LIMIT OF CONCRETE PAVEMENT.
- ROLL OVER BETWEEN SHOULDER AND TRAVEL LANE SHALL NOT EXCEED 8%.
- TRILING AND LEVELING COURSE ITEM 404.0179 MAY BE REQUIRED TO ACHIEVE UNIFORM CROSS SLOPE. CONTRACTOR SHALL VERIFY IF SUCH NEED IS REQUIRED AND CONFER WITH E.L.C. PRIOR TO COMMENCEMENT OF PAVING OPERATIONS.
- AS PER SECTION 610-3.10, IN THE ABSENCE OF 1 INCH OF RAINFALL WITHIN 5 CONSECUTIVE CALENDAR DAYS THE CONTRACTOR SHALL WATER ALL TURF, WILDOFLOWERS, SOD AND PLANTING BEDS ONCE A WEEK TO A DEPTH OF 1 INCH UNDER ITEM 610.19. IN ADDITION AS PER SECTION 610-3.12, THE CONTRACTOR SHALL MOW ALL TURF ESTABLISHMENT AREAS TO A HEIGHT OF 3 INCHES WHEREVER GROWTH REACHES 8 INCHES FOR THE DURATION OF THE CONTRACT UNDER ITEM 619.21. CLIPPINGS SHALL BE LEFT IN PLACE.
- ASPHALT PAVEMENT JOINT ADHESIVE ITEM 418.7603 SHALL BE APPLIED TO ALL FINAL PAVING VERTICAL JOINTS INCLUDING LONGITUDINAL, TRANSVERSE, CURBS OR OTHER JOINTS BUTTING AGAINST NEW ASPHALT. ASPHALT PAVEMENT JOINT ADHESIVE SHALL ALSO BE APPLIED TO BASE OR BINDER COURSE JOINTS WHEN THERE IS POTENTIAL THAT BASE OR BINDER COURSE WILL BE LEFT OPEN TO TRAFFIC OVER THE WINTER OR LONGER.

APPROVED
Resolution Number 23-13
Date July 17, 2023



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3	5/16/24	MINOR REVISED PER NYSDOT 5/16/24 COMMENTS



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PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE IMPROVEMENTS
(SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT
UNDERHILL AVENUE

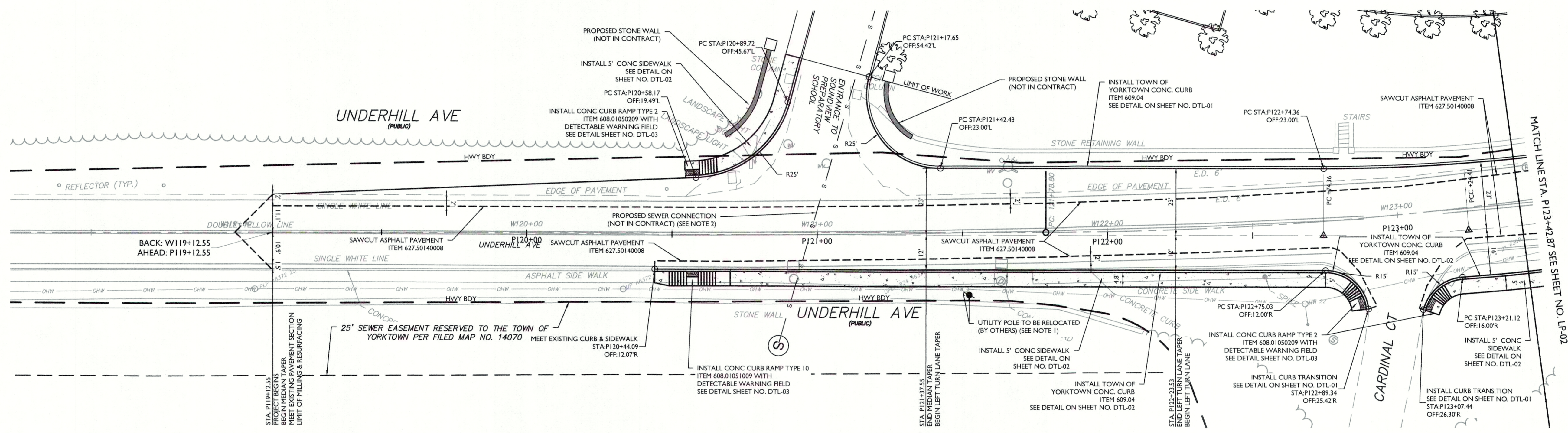
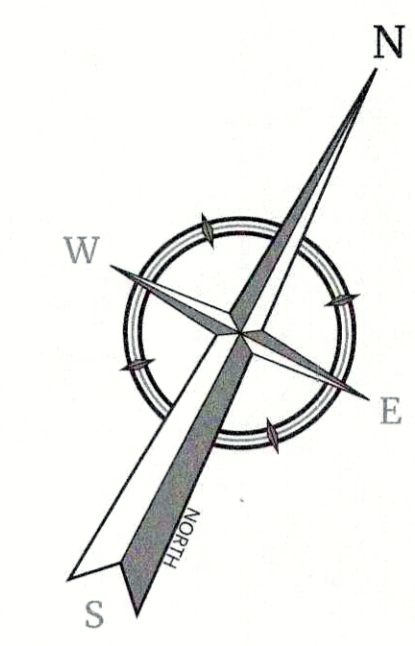
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SCALE: AS SHOWN	DATE: 1/8/23	DRAWN BY: M.J.A.	CHECKED BY: R.G.D.
PROJECT NUMBER: 20006297A	DRAWING NAME: R-PL06-CN5T		

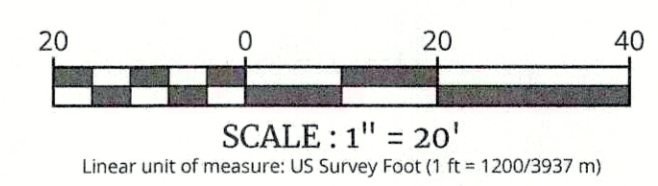
SHEET TITLE:
LAYOUT & CONSTRUCTION PLAN

SHEET NUMBER:
LP-01



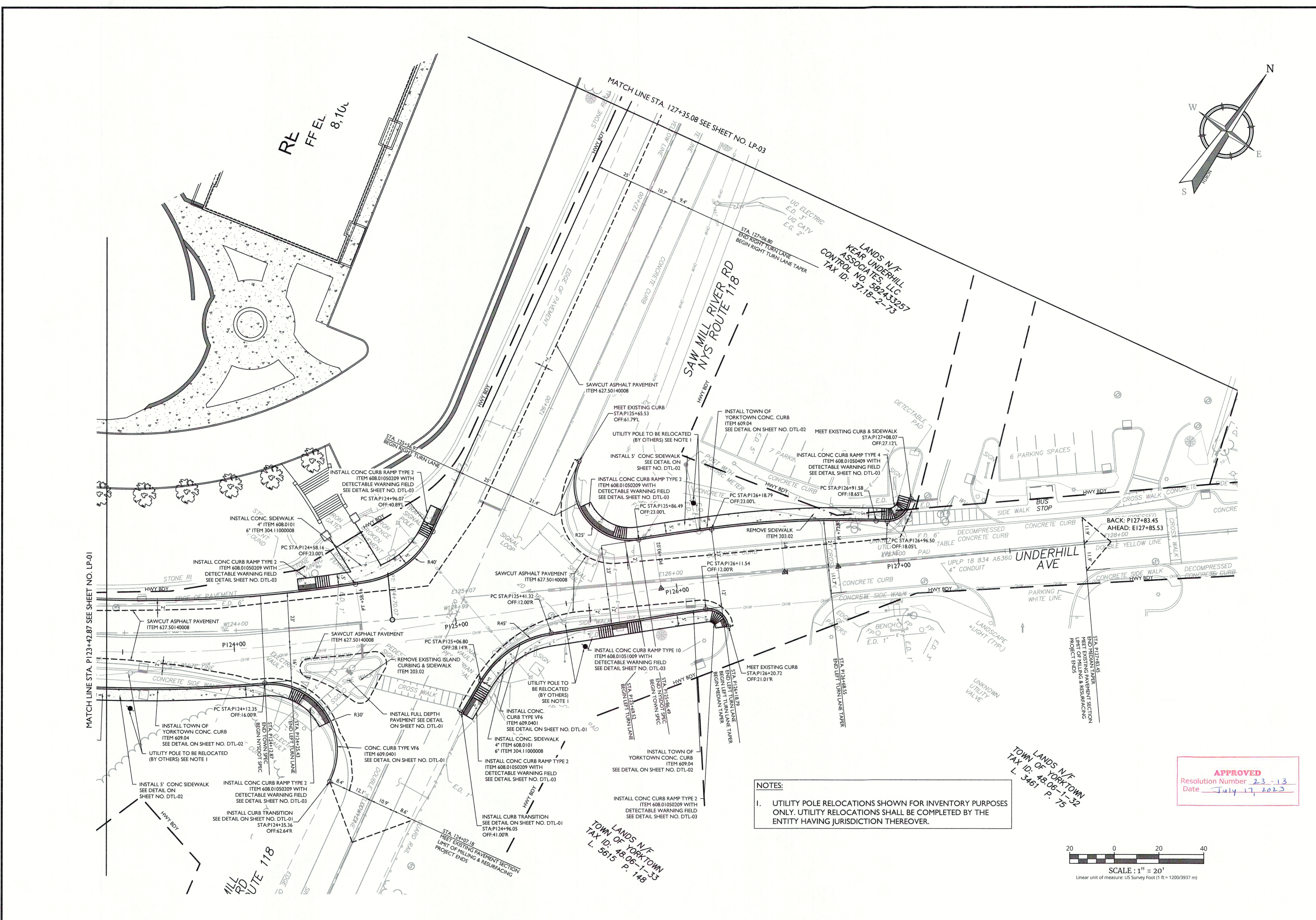
- NOTES:**
- UTILITY POLE RELOCATIONS SHOWN FOR INVENTORY PURPOSES ONLY. UTILITY RELOCATIONS SHALL BE COMPLETED BY THE ENTITY HAVING JURISDICTION THEREOVER.
 - PROPOSED SEWER CONNECTION IS NOT INCLUDED AS PART OF THIS CONTRACT AND SHALL BE COMPLETED BY SOUNDVIEW SITE CONTRACTOR. COORDINATION OF WORK WILL BE REQUIRED TO ENSURE SEWER INSTALLATION IS COORDINATED WITH PROPOSED DRAINAGE WORK ON THE SOUTH SIDE OF UNDERHILL AVENUE AND IS COMPLETED PRIOR TO FINAL PAVING OF UNDERHILL AVENUE.

APPROVED
Resolution Number 23-13
Date July 17, 2023



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PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

NYS ROUTE 118 (S.H. 14.8) AT UNDERHILL AVENUE
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WESTCHESTER COUNTY
NEW YORK

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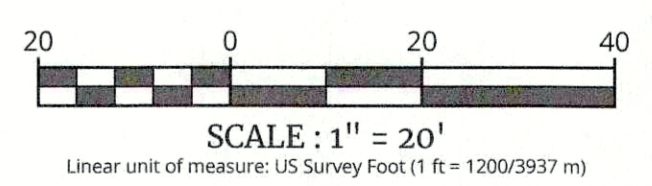
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PROJECT NUMBER: 2006297A	DRAWING NAME: R-PL06-CNST		

SHEET TITLE:
LAYOUT & CONSTRUCTION PLAN

SHEET NUMBER:
LP-02

NOTES:
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3	5/16/24	REVISED PER NYS DOT 5/02/24 COMMENTS	M.J.A.		



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(SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

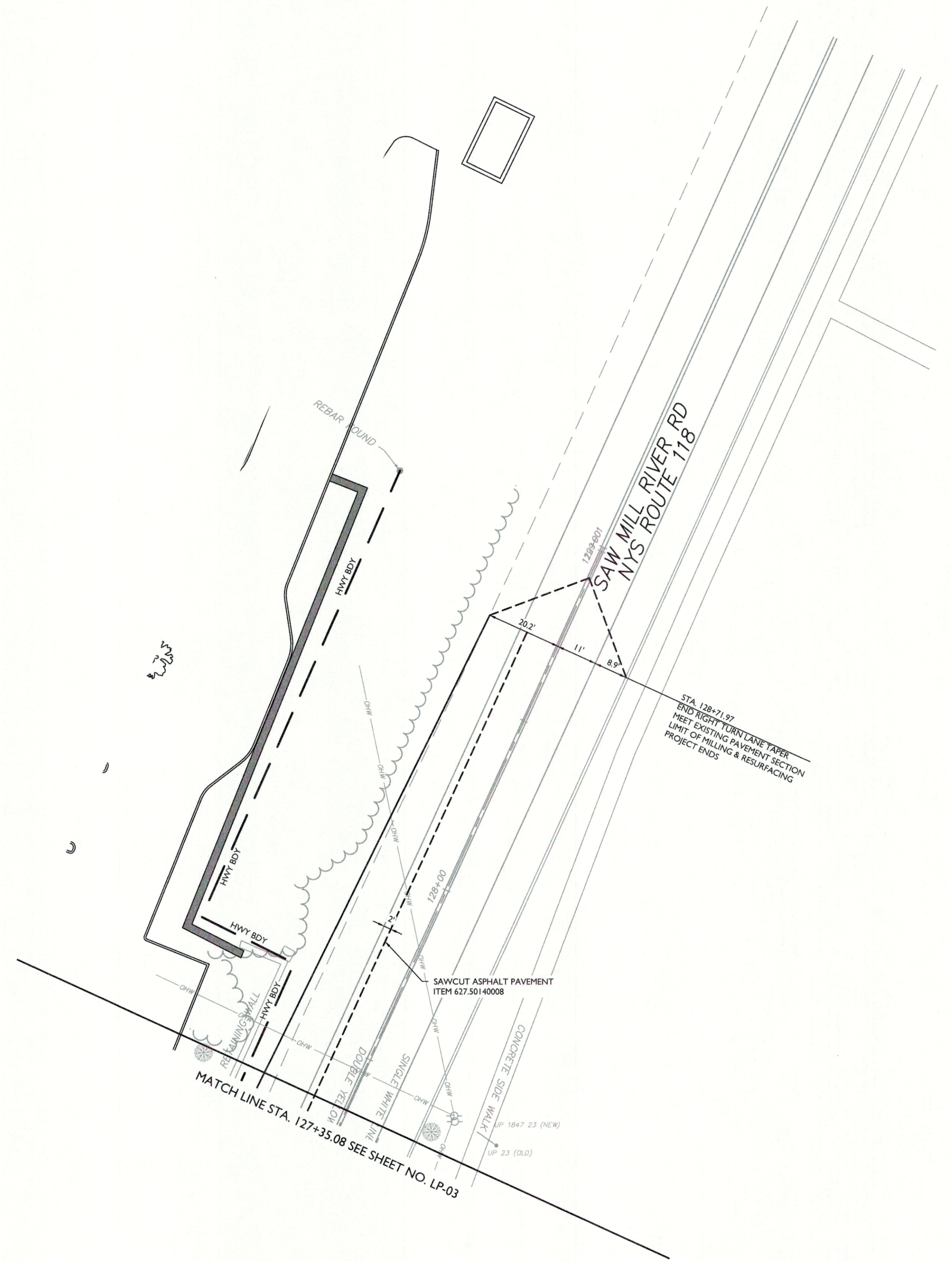
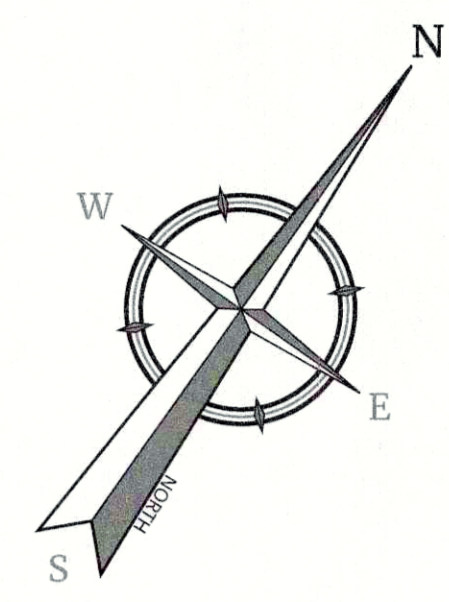
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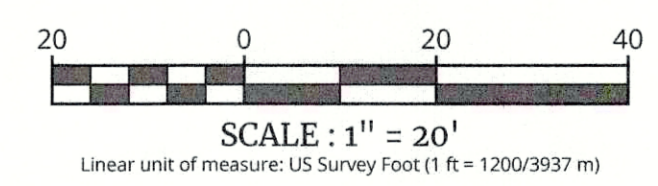
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SHEET TITLE:
LAYOUT & CONSTRUCTION PLAN

SHEET NUMBER:
LP-03

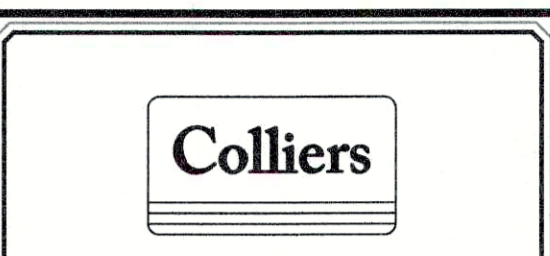
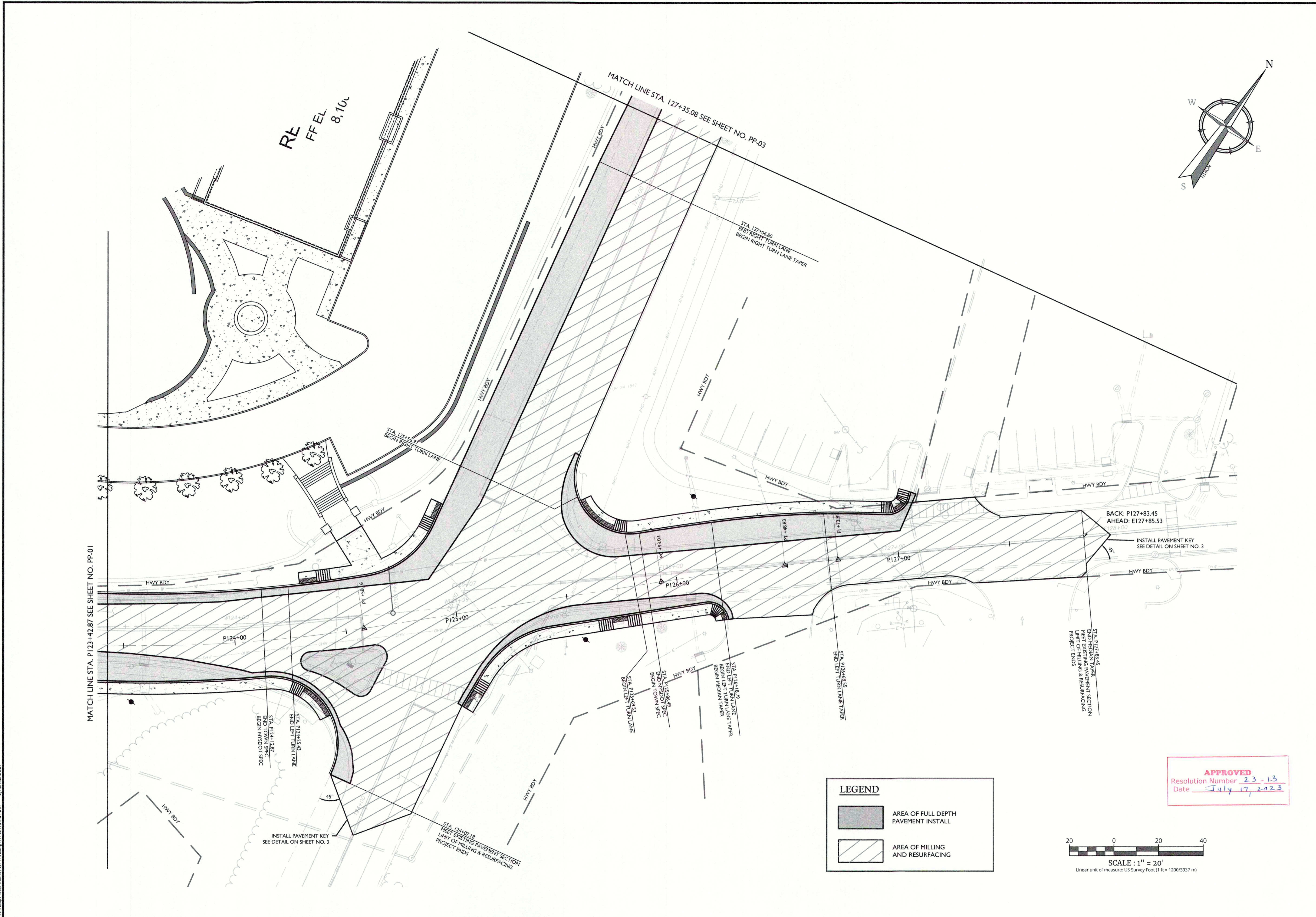


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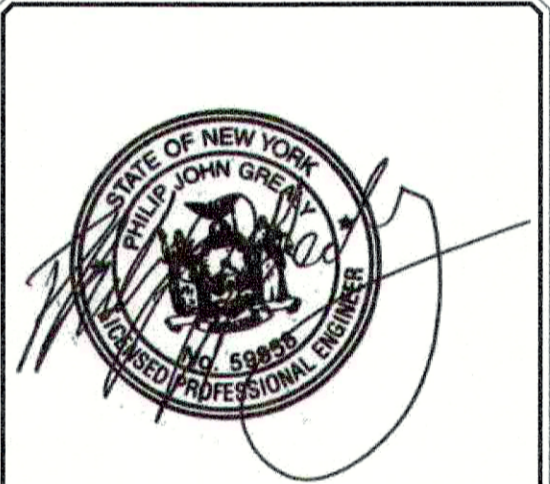
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 N.Y. C.O.A.#: 0017609

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 FOR
UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

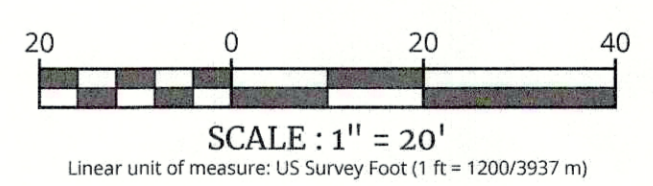
NYS ROUTE 118 (S.H. 14.8) AT UNDERHILL AVENUE

TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK

APPROVED
 Resolution Number 23-13
 Date July 17, 2023

LEGEND

- AREA OF FULL DEPTH PAVEMENT INSTALL
- AREA OF MILLING AND RESURFACING



UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

PAVING PLAN

SHEET NUMBER: **PP-02**

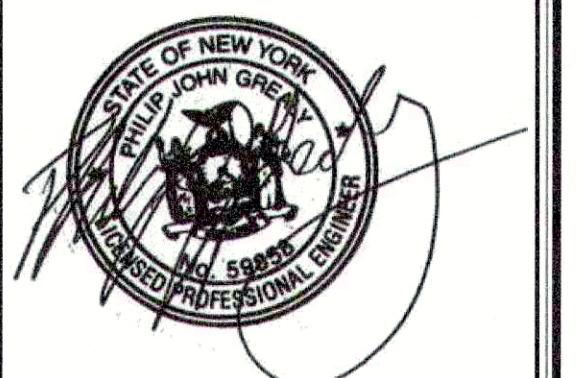
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DESCRIPTION
1	4/2/24	REVISED PER WISDOT COMMENTS RECEIVED 3/19/24
2	4/26/24	REVISED PER WISDOT 4/25/24 COMMENTS
3	5/14/24	REVISED PER WISDOT 5/24/24 COMMENTS



Philip John Grealy
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N.Y. C.O.A.#: 0017609

PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE IMPROVEMENTS
(SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

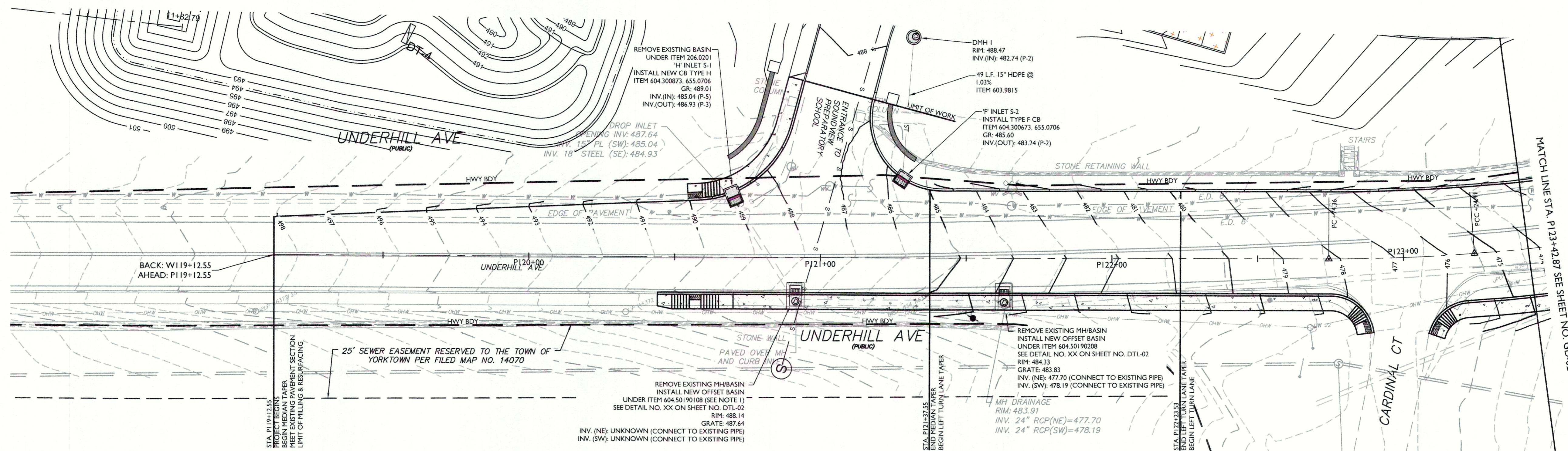
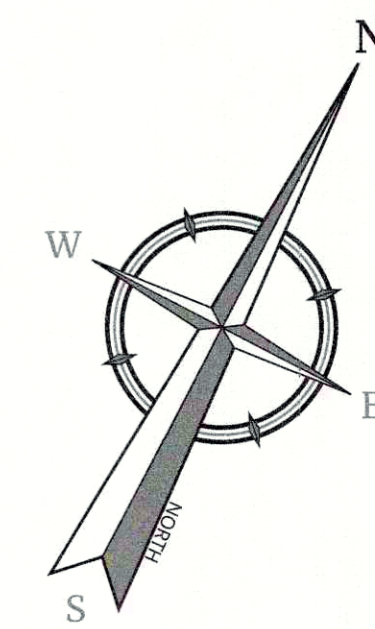
TOWN OF YORKTOWN
WESTCHESTER COUNTY
NEW YORK

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400 Columbus Avenue,
Suite 180E
Valhalla, NY 10595
Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN,
ARCHITECTURAL, LANDSCAPE ARCHITECTURE,
SURVEYING CT, P.C.

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/8/23	M.J.A.	R.G.D.
PROJECT NUMBER:	DRAWING NAME:		
20006297A	R-PL08-GRAD		

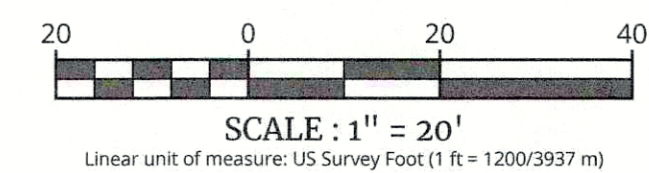
SHEET TITLE:
GRADING & DRAINAGE PLAN

SHEET NUMBER:
GD-01

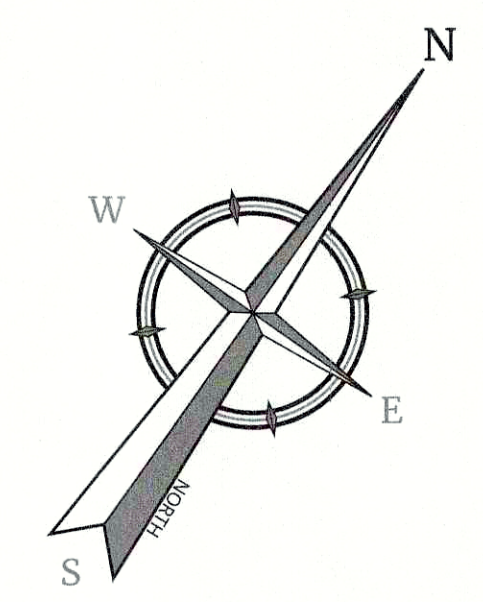
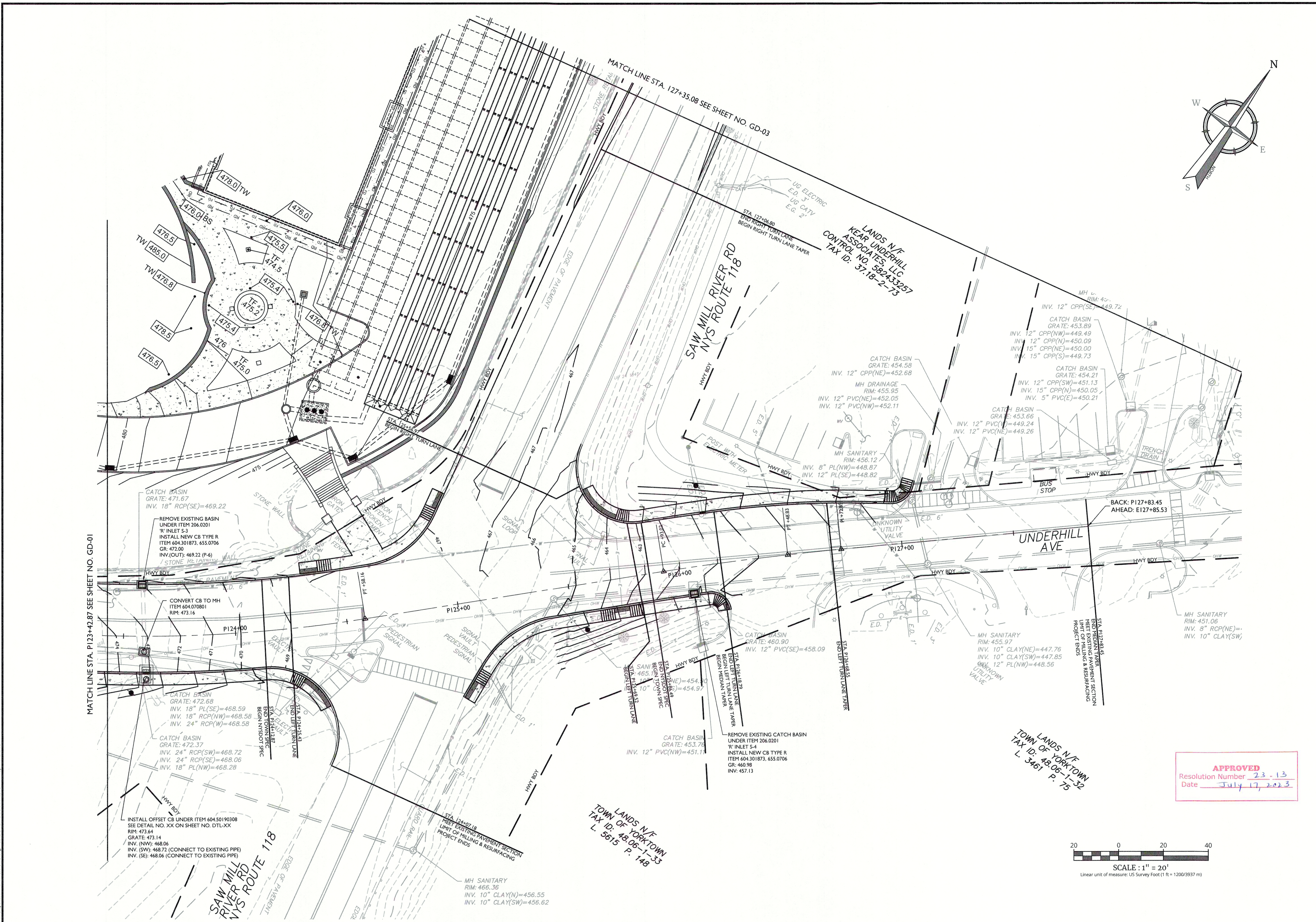


NOTES:
1. CONTRACTOR SHALL EXPOSE AND INSPECT STRUCTURE PRIOR TO WORK TO DETERMINE INVERTS OF EXISTING STRUCTURE. STRUCTURE SHALL BE CONNECTED TO EXISTING PIPES AT EXISTING INVERTS.

APPROVED
Resolution Number 23-13
Date July 17, 2023



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1	4/29/24	REVISED PER WISDOT COMMENTS RECEIVED 3/19/24				
2	4/26/24	REVISED PER WISDOT 4/25/24 COMMENTS				
3	5/14/24	REVISED PER WISDOT 5/7/24 COMMENTS				



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PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

NYS ROUTE 118 (S.H. 14.8) AT UNDERHILL AVENUE

TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK

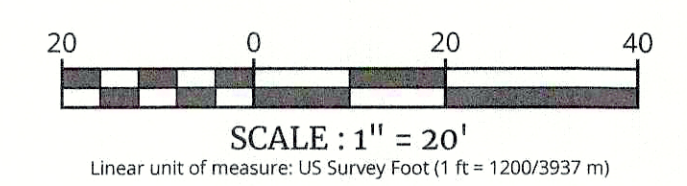
Colliers WESTCHESTER
400 Columbus Avenue, Suite 180E
Valhalla, NY 10595
Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN ARCHITECTURAL, LANDSCAPE ARCHITECTURE, SURVEYING, P.C.

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/8/23	M.J.A.	R.G.D.
PROJECT NUMBER:	DRAWING NAME:		
20006297A	R-PL08-GRAD		

GRADING & DRAINAGE PLAN

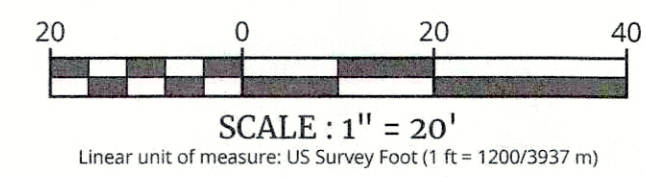
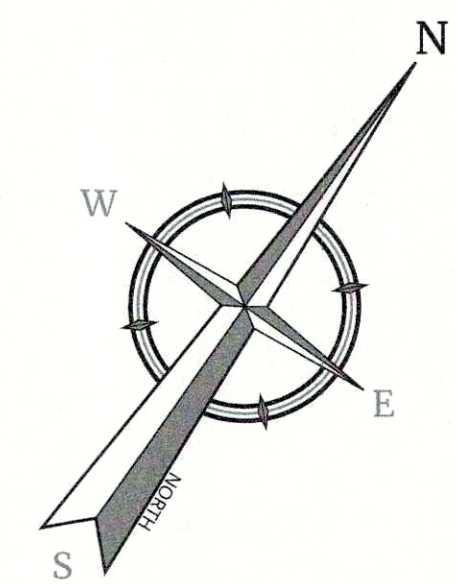
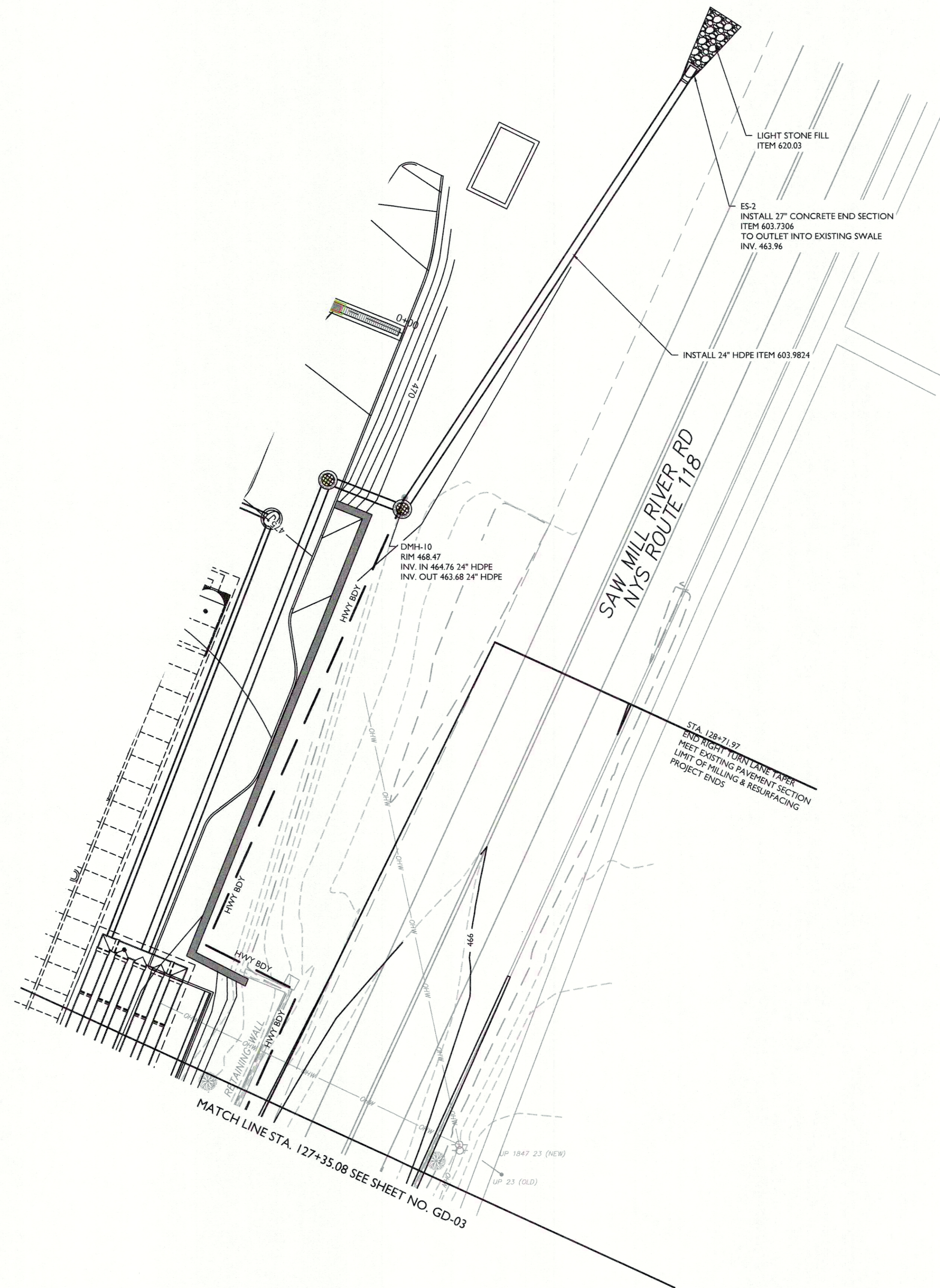
SHEET NUMBER: **GD-02**

APPROVED
Resolution Number **23-13**
Date **July 17, 2023**




UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

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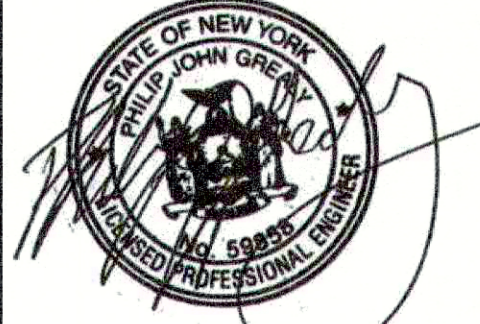
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1	4/2/24	REVISED PER NYSDOT COMMENTS RECEIVED 3/19/24	M.J.A.		
2	4/26/24	REVISED PER NYSDOT 4/25/24 COMMENTS.	J.E.M.		
3	5/16/24	REVISED PER NYSDOT 5/2/24 COMMENTS.	M.J.A.		



Philip John Grealy
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N.Y. C.O.A #: 0017609


PRELIMINARY HIGHWAY IMPROVEMENT PLANS

FOR

UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK



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400 Columbus Avenue, Suite 180E
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SCALE: AS SHOWN	DATE: 1/8/23	CHECKED BY: R.G.D.
PROJECT NUMBER: 20006297A	DRAWING NAME: R-PI08-GRAD	

LAYOUT & CONSTRUCTION PLAN

SHEET NUMBER: **GD-03**

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



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3	5/14/24	REVISED PER NYSDOT 5/14/24 COMMENTS



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N.Y. C.O.A.#: 0017609

PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE IMPROVEMENTS
(SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

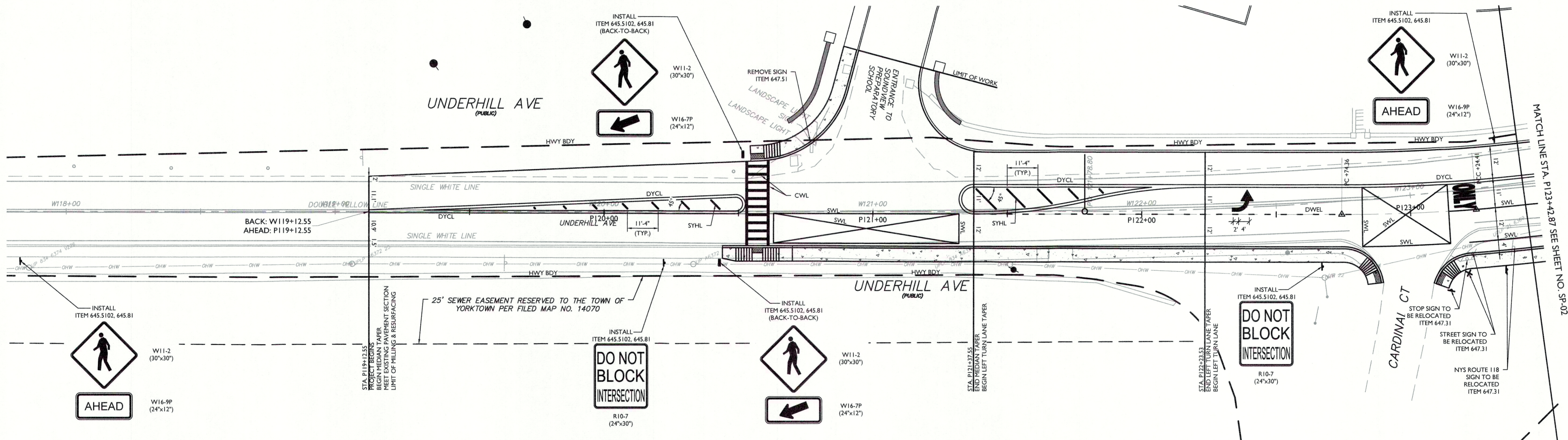
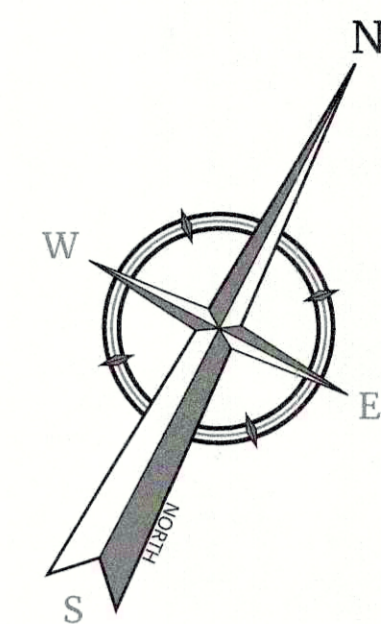
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WESTCHESTER COUNTY
NEW YORK

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Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN
ARCHITECTURE, LANDSCAPE ARCHITECTURE,
SURVEYING, P.C.

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/8/23	M.J.A.	R.G.D.
PROJECT NUMBER:	DRAWING NAME:		
20006297A	R-PL09-TSSP		

SHEET TITLE:
SIGNING & STRIPING PLAN

SHEET NUMBER:
SP-01



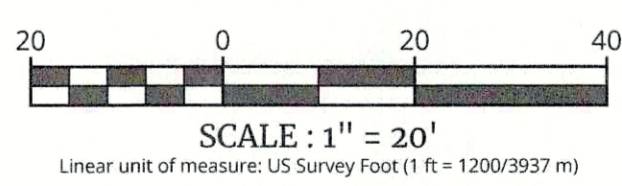
STRIPING NOTES:

- ALL SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH THE MUTCD.
- TRAFFIC SIGN SUPPORTS SHALL BE TYPE "A" AND FROM THE STATE APPROVED LIST.
- THE REMOVAL OF EXISTING PAVEMENT MARKINGS WILL BE UNDER THE FOLLOWING ITEMS:
 - 635.0103 - CLEANING AND PREPARATION OF PAVEMENT SURFACE LINES (LF)
 - 635.0203 - CLEANING AND PREPARATION OF PAVEMENT SURFACE LETTERS (EA)
 - 635.0303 - CLEANING AND PREPARATION OF PAVEMENT SURFACE SYMBOLS (EA)
- ALL NEW PAVEMENT MARKINGS SHALL BE THE FOLLOWING ITEMS:
 - 685.1102 - WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES, 20 MILS.
 - 685.1202 - YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES, 20 MILS.
- ALL STOP LINES, LEGENDS AND SYMBOLS SHALL BE THE FOLLOWING ITEMS:
 - 685.3104 - WHITE EPOXY REFLECTORIZED PAVEMENT SPECIAL STRIPES - 20 MIL PORTABLE/HAND APPLICATION (LF)
 - 685.3304 - WHITE EPOXY REFLECTORIZED PAVEMENT LETTERS - 20 MIL PORTABLE/HAND APPLICATION (EA)
 - 685.3404 - WHITE EPOXY REFLECTORIZED PAVEMENT SYMBOLS - 20 MIL PORTABLE/HAND APPLICATION (EA)
- THE CONTRACTOR SHALL BE AWARE OF THE FACT THAT IN ADDITION TO SIGN WORK SHOWN ON THESE PLANS THERE MAY EXIST SIGNS WITHIN THE RIGHT-OF-WAY THAT NEED TO BE RELOCATED OR REMOVED THAT ARE NOT SHOWN ON THESE PLANS. SUCH RELOCATION/REMOVAL SHALL BE COMPLETED A.O.B.E.
- SEE STRIPING DETAILS ON SHEET NO. DTL-01

STRIPING LEGEND:

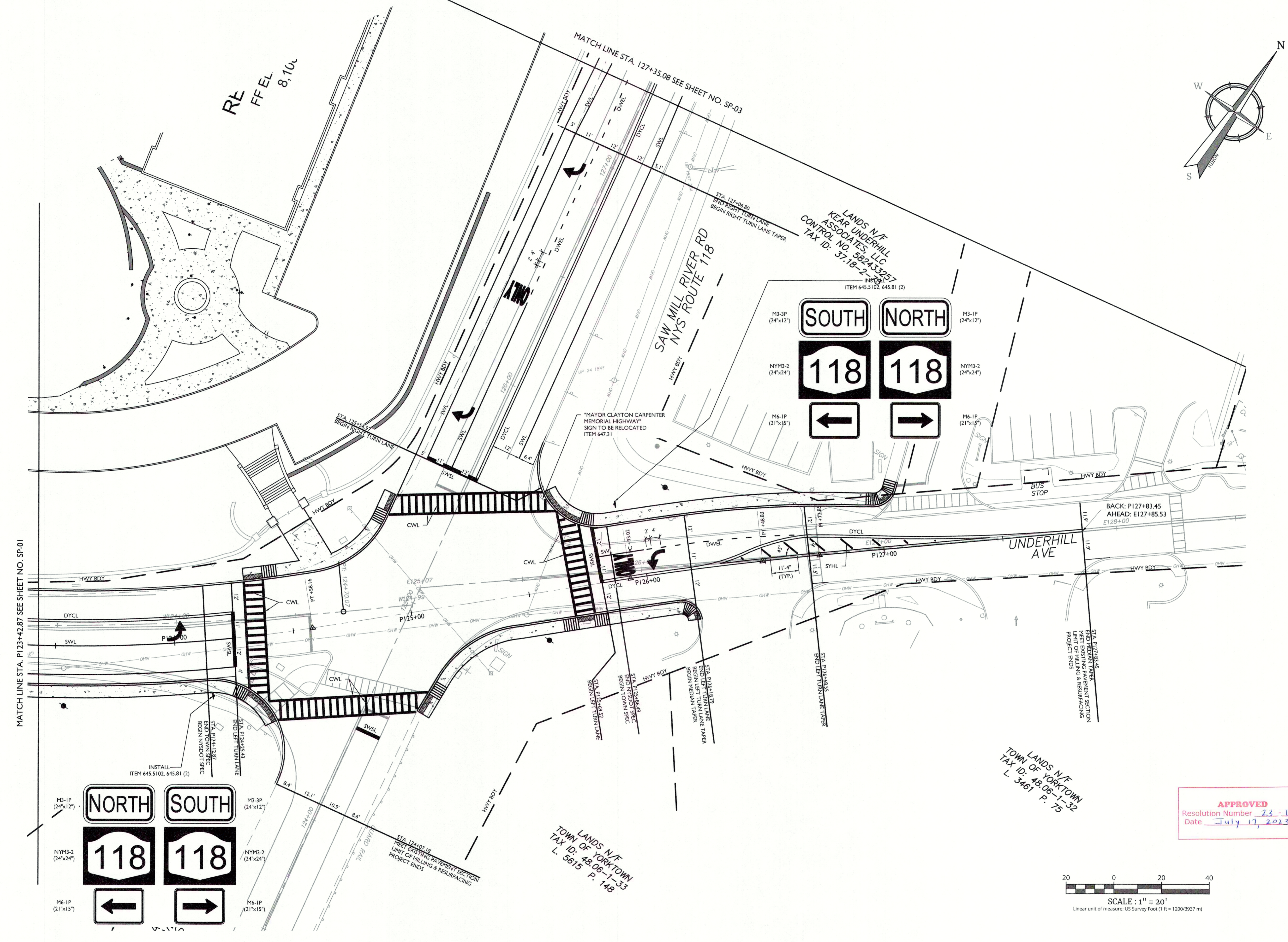
- DYCL - DOUBLE YELLOW CENTER LINE 4"
- SWL - SOLID WHITE LINE 4"
- SWSL - SOLID WHITE STOP LINE 24"
- SYHL - SOLID YELLOW HATCH LINE 24"
- DWEL - DOTTED WHITE EXTENSION LINE 4"
- CWL - SOLID WHITE CROSS WALK LINE 12"

- WHITE SYMBOL
- WHITE LETTERS



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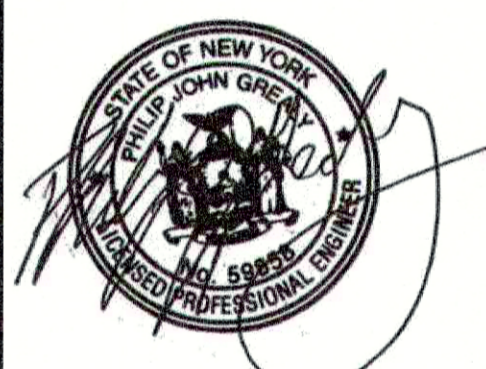
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2	4/26/24	J.E.M.	REVISED PER NYSDOT 4/26/24 COMMENTS.
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N.Y. C.O.A. #: 0017609

PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE
TOWN OF YORKTOWN
WESTCHESTER COUNTY
NEW YORK

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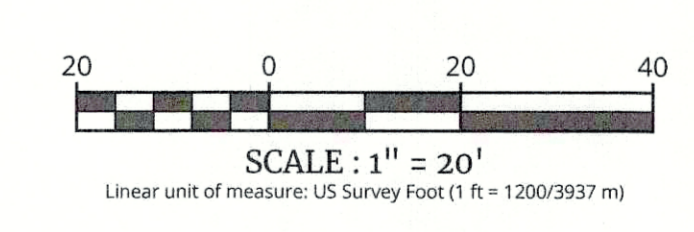
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400 Columbus Avenue,
Suite 190E
Valhalla, NY 10595
Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN
ARCHITECTURE, LANDSCAPE ARCHITECTURE
SURVEYING CT, P.C.

SCALE: AS SHOWN DATE: 1/8/23 DRAWN BY: M.J.A. CHECKED BY: R.G.D.
PROJECT NUMBER: 20006297A DRAWING NAME: R-PL09-TSSP

SHEET TITLE:
SIGNING & STRIPING PLAN

SHEET NUMBER:
SP-02

APPROVED
Resolution Number 23-13
Date July 17, 2023



UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

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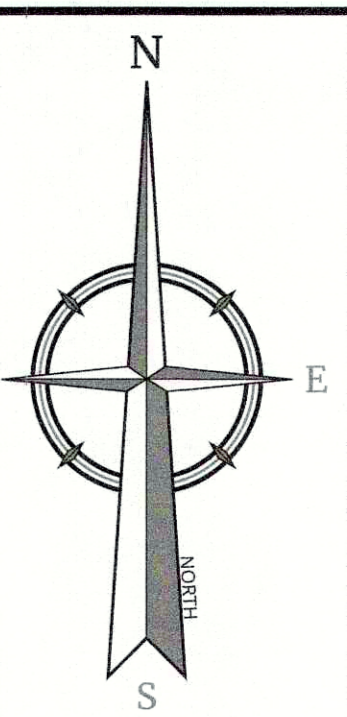
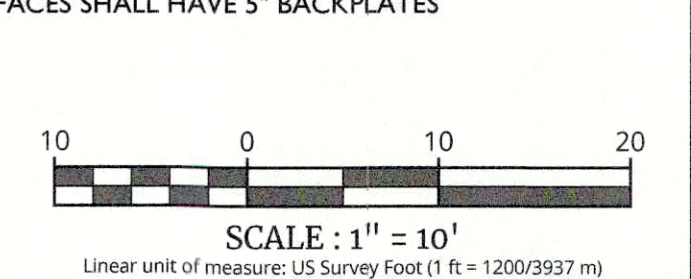
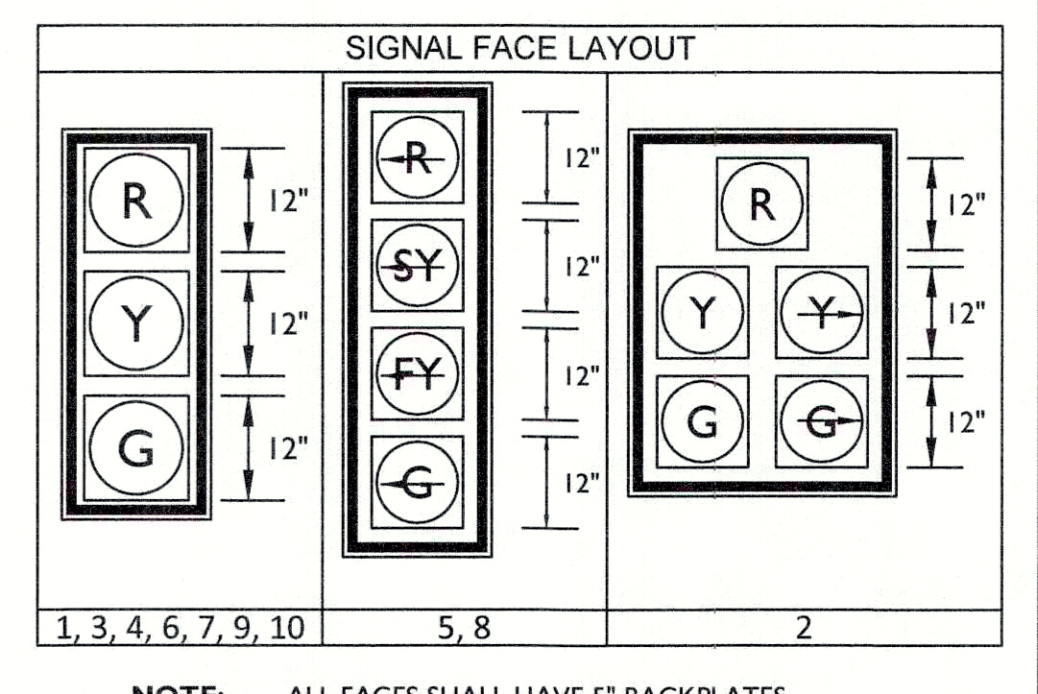
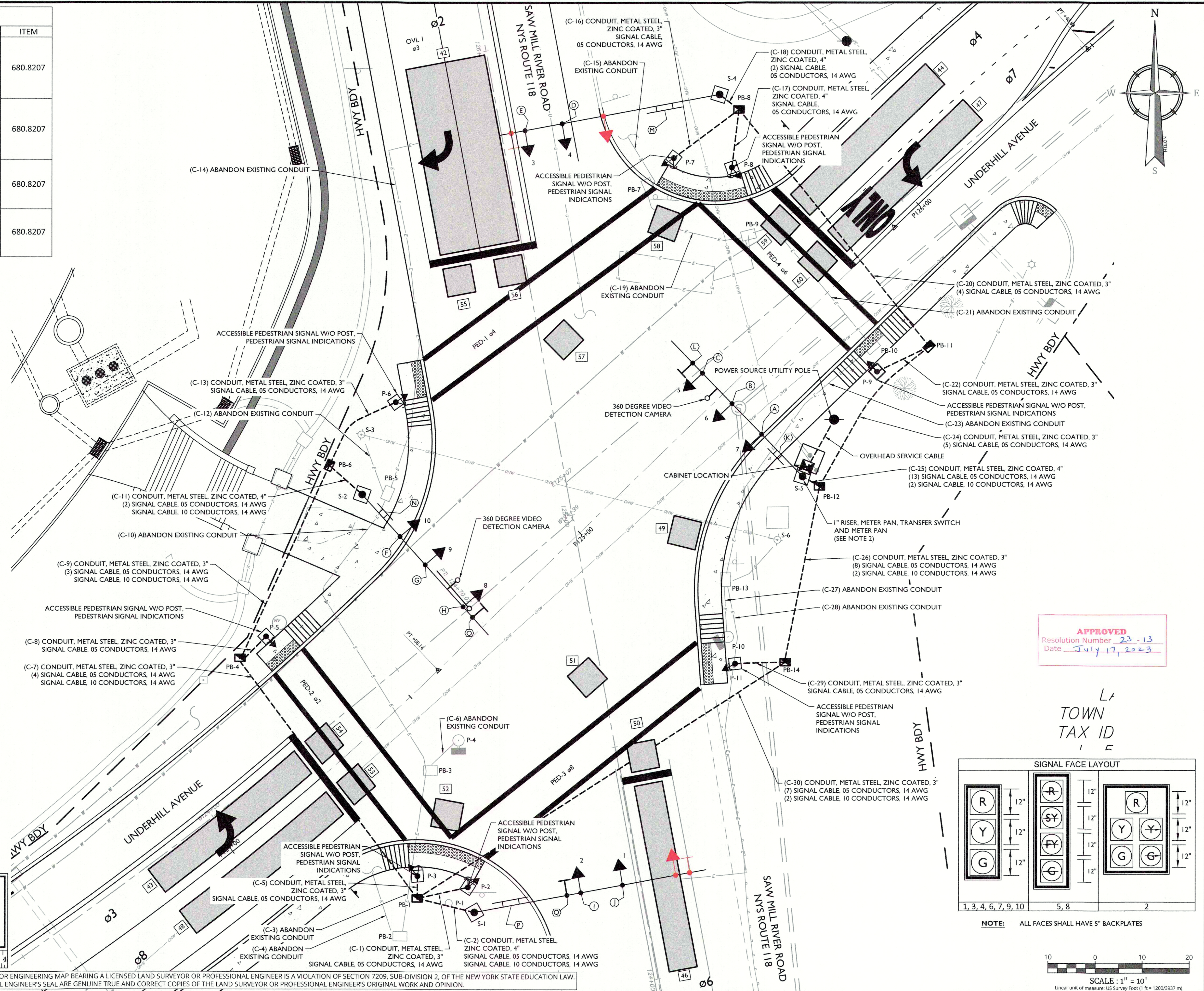
SIGN TEXT LEGEND			
NO.	SIGN TEXT	M.U.T.C.D. NO.	ITEM
L, O		R3 - 5L	680.8207
Q		R3 - 5R	680.8207
K, N		R3 - 5R	680.8207
M, P		R3 - 5R	680.8207

LEGEND	
	PROPOSED SIGNAL HEAD
	POTENTIAL FUTURE SIGNAL HEAD
	PROPOSED OVERHEAD SIGN
	POTENTIAL FUTURE OVERHEAD SIGN
	SIGNAL CONTROLLER CABINET
	18' x 26' PULLBOX
	360 DEGREE VIDEO DETECTION CAMERA
	6' x 40' DETECTION ZONE
	6' x 6' DETECTION ZONE COUNT

- NOTE:
- FOR PAVEMENT MARKINGS SEE SHEET NO. SP-02.
 - INSTALL 1" RISER ASSEMBLY (ITEM 680.700603), METER PAN (680.9402) AND GENERATOR TRANSFER SWITCH (ITEM 680.9499) ON POLE S-5 IN ACCORDANCE WITH NYS DOT STANDARD SHEET 680-05.

NOTE
SCALE REDUCTION
ALL INDICATED SCALES ARE REDUCED TO HALF SIZE.
ORIGINAL DRAWING SIZE: 22"x34"

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1	4/26/24	REVISED PER NYS DOT COMMENTS RECEIVED 4/19/24
2	4/26/24	REVISED PER NYS DOT 4/25/24 COMMENTS
3	5/14/24	REVISED PER NYS DOT 5/22/24 COMMENTS
4	5/29/24	REVISED TRAFFIC SIGNAL PLAN SHEETS PER NYS DOT SIGNAL GROUP 5/23/24 EMAIL COMMENTS

Philip John Grealy
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 059858-B
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A.#: 0017609

PRELIMINARY HIGHWAY IMPROVEMENT PLANS

FOR
UNDERHILL AVENUE IMPROVEMENTS
(SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

TOWN OF YORKTOWN
WESTCHESTER COUNTY
NEW YORK

WESTCHESTER
400 Columbus Avenue,
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Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN
ARCHITECTURE, LANDSCAPE ARCHITECTURE,
SURVEYING, P.C.

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/8/23	M.J.A.	R.G.D.
PROJECT NUMBER:	DRAWING NAME:		
20006297A	R-PL10-SGNL		

SHEET TITLE: TRAFFIC SIGNAL PLAN
NYS ROUTE 118 & UNDERHILL AVENUE
(SIGNAL NO. W-213)

SHEET NUMBER: TSP-01

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

TRAFFIC SIGNAL NOTES:

- ALL WORK IS TO BE COMPLETED ACCORDING TO THE LATEST "NYS DOT STANDARD SPECIFICATIONS," REGION 8 SIGNAL DETAILS SHEETS AND STANDARD STRUCTURE SHEETS. THE REGION 8 SIGNAL DETAILS SHEETS ARE TO BE A PART OF THE SIGNAL PLAN.
- SIGNAL HEAD ROADWAY CLEARANCE SHOULD BE 16'-6".
- ALL MATERIALS INCORPORATED IN THE SIGNAL INSTALLATION SHALL CONFORM TO THE CURRENT NYS DOT REQUIREMENTS AS PER NOTE 1 ABOVE. CONFORMANCE SHALL BE MET BY THE STATE APPROVAL OF THE FOLLOWING SUBMISSIONS BY THE CONTRACTOR.

A. TRAFFIC SIGNAL POLES AND PEDESTRIAN Poles:

MANUFACTURER'S SHOP DRAWINGS AND CALCULATIONS MUST BE SUBMITTED TO NYS DOT FOR EACH SIGNAL POLE. THE SHOP DRAWINGS AND CALCULATIONS MUST BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK.

B. TRAFFIC SIGNAL HEADS (SECTIONS) & BRACKET ASSEMBLIES, PEDESTRIAN HEADS AND BRACKET ASSEMBLIES, CONCRETE PULLBOXES, CAST ALUMINUM JUNCTION BOXES, AND OVERHEAD SIGN ASSEMBLIES:

MANUFACTURER'S CATALOG CUTS MUST BE SUBMITTED TO THE STATE AS WELL AS MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH "NYS DOT STANDARD SPECIFICATIONS"

C. TRAFFIC SIGNAL CONDUIT, CABLE, WIRE:

MANUFACTURER'S CATALOG CUTS MUST BE SUBMITTED TO NYS DOT.

D. TRAFFIC SIGNAL LOOP EMBEDDING SEALER:

ONLY THOSE PRODUCTS ON THE LATEST NYS DOT MATERIALS BUREAU "APPROVED LIST" SHALL BE USED.

- THE SIGNAL INSTALLATION CONTRACTOR SHALL CONTACT THE STATE PRIOR TO PERFORMING ANY WORK. A MEETING SHALL TAKE PLACE AS DETERMINED NECESSARY BY NYS DOT OR AT THE REQUEST OF THE CONTRACTOR.
- NYS DOT SHALL BE NOTIFIED PRIOR TO THE INSTALLATION OF ANY VEHICLE DETECTOR LOOPS. FAILURE TO DO SO MAY RESULT IN THE REJECTION OF LOOPS SO INSTALLED.
- THE PERMITTEE/CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL LOCAL PERMITS REQUIRED.
- PAVEMENT MARKINGS, IF REQUIRED, SHALL BE IN ACCORDANCE WITH CURRENT NYS DOT PRACTICE FOR THE SIGNAL LOCATION.
- THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING ELECTRIC SERVICE TO THE SIGNAL.
- IT IS THE PERMITTEE'S RESPONSIBILITY TO RESTORE ANY DISTURBED AREAS TO THEIR ORIGINAL CONDITION AS PER THE APPROPRIATE SECTIONS OF THE STANDARD SPECIFICATIONS.
- NYS DOT SHALL PROVIDE A TABLE OF SWITCH PACKS AND TABLE OF INPUT WIRING TO THE PERMITTEE (CONTRACTOR). IT IS THE PERMITTEE'S (CONTRACTOR'S) RESPONSIBILITY TO NOTIFY NYS DOT IN ADVANCE OF WHEN THESE ARE NEEDED.
- LOOP DETECTORS ARE TO BE WIRED IN PARALLEL IN THE CABINET.
- ELECTRICAL CABLE SPLICES:

ALL CABLE SPLICES MADE IN CABLE RUNS TO BE LOCATED BELOW GROUND WILL BE ACCOMPLISHED USING METHOD # 2 (TWO COMPONENT ELECTRICAL INSULATING RESIN REJACKETING MATERIAL) AS DESCRIBED IN SECTION 680.3.16 OF THE STANDARDS SPECIFICATIONS.

- MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES NYS SUPPLEMENT AND THE NYS DOT STANDARD SPECIFICATIONS.
- PULLBOXES:
 - UNLESS OTHERWISE SHOWN ON THE PLANS ALL PULLBOXES SHALL BE INSTALLED OUTSIDE OF THE PAVEMENT OR SHOULDER AREA.
 - THE FINISHED GROUND SURFACE ON THE BACK SLOPE IN THE VICINITY OF THE PULLBOX SHALL BE ADJUSTED SO THAT NO FILL SHALL BE SPILLED ON THE TOP OF THE BOX AND THE MAXIMUM DISTANCE FROM THE TOP OF THE FINISHED GROUND AT THE BOX SHALL NOT EXCEED 4 INCHES. ALL MATERIALS AND LABOR NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE PULLBOX.
- THE CONTRACTOR SHALL REFERENCE NYS DOT STANDARD SHEETS 680-1, 680-2, 680-4, 680-5, 680-6, 680-8, 680-10, 680-11, 680-13 AND 680-14, 685-01 FOR THIS INSTALLATION.
- PER NYS DOT STANDARD SPECIFICATION SECTION 619-3.17 - MAINTAIN OR MODIFY TRAFFIC SIGNAL EQUIPMENT - TRAFFIC SIGNALS SHALL BE MAINTAINED IN PROPER OPERATION, INCLUDING THE MAINTENANCE OF ALL FEATURES OF THE TRAFFIC SIGNAL OPERATION IN EFFECT AND OPERATING AT THE TIME ANY WORK BEGINS ON THE CONTRACT. TRAFFIC ACTUATED PHASES SHALL REMAIN ACTUATED, AND SIGNALS OPERATING WITHIN SIGNAL SYSTEMS SHALL REMAIN COORDINATED WITH THE REMAINDER OF THE SYSTEM UNLESS OTHERWISE APPROVED BY THE ENGINEER. EXCEPT FOR EMERGENCIES, NO CHANGES IN THE SIGNAL OPERATION OR TIMING SHALL BE MADE WITHOUT PRIOR APPROVAL BY THE ENGINEER. IF EMERGENCY CONDITIONS DICTATE A CHANGE IN THE OPERATION, THE ENGINEER SHALL BE NOTIFIED BY THE START OF THE NEXT WORK DAY, UNLESS OTHERWISE APPROVED BY THE ENGINEER. AN ALTERED SIGNAL OPERATION MUST BE RETURNED TO THE ORIGINAL SIGNAL OPERATION WITHIN 24 HOURS.

THE CONTRACTOR SHALL MAINTAIN IN OPERATION ALL EQUIPMENT INCLUDING SIGNAL HEADS, SUPPORTS, CABLE, WIRING, SPAN-WIRE-MOUNTED SIGNALING CONTROLLERS, MASTER CONTROLLERS, DETECTOR SYSTEMS, CONFLICT AND CURRENT MONITORS, RELAYS, SWITCH PACKS, AND ALL OTHER ACCESSORY AND NECESSARY EQUIPMENT. MAINTENANCE SHALL ALSO INCLUDE THE REPAIR AND REPLACEMENT OF EXISTING DETECTOR LOOPS, PAID FOR SEPARATELY.

THE CONTRACTOR SHALL HAVE CAPABLE TRAFFIC SIGNAL REPAIR PERSONNEL ON CALL 24 HOURS A DAY, SEVEN DAYS A WEEK, AND SHALL PROVIDE TO THE ENGINEER A SINGLE TELEPHONE NUMBER FOR CONTACTING THEM. IF FOR ANY REASON A SIGNAL IS NOT FUNCTIONING PROPERLY, THE CONTRACTOR SHALL COMMENCE WORK ON THE SIGNAL WITHIN TWO (2) HOURS OF NOTIFICATION, IF DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE POLICE AGENCY FOR TRAFFIC CONTROL OPERATIONS. IF THE POLICE AGENCY CANNOT OR WILL NOT PROVIDE TRAFFIC CONTROL, THE CONTRACTOR SHALL PROVIDE FLAGGERS AT LOCATIONS SPECIFIED BY THE ENGINEER WITHIN THE 2-HOUR TIME PERIOD. THE CONTRACTOR SHALL CONTINUE THE FLAGGER SERVICES UNTIL THE SIGNAL IS IN PROPER OPERATION. A FLAGGER WARNING (W20-7 OR W20-7a) SIGN SHALL BE USED ON ALL APPROACHES TO AN INTERSECTION CONTROLLED BY FLAGGERS.

- THE CLEARANCES BETWEEN ANY SIGNAL EQUIPMENT AND UTILITY LINES SHALL BE 10' FOR PRIMARY, 5.5' SECONDARY AND 2' FOR ALL OTHERS. CONTRACTOR SHALL COORDINATE HIS WORK WITH THE APPROPRIATE UTILITY COMPANY TO ENSURE PROPER CLEARANCES ARE ACHIEVED.
- IF SOFT CLAY OR ORGANIC DEPOSITS ARE ENCOUNTERED DURING THE FOOTING AUGERING/DIGGING OPERATION, OR IF AUGERING/DIGGING IS UNDERTAKEN IN AREAS HAVING A HIGH WATER TABLE, THE CONTRACTOR SHALL CONSULT THE ENGINEER-IN-CHARGE.
- CONTRACTOR SHALL CONTACT ALL THE APPROPRIATE PARTIES WITH JURISDICTION OVER THE UTILITIES (OVERHEAD AND UNDERGROUND) ENTERING ON OR NEAR THE PROJECT AREA PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES AND PROVIDE THOSE AGENCIES 72 HOURS NOTIFICATION. CONTRACTOR SHALL BE AWARE THAT OTHER UTILITIES (OVERHEAD AND/OR UNDERGROUND) NOT SHOWN ON THE PLANS MAY BE ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL AT HIS/HER OWN EXPENSE, REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES THAT HE/SHE DAMAGES, AND SHALL CONSTANTLY PROCEED WITH CAUTION TO PREVENT UNDUE INTERRUPTION TO UTILITY SERVICES.
- IF SOFT CLAY OR ORGANIC DEPOSITS ARE ENCOUNTERED DURING THE FOOTING AUGERING/DIGGING OPERATION, OR IF AUGERING/DIGGING IS UNDERTAKEN IN AREAS HAVING A HIGH WATER TABLE, THE CONTRACTOR SHALL CONSULT THE ENGINEER-IN-CHARGE.
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- PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES IN AREA TO RESOLVE ANY CONFLICTS BETWEEN SIGNAL EQUIPMENT AND UTILITY.
- AT THE CONCLUSION OF INSTALLATION WORK AND UPON ACCEPTANCE BY THE STATE THE CONTRACTOR SHALL FURNISH AN AS-BUILT DRAWING TO NYS DOT ALONG WITH A LIST OF ALL INSTALLED EQUIPMENT.
- PHASE 2 & 6 SHALL BE SET ON RECALL GREEN.
- FOR PAVEMENT MARKINGS SEE SHEET NO. SP-01.
- PEDESTRIAN PUSHBUTTONS:

PEDESTRIAN PUSHBUTTONS SHOULD BE LOCATED TO MEET ALL OF THE FOLLOWING CRITERIA:

- UNOBSTRUCTED AND ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR;
- BETWEEN THE EDGE OF THE CROSSWALK LINE (EXTENDED) FARTHEST FROM THE CENTER OF THE INTERSECTION AND THE SIDE OF A CURB RAMP (IF PRESENT), BUT NOT GREATER THAN 5 FEET FROM SAID CROSSWALK LINE;
- A DISTANCE OF 10" MAXIMUM FROM THE PEDESTRIAN ACCESS ROUTE (PUSHBUTTON EXTENSION ARMS MAY BE USED UP TO 18" IN LENGTH);
- BETWEEN 1.5 AND 6 FEET FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT;
- WITH THE FACE OF THE PUSHBUTTON PARALLEL TO THE CROSSWALK TO BE USED; AND
- AT A MOUNTING HEIGHT OF APPROXIMATELY 3.5 FEET, BUT NO MORE THAN 4 FEET, ABOVE THE SIDEWALK.

WHERE THERE ARE PHYSICAL CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 AND 6 FEET FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FARTHER THAN 10 FEET FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

EXCEPT AS PROVIDED BELOW, WHERE TWO PEDESTRIAN PUSHBUTTONS ARE PROVIDED ON THE SAME CORNER OF A SIGNALIZED LOCATION, THE PUSHBUTTONS SHOULD BE SEPARATED BY A DISTANCE OF AT LEAST 10 FEET.

WHERE THERE ARE PHYSICAL CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10-FOOT SEPARATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

IF TWO ACCESSIBLE PEDESTRIAN PUSHBUTTONS ARE PLACED LESS THAN 10 FEET APART OR ON THE SAME POLE, EACH ACCESSIBLE PEDESTRIAN PUSHBUTTON SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:

- A PUSHBUTTON LOCATOR TONE.
- A TACTILE ARROW.
- A SPEECH WALK MESSAGE FOR THE WALKING PERSON (SYMBOLIZING WALK) INDICATION, AND

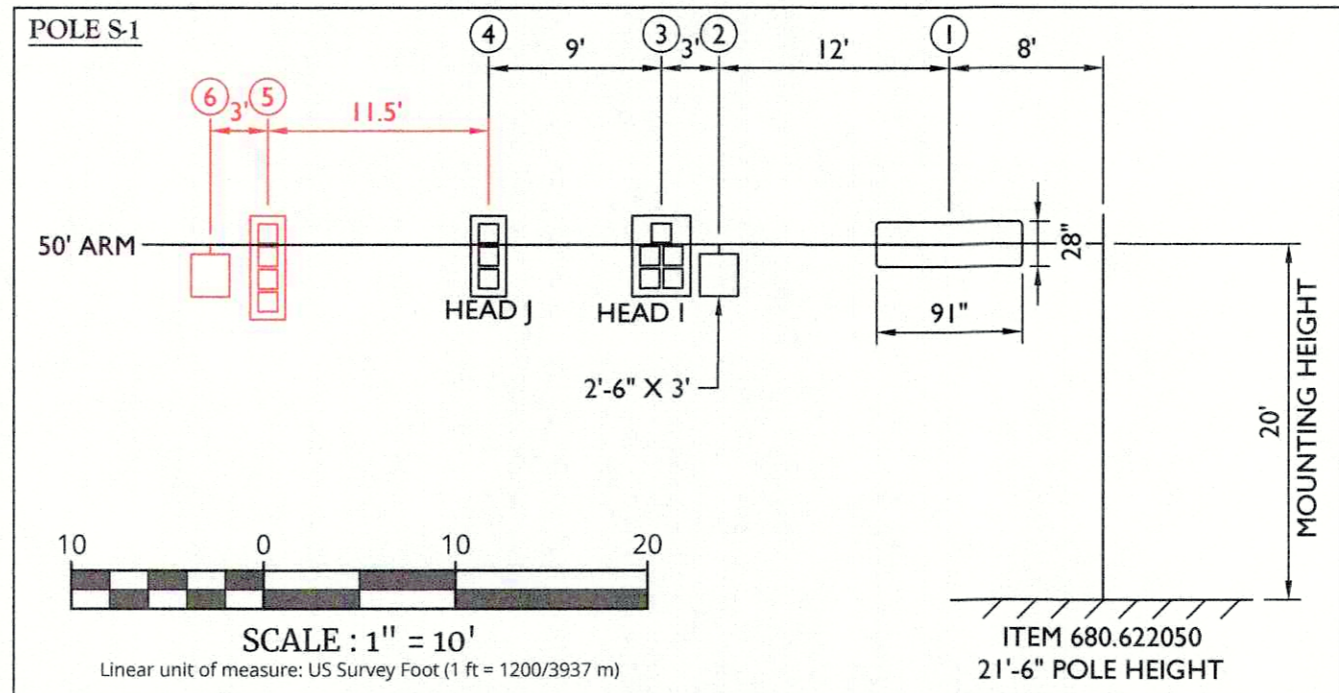
D. A SPEECH PUSHBUTTON INFORMATION MESSAGE

THE ACCESSIBLE PEDESTRIAN PUSHBUTTON SHALL BE LOCATED WITHIN 10" OF THE PEDESTRIAN ACCESS ROUTE. A MAXIMUM PUSHBUTTON EXTENSION ARM LENGTH OF 24" MAY BE USED TO ACHIEVE THIS WHERE REQUIRED.

ANY DEVIATIONS FROM THE ABOVE SHALL BE PRESENTED TO THE E.I.C. FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

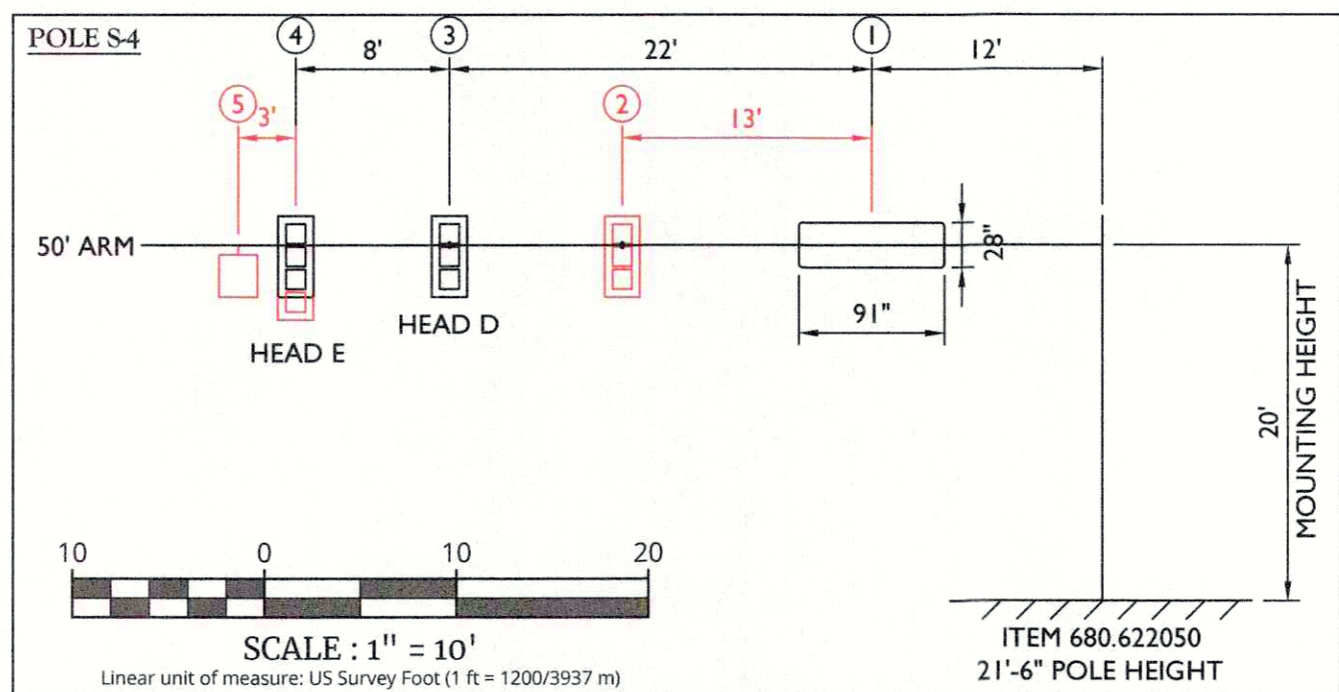
- SEQUENCE OF EVENTS FOR SIGNAL CONSTRUCTION CONTRACTS (CONTRACTOR SHALL CONTACT REGION 8 SIGNALS UNIT AT 845-437-3320):

- THE EIC OR INSPECTOR SHALL BE COPIED ON ALL COMMUNICATION TO AND FROM THE SIGNAL CONTRACTOR.
- PRECONSTRUCTION/UTILITY MEETING: NOTIFY TRAFFIC & SAFETY AS TO THE TIME AND PLACE. IT SHOULD BE CONFIRMED THAT THE CONTRACTOR HAS THE LATEST SET OF PLANS. THE EIC/INSPECTOR SHOULD DIRECT THE CONTRACTOR TO FORWARD SIGNAL POLE/MAST ARM SHOP DRAWINGS/CALCULATIONS TO THE TRAFFIC & SAFETY OFFICE FOR REVIEW. THIS IS TIME SENSITIVE SINCE THE MANUFACTURER MAY NEED TO REDESIGN THE POLES.
- REQUEST FOR POWER: REQUEST A SUBMITTAL THROUGH THE POWER REQUEST COORDINATOR THREE MONTHS BEFORE THE START OF ANY TRAFFIC SIGNAL RELATED WORK.
- FIRST DAY OF CONSTRUCTION: THE EIC/INSPECTOR SHALL NOTIFY THE REGIONAL TRAFFIC SIGNAL ENGINEER AND ALL SIGNAL CREW SUPERVISORS WITH THE CONTRACTOR'S EMERGENCY CONTACT INFORMATION. AN EMAIL REQUEST FOR A CABINET SHOULD BE MADE BY THE EIC/INSPECTOR TO THE REGIONAL TRAFFIC SIGNAL ENGINEER WHICH INCLUDES THE FINAL DR. SIGNALS LOCATION, NUMBER OF CABINETS/DISCONNECTS NEEDED, AND IF THE CABINET IS NEEDED EARLY FOR PAINTING.
- SIGNAL POLE STAKE OUT: THE STAKE OUT OF THE POLE LOCATIONS SHALL BE APPROVED BY THE TRAFFIC SIGNAL UNIT BEFORE THE FOUNDATIONS ARE INSTALLED. THIS IS TO IDENTIFY ANY POSSIBLE UTILITY CLEARANCE PROBLEMS BEFORE THE POLE LOCATION IS FINALIZED. ADDITIONAL CLEARANCE CHECKS MAY BE REQUIRED BEFORE POLES/SPAN WIRES/MAST ARMS ARE INSTALLED. THE SIGNAL UTILITY COORDINATOR WILL SCHEDULE ADDITIONAL CHECKS WITH THE CONTRACTOR WHILE ON SITE.
- CABINET RELEASE: WIRING SHEETS WILL BE E-MAILED TO EIC/INSPECTOR AT THE TIME OF CABINET RELEASE. THE CABINET WILL NOT BE RELEASED UNTIL ALL UTILITY CONFLICTS HAVE A RESOLUTION IN PLACE.
- SIGNALS UNDER CONSTRUCTION: THE CONTRACTOR IS EXPECTED TO MAINTAIN AND OPERATE TRAFFIC SIGNALS WHILE UNDER CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAKING TIMING ADJUSTMENTS AND SHIFTING HEADS DURING CONSTRUCTION TO ACCOUNT FOR UNFINISHED DETECTION, LANE CLOSURES, AND OTHER ACTIVITIES THAT AFFECT THE OPERATION OF THE SIGNAL. TEMPORARY TURN ON'S ARE ONLY ALLOWED WHEN IT IS NECESSARY TO REMOVE THE EXISTING SIGNAL TO FINISH CONSTRUCTION OF THE NEW SIGNAL. THE NEW SIGNAL CAN BE TURNED ON IF THERE ARE STOP BARS, IT PASSES THE GROUND TEST, ALL LEDS ARE WORKING, AND THE HEADS ALIGN IN THE LANES. NYS DOT WILL PROVIDE THE FINAL TIMING PLAN BEFORE A TEMPORARY TURN ON.
- TURN-ON: THE EIC/INSPECTOR SHOULD NOTIFY THE REGIONAL TRAFFIC SIGNAL ENGINEER WHEN THE SIGNAL IS READY FOR INSPECTION. A PRE INSPECTION WILL BE DONE TO VERIFY THAT ALL WORK IS COMPLETE. WITHIN 2 WEEKS FROM THE REQUEST, A FULL TURN ON DATE WILL BE SCHEDULED.
- THE CONTRACTOR SHALL INSTALL PORTABLE VARIABLE MESSAGE SIGNS (PVMS) ON ALL INTERSECTION APPROACHES FOR A MINIMUM OF ONE-WEEK PRIOR TO THE SCHEDULED TURN ON DATE. PVMS SHALL BE PAID FOR UNDER ITEM 619.110511 - PVMS STANDARD SIZE - FULL MATRIX (LED) NO OPTIONAL EQUIPMENT SPECIFIED. NO CELLULAR COMMUNICATIONS REQUIRED. CONTRACTOR SHALL CONTACT REGION 8 TRAFFIC SIGNALS UNIT TO CONFIRM PVMS MESSAGING PRIOR TO INSTALLATION.
- 10-DAY FUNCTIONAL TEST: A PUNCH LIST OF ANY ITEMS TO BE CORRECTED WILL BE GIVEN TO THE CONTRACTOR AT THE TURN ON. ONCE ALL OF THE ITEMS ARE COMPLETE THE 10-DAY FUNCTIONAL TEST WILL BEGIN. THE SIGNAL WILL BE ACCEPTED ONCE THE FUNCTIONAL TEST IS COMPLETE.



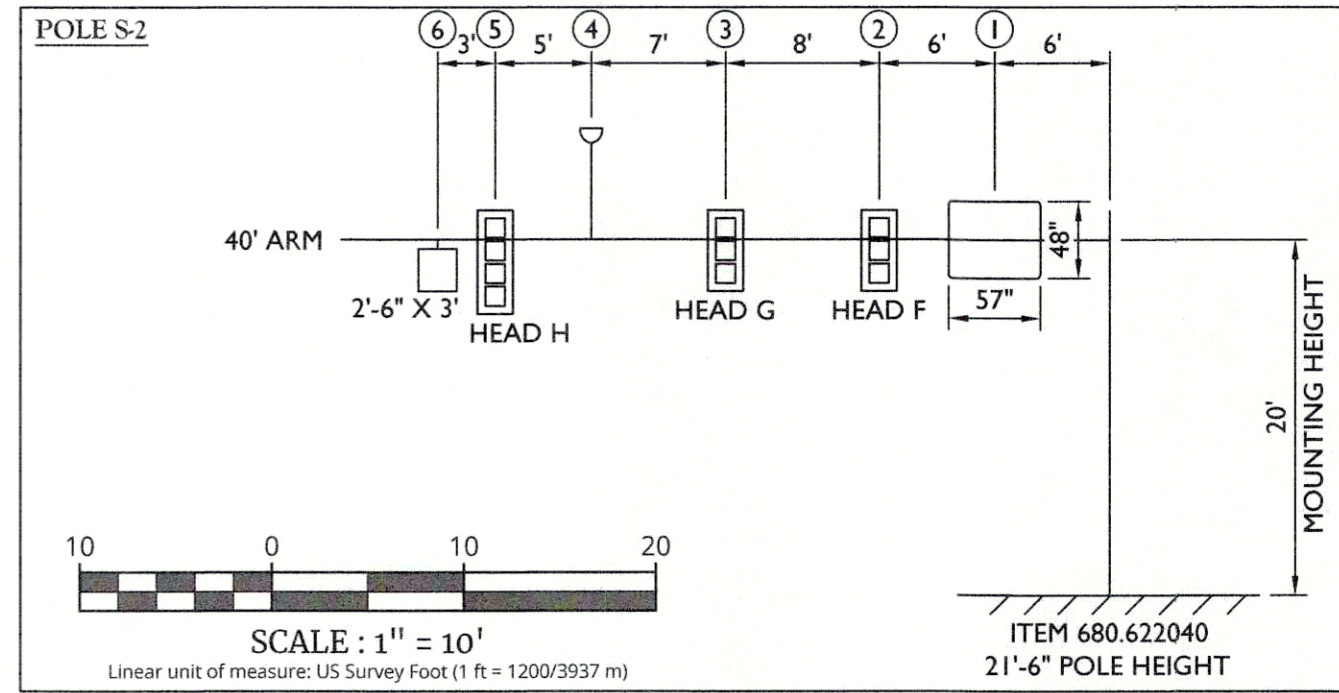
LOAD NO.	TYPE	NO. OF 12" SIGNAL SECTIONS	DEAD LOAD (LB)	PROJECTED WIND AREA (SF)	PROJECTED ICE AREA (SF)
1	SIGN	-	43.50	18.0	18.0
2	SIGN	-	22.50	7.5	7.5
3	SIGNAL HEAD I	5	85.83	118.83	360.21
4	SIGNAL HEAD J	3	47.32	8.2	20.9
5	FUTURE SIGNAL HEAD	4	59.45	10.9	27.9
6	FUTURE SIGN	-	22.50	7.5	7.5

- NOTES:
- WIND SPEEDS PER STANDARD SPECIFICATION SECTION 724.03.
 - DEAD LOADS INCLUDE SIGNAL SECTIONS OF SIGN, BRACKETS AND HARDWARE, EXCLUSIVE OF MAST ARM AND UPRIGHT.



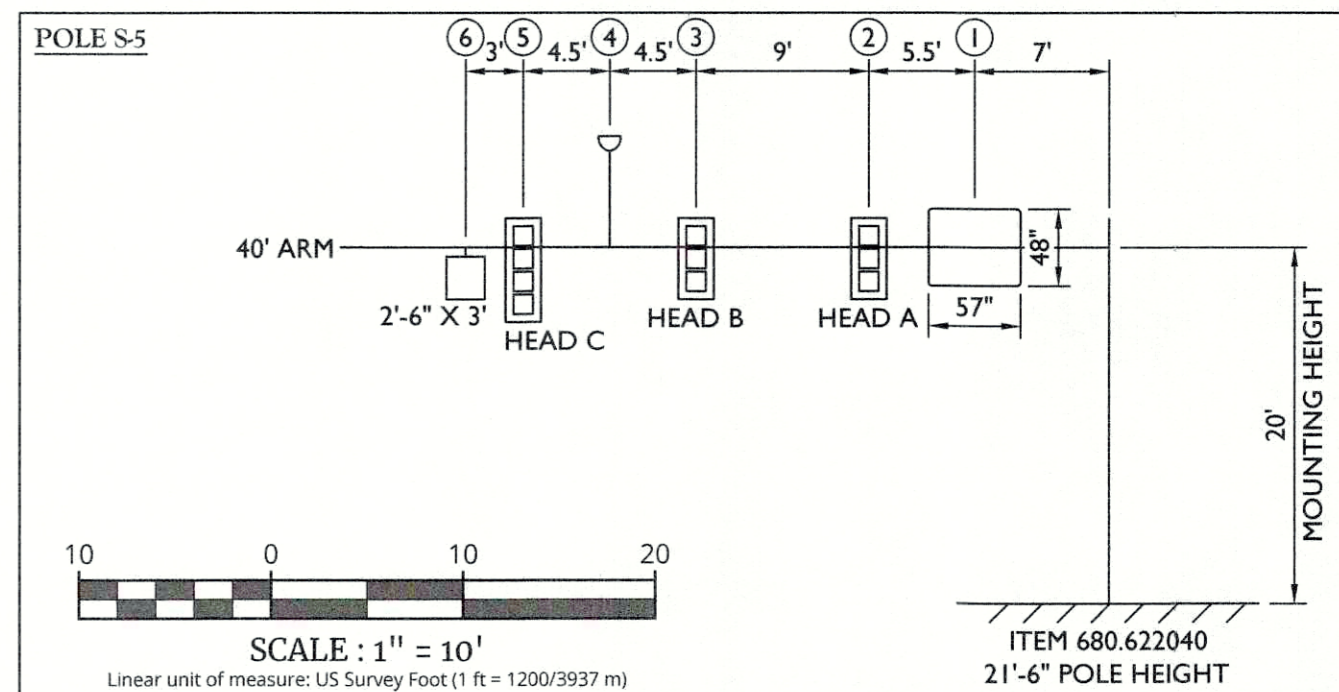
LOAD NO.	TYPE	NO. OF 12" SIGNAL SECTIONS	DEAD LOAD (LB)	PROJECTED WIND AREA (SF)	PROJECTED ICE AREA (SF)
1	SIGN	-	43.50	18.0	18.0
2	FUTURE SIGNAL HEAD	3	47.32	8.2	20.9
3	SIGNAL HEAD D	3	47.32	8.2	20.9
4	SIGNAL HEAD E	4	59.45	10.9	27.9
5	FUTURE SIGN	-	22.50	7.5	7.5

- NOTES:
- WIND SPEEDS PER STANDARD SPECIFICATION SECTION 724.03.
 - DEAD LOADS INCLUDE SIGNAL SECTIONS OF SIGN, BRACKETS AND HARDWARE, EXCLUSIVE OF MAST ARM AND UPRIGHT.
 - LOAD NO. 3, SIGNAL HEAD E SHALL BE A 3-SECTION HEAD WITH BACKPLATE AS INSTALLED UNDER THIS CONTRACT. HOWEVER LOADING DESIGN SHALL ACCOUNT FOR A FUTURE 4-SECTION HEAD WITH BACKPLATE AT THIS LOCATION.



LOAD NO.	TYPE	NO. OF 12" SIGNAL SECTIONS	DEAD LOAD (LB)	PROJECTED WIND AREA (SF)	PROJECTED ICE AREA (SF)
1	SIGN	-	45.50	19.0	19.0
2	SIGNAL HEAD F	3	47.32	8.2	20.9
3	SIGNAL HEAD G	3	47.32	8.2	20.9
4	GRIDSMA RT CAMERA	-	10.00	1.5	1.5
5	SIGNAL HEAD H	4	59.45	10.9	27.9
6	SIGN	-	22.50	7.5	7.5

- NOTES:
- WIND SPEEDS PER STANDARD SPECIFICATION SECTION 724.03.
 - DEAD LOADS INCLUDE SIGNAL SECTIONS OF SIGN, BRACKETS AND HARDWARE, EXCLUSIVE OF MAST ARM AND UPRIGHT.



LOAD NO.	TYPE	NO. OF 12" SIGNAL SECTIONS	DEAD LOAD (LB)	PROJECTED WIND AREA (SF)	PROJECTED ICE AREA (SF)
1	SIGN	-	45.50	19.0	19.0
2	SIGNAL HEAD A	3	47.32	8.2	20.9
3	SIGNAL HEAD B	3	47.32	8.2	20.9
4	GRIDSMA RT CAMERA	-	10.00	1.5	1.5
5	SIGNAL HEAD C	4	59.45	10.9	27.9
6	SIGN	-	22.50	7.5	7.5

- NOTES:
- WIND SPEEDS PER STANDARD SPECIFICATION SECTION 724.03.
 - DEAD LOADS INCLUDE SIGNAL SECTIONS OF SIGN, BRACKETS AND HARDWARE, EXCLUSIVE OF MAST ARM AND UPRIGHT.

APPROVED
Resolution Number 23-13
Date July 17, 2023

NOTE
SCALE REDUCTION
ALL INDICATED SCALES ARE REDUCED TO HALF SIZE.
ORIGINAL DRAWING SIZE: 22"X34"



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811
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REV	DATE	DESCRIPTION	DRAWN BY	DATE	REVISION
1	4/29/24	M.J.A.	REVISOR PER NYS DOT COMMENTS		
2	4/29/24	J.L.M.	REVISOR PER NYS DOT COMMENTS		
3	5/14/24	M.J.A.	REVISOR PER NYS DOT COMMENTS		
4	5/14/24	M.J.A.	REVISOR PER NYS DOT COMMENTS		

Philip John Grealy
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 059859-1
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A. #: 0017609

PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)
NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE
TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK

Colliers Engineering & Design
400 Columbus Avenue, Suite 180E, Valhalla, NY 10595
Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN ARCHITECTURAL, LANDSCAPE ARCHITECTURE, PLANNING, CT, P.C.

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/8/23	M.J.A.	R.G.D.
PROJECT NUMBER:	DRAWING NAME:		
20006297A	R-PL10-SGNL		

SHEET TITLE: TRAFFIC SIGNAL PLAN
NYS ROUTE 118 & UNDERHILL AVENUE
(SIGNAL NO. W-213)

SHEET NUMBER: TSP-02

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TABLE OF SIGNAL POLES										
POLE NO.	LOCATION			ELEV. OF FOOTING CAP	ITEM	MOUNTING HEIGHT	ARM LENGTH	FOOTING MOMENT (FT-KIP)	FOUNDATION	
	CENTERLINE STATION	OFFSET	SIDE						CODE	CY
S-1	124+20.98	35.79	LT	468.4' ±	680.622050	20'	50'	66	K5	1.9
S-2	125+12.37	43.03	LT	467.8' ±	680.622040	20'	40'	49	K3	1.8
S-3	125+24.90	40.88	LT	-	680.99040010	32'	-	EXIST.	EXIST.	EXIST.
S-4	125+81.92	47.08	RT	463.0' ±	680.622050	20'	50'	60	K4	1.8
S-5	124+99.08	49.58	RT	463.8' ±	680.622040	20'	40'	49	K3	1.8
S-6	124+86.84	41.89	RT	-	680.99040010	32'	-	EXIST.	EXIST.	EXIST.
P-1	124.23.92	40.74	LT	-	680.82250608	-	-	EXIST.	EXIST.	EXIST.
P-2	124+26.47	36.17	LT	468.8' ±	680.6808	8'	-	-	J1	1.1
P-3	124+30.77	46.24	LT	469.1' ±	680.6808	8'	-	-	J1	1.1
P-4	124+57.48	32.42	LT	-	680.82250608	8'	-	-	EXIST.	EXIST.
P-5	124+86.54	68.57	LT	468.8' ±	680.6808	8'	-	-	J1	1.1
P-6	125+30.31	32.46	LT	467.4' ±	680.6808	8'	-	-	J1	1.1
P-7	125+70.39	35.05	RT	465.6' ±	680.6808	8'	-	-	J1	1.1
P-8	125+66.20	46.82	RT	464.5' ±	680.6808	8'	-	-	J1	1.1
P-9	125+18.03	69.18	RT	463.9' ±	680.6808	8'	-	-	J1	1.1
P-10	124+68.54	27.81	RT	-	680.82250608	8'	-	-	EXIST.	EXIST.
P-11	124+62.71	28.28	RT	467.1' ±	680.6808	8'	-	-	J1	1.1
TOTAL (CY)										16.1

TABLE OF INPUTS				
SDLC CHANNEL	FUNCTION	DETECTION ZONE NUMBER	SIZE	REMARKS
42	Ø2	42	6' X 40'	PRESENCE
43	Ø3	43	6' X 40'	PRESENCE
44	Ø4	44	6' X 40'	PRESENCE
46	Ø6	46	6' X 40'	PRESENCE
47	Ø7	47	6' X 40'	PRESENCE
48	Ø8	48	6' X 40'	PRESENCE
49	Ø6	49	6' X 6'	NB RIGHT COUNT
50	Ø6	50	6' X 6'	NB THROUGH COUNT
51	Ø6	51	6' X 6'	NB LEFT COUNT
52	Ø8	52	6' X 6'	EB RIGHT COUNT
53	Ø8	53	6' X 6'	EB THROUGH COUNT
54	Ø3	54	6' X 6'	EB LEFT COUNT
55	Ø2	55	6' X 6'	SB RIGHT COUNT
56	Ø2	56	6' X 6'	SB THROUGH COUNT
57	Ø2	57	6' X 6'	SB LEFT COUNT
58	Ø4	58	6' X 6'	WB RIGHT COUNT
59	Ø4	59	6' X 6'	WB THROUGH COUNT
60	Ø7	60	6' X 6'	WB LEFT COUNT

ESTIMATE OF CONDUITS					
CONDUIT NO.	LOCATION		2" STEEL	680.520108	680.520110
	FROM	TO		3" STEEL	4" STEEL
C-1	P-2	PB-1	-	11	-
C-2	S-1	PB-1	-	-	13
C-3	PB-3	PB-2	EX. TO BE ABANDONED	-	-
C-4	INDUCTION LOOP	PB-2	EX. TO BE ABANDONED	-	-
C-5	P-3	PB-1	-	5	-
C-6	P-4	PB-3	EX. TO BE ABANDONED	-	-
C-7	PB-4	PB-1	-	65	-
C-8	P-5	PB-4	-	7	-
C-9	PB-6	PB-4	-	44	-
C-10	PB-3	PB-5	EX. TO BE ABANDONED	-	-
C-11	S-2	PB-6	-	-	9
C-12	PB-5	S-3	EX. TO BE ABANDONED	-	-
C-13	P-6	PB-6	-	20	-
C-14	INDUCTION LOOP	PB-5	EX. TO BE ABANDONED	-	-
C-15	INDUCTION LOOP	PB-7	EX. TO BE ABANDONED	-	-
C-16	P-7	PB-8	-	18	-
C-17	P-8	PB-8	-	13	-
C-18	S-4	PB-8	-	-	5
C-19	PB-7	PB-9	EX. TO BE ABANDONED	-	-
C-20	PB-8	PB-11	-	64	-
C-21	PB-9	PB-10	EX. TO BE ABANDONED	-	-
C-22	P-9	PB-11	-	13	-
C-23	PB-10	PB-13	EX. TO BE ABANDONED	-	-
C-24	PB-11	PB-12	-	39	-
C-25	PB-12	S-5	-	-	5
C-26	PB-14	PB-12	-	38	-
C-27	P-10	PB-13	EX. TO BE ABANDONED	-	-
C-28	INDUCTION LOOP	PB-13	EX. TO BE ABANDONED	-	-
C-29	P-11	PB-14	-	12	-
C-30	PB-1	PB-14	-	90	-
TOTAL (FEET)			0	439	32

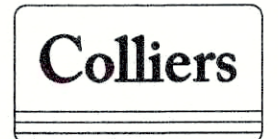
TABLE OF PULLBOXES						
PULLBOX NO.	LOCATION			ELEV. OF TOP	680.510501	680.82250801
	CENTERLINE STATION	OFFSET	SIDE		RECTANGULAR 26" X 18" RC	REMOVE TRAFFIC SIGNAL PULLBOXES
PB-1	124+26.10	47.15	LT	468.7' ±	1	0
PB-2	124+18.87	52.24	LT	469.1' ±	0	1
PB-3	124+52.26	39.41	LT	468.8' ±	0	1
PB-4	124+83.08	74.85	LT	469.3' ±	1	0
PB-5	125+11.61	37.68	LT	467.2' ±	0	1
PB-6	125+19.72	48.73	LT	468.8' ±	1	0
PB-7	125+65.59	28.61	RT	466.3' ±	0	1
PB-8	125+78.01	50.55	RT	460.3' ±	1	0
PB-9	125+51.46	47.66	RT	464.1' ±	0	1
PB-10	125+23.44	69.14	RT	463.8' ±	0	1
PB-11	125+21.24	81.03	RT	460.7' ±	1	0
PB-12	124+96.33	52.72	RT	461.3' ±	1	0
PB-13	124+80.66	29.56	RT	466.9' ±	0	1
PB-14	124+61.03	38.77	RT	462.8' ±	1	0
TOTAL					7	7

ESTIMATE OF QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
206.03	CONDUIT EXCAVATION AND BACKFILL INCLUDING SURFACE RESTORATION	LF	471
619.1612	MAINTAIN TRAFFIC SIGNAL EQUIPMENT (REQUIREMENT B)	INTM	6
625.01000108	SURVEY AND STAKEOUT (TRAFFIC SIGNALS)	EA	4
662.60000108	FURNISH ELECTRICAL SERVICE	DC	1
680.05010007	360 DIGITAL CAMERA VIDEO DETECTION SYSTEM	EA	1
680.05020007	360 DEGREE CAMERA ASSEMBLY	EA	1
680.5001	POLE EXCAVATION AND CONCRETE FOUNDATION	CY	16.1
680.510501	PULLBOX - RECTANGULAR, 26" X 18", REINFORCED CONCRETE	EA	7
680.520108	CONDUIT, METAL STEEL, ZINC COATED, 3"	LF	439
680.520110	CONDUIT, METAL STEEL, ZINC COATED, 4"	LF	32
680.622040	TRAFFIC SIGNAL POLE - MAST ARM, 20 FT. MOUNTING HEIGHT, 40 FT. ARM LENGTH	EA	2
680.622050	TRAFFIC SIGNAL POLE - MAST ARM, 20 FT. MOUNTING HEIGHT, 50 FT. ARM LENGTH	EA	2
680.6808	TRAFFIC SIGNAL POLE-BRACKET MOUNT 8 FEET MOUNTING HEIGHT	EA	8
680.700603	RISER ASSEMBLY, 1" DIAMETER	EA	1
680.730514	SIGNAL CABLE, 5 CONDUCTORS, 14 AWG	LF	2830
680.731014	SIGNAL CABLE, 10 CONDUCTORS, 14 AWG	LF	648
680.79000005	REMOVE TRAFFIC SIGNAL INSTALLATION	EA	1
680.80324515	INSTALL MICROCOMPUTER CABINET	EA	1
680.810101	TRAFFIC SIGNAL MODULE - 12 INCH, RED BALL, LED	EA	8
680.810102	TRAFFIC SIGNAL MODULE - 12 INCH, RED ARROW, LED	EA	2
680.810103	TRAFFIC SIGNAL MODULE - 12 INCH, YELLOW BALL, LED	EA	8
680.810104	TRAFFIC SIGNAL MODULE - 12 INCH, YELLOW ARROW, LED	EA	5
680.810105	TRAFFIC SIGNAL MODULE - 12 INCH, GREEN BALL, LED	EA	8
680.810106	TRAFFIC SIGNAL MODULE - 12 INCH, GREEN ARROW, LED	EA	3
680.810107	TRAFFIC SIGNAL SECTION - TYPE I, 12 INCH	EA	34
680.81230008	TRAFFIC SIGNAL BRACKET ASSEMBLY - 1 WAY, MAST ARM MOUNT (CABLETYPE)	EA	9
680.81240008	TRAFFIC SIGNAL BRACKET ASSEMBLY - 2 WAY, MAST ARM MOUNT (CABLETYPE)	EA	1
680.8151	ACCESSIBLE PEDESTRIAN SIGNAL (APS) WITHOUT POST	EA	8
680.813103	PEDESTRIAN SIGNAL SECTION - TYPE I, 12 INCH	EA	16
680.813105	PEDESTRIAN SIGNAL MODULE - 12 INCH BI-MODAL, HAND/MAN SYMBOLS LED	EA	8
680.8141	PEDESTRIAN SIGNAL BRACKET MOUNT ASSEMBLY	EA	8
680.815001	PEDESTRIAN SIGNAL MODULE - 12 INCH COUNTDOWN TIMER, LED	EA	8
680.8199	BACKPLATES FOR TRAFFIC SIGNAL HEADS	EA	10
680.8207	OVERHEAD SIGN ASSEMBLY, TYPE G	EA	7
680.8223	BREAKAWAY TRANSFORMER BASE	EA	8
680.82250608	REMOVE AND DISPOSE PEDESTRIAN POLE AND FOUNDATION	EA	3
680.82250801	REMOVE TRAFFIC SIGNAL PULLBOXES	EA	7
680.94000008	TRAFFIC SIGNAL SERVICE ENTRANCE	EA	1
680.9402	METER PAN	EA	1
680.9499	FURNISH AND INSTALL ELECTRICAL DISCONNECT GENERATOR TRANSFER SWITCH	EA	1
680.950206	ELECTRICAL SERVICE CABLE 2 WIRE 6 GAUGE	LF	14
680.99040010	REMOVE TRAFFIC SIGNAL POLE	EA	2

TABLE OF OPERATION														
FACE	PHASE													
	1	2	3	4	5	6	7	8	9	10	PED 1	PED 2	PED 3	PED 4
Ø2	G	G	R	R	←R	R	R	←R	R	R	DW	DW ¹	DW	DW
Ø3	R	R	R	R	←G	R	R	←R	R	R	DW	DW	DW	DW
Ø4	R	R	R	R	←R	R	R	←R	G	G	DW ¹	DW	DW	DW
Ø6	R	R	G	G	←R	R	R	←R	R	R	DW	DW	DW	DW ¹
Ø7	R	R	R	R	←R	R	R	←G	R	R	DW	DW	DW	DW
Ø8	R	R	R	R	←R	G	G	←R	R	R	DW	DW	DW ¹	DW
Ø2+Ø6	G	G	G	G	←R	R	R	←R	R	R	DW	DW ¹	DW	DW ¹
Ø3+Ø7	R	R	R	R	←G	R	R	←G	R	R	DW	DW	DW	DW
Ø3+Ø8	R	R	R	R	←G	G	G	←R	R	R	DW	DW	DW ¹	DW
Ø4+Ø7	R	R	R	R	←R	R	R	←G	G	G	DW ¹	DW	DW	DW
Ø4+Ø8	R	R	R	R	←R	G	G	←R	G	G	DW ¹	DW	DW ¹	DW
FLASH OPERATION	FY	FY	FY	FY	DARK	FR	FR	DARK	FR	FR	DARK	DARK	DARK	DARK

- NOTES:**
- PEDESTRIAN SIGNAL TO BE DEMAND ACTUATED ONLY UPON ACTUATION OF A PEDESTRIAN PUSH BUTTON THE INDICATIONS SHALL DISPLAY A STEADY "MAN" FOLLOWED BY A FLASHING "HAND" AND COUNTDOWN TIMER AND THEN A STEADY "HAND".


APPROVED
Resolution Number 23-13
Date July 17, 2023



Engineering & Design

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DESCRIPTION	DRAWN BY	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
1	4/2/24	REVISED PER NYSDOT COMMENTS RECEIVED 3/19/24	M.J.A.											
2	4/26/24	REVISED PER NYSDOT 4/26/24 COMMENTS.	J.P.M.											
3	5/14/24	REVISED PER NYSDOT 5/14/24 COMMENTS.	M.J.A.											
4	5/24/24	REVISED TRAFFIC SIGNAL PLAN SHEETS PER NYSDOT 5/24/24 COMMENTS.	M.J.A.											



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N.Y. C.O.A.#: 0017609

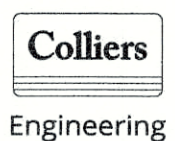
PRELIMINARY HIGHWAY IMPROVEMENT PLANS

FOR

UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK



Engineering & Design

WESTCHESTER
400 Columbus Avenue, Suite 1805
Valhalla, NY 10595
Phone: 914.347.7500

COLLIERS ENGINEERING & DESIGN ARCHITECTURAL LANDSCAPE ARCHITECTURE SURVEYING CT, P.C.

DATE: AS SHOWN	DATE: 1/8/23	DRAWN BY: M.J.A.	CHECKED BY: R.G.D.
PROJECT NUMBER: 20006297A	DRAWING NAME: R-PL10-SGNL		

SHEET TITLE: TRAFFIC SIGNAL PLAN
NYS ROUTE 118 & UNDERHILL AVENUE (SIGNAL NO. W-213)

SHEET NUMBER: TSP-03

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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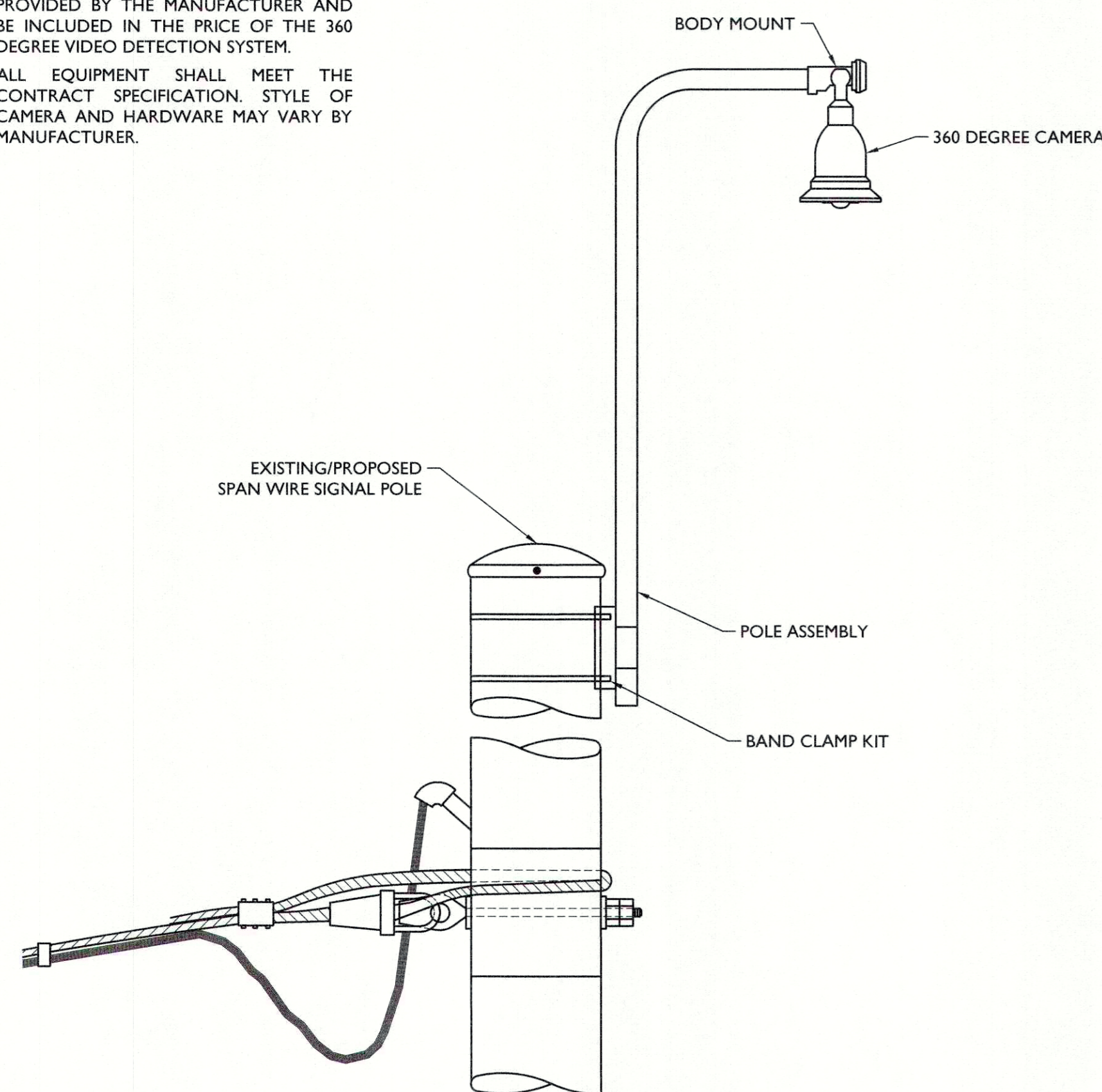
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TABLE OF PEDESTRIAN INDICATIONS														
ITEM NUMBER	DESCRIPTION	UNIT	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8	P-9	P-10	P-11	TOTAL
680.5001	POLE EXCAVATION AND CONCRETE FOUNDATION	CY	-	1.1	1.1	-	1.1	1.1	1.1	1.1	1.1	-	1.1	8.8
680.6808	TRAFFIC SIGNAL POLE-BRACKET MOUNT 8 FEET MOUNTING HEIGHT	EA	-	1	1	-	1	1	1	1	1	-	1	8
680.8151	ACCESSIBLE PEDESTRIAN SIGNAL (APS) WITHOUT POST	EA	-	1	1	-	1	1	1	1	1	-	1	8
680.813103	PEDESTRIAN SIGNAL SECTION - TYPE I, 12 INCH	EA	-	2	2	-	2	2	2	2	2	-	2	16
680.813105	PEDESTRIAN SIGNAL MODULE - 12 INCH BI-MODAL, HAND/MAN SYMBOLS LED	EA	-	1	1	-	1	1	1	1	1	-	1	8
680.8141	PEDESTRIAN SIGNAL BRACKET MOUNT ASSEMBLY	EA	-	1	1	-	1	1	1	1	1	-	1	8
680.815001	PEDESTRIAN SIGNAL MODULE - 12 INCH COUNTDOWN TIMER, LED	EA	-	1	1	-	1	1	1	1	1	-	1	8
680.8223	BREAKAWAY TRANSFORMER BASE	EA	-	1	1	-	1	1	1	1	1	-	1	8
680.82250608	REMOVE AND DISPOSE PEDESTRIAN POLE AND FOUNDATION	EA	1	-	-	1	-	-	-	-	-	1	-	3

NOTES:

- ALL MOUNTING HARDWARE SHALL BE PROVIDED BY THE MANUFACTURER AND BE INCLUDED IN THE PRICE OF THE 360 DEGREE VIDEO DETECTION SYSTEM.
- ALL EQUIPMENT SHALL MEET THE CONTRACT SPECIFICATION. STYLE OF CAMERA AND HARDWARE MAY VARY BY MANUFACTURER.



1 VIDEO DETECTION CAMERA DETAIL MOUNTED ON A SPAN WIRE POLE

NOT TO SCALE

NYDT-SGNI-1000

08/16/21

ESTIMATE OF CABLES							680.730514	680.731014
FROM	ROUTE THROUGH	TO	CABLE DESCRIPTION	# OF CABLES	5 C, 14 AWG	10 C, 14 AWG		
CONTROLLER	S-5	SIGNAL HEAD A	14-05C-A-X/X	1	42	-		
CONTROLLER	S-5	SIGNAL HEAD B	14-05C-B-X/X	1	54	-		
CONTROLLER	S-5	SIGNAL HEAD C	14-10C-C-X/X	1	-	64		
CONTROLLER	S-5, C-25, PB-12, C-24, PB-11, C-20, PB-8, C-18, S-4	SIGNAL HEAD D	14-05C-D-X/X	1	200	-		
CONTROLLER	S-5, C-25, PB-12, C-24, PB-11, C-20, PB-8, C-18, S-4	SIGNAL HEAD E	14-05C-E-X/X	1	208	-		
CONTROLLER	S-5, C-25, PB-12, C-26, PB-14, C-30, PB-1, C-7, PB-4, C-9, PB-6, C-11, S-2	SIGNAL HEAD F	14-05C-F-X/X	1	341	-		
CONTROLLER	S-5, C-25, PB-12, C-26, PB-14, C-30, PB-1, C-7, PB-4, C-9, PB-6, C-11, S-2	SIGNAL HEAD G	14-05C-G-X/X	1	351	-		
CONTROLLER	S-5, C-25, PB-12, C-26, PB-14, C-30, PB-1, C-7, PB-4, C-9, PB-6, C-11, S-2	SIGNAL HEAD H	14-10C-H-X/X	1	-	360		
CONTROLLER	S-5, C-25, PB-12, C-26, PB-14, C-30, PB-1, C-2, S-1	SIGNAL HEAD I	14-10C-I-X/X	1	-	224		
CONTROLLER	S-5, C-25, PB-12, C-26, PB-14, C-30, PB-1, C-2, S-1	SIGNAL HEAD J	14-05C-J-X/X	1	238	-		
CONTROLLER	S-5, C-25, PB-12, C-26, PB-14, C-30, PB-1, C-1, P-2	PED P-2	-	1	184	-		
CONTROLLER	S-5, C-25, PB-12, C-26, PB-14, C-30, PB-1, C-5, P-3	PED P-3	-	1	177	-		
CONTROLLER	S-5, C-25, PB-12, C-26, PB-14, C-30, PB-1, C-7, PB-4, C-8, P-5	PED P-5	-	1	253	-		
CONTROLLER	S-5, C-25, PB-12, C-26, PB-14, C-30, PB-1, C-7, PB-4, C-9, PB-6, C-13, P-6	PED P-6	-	1	324	-		
CONTROLLER	S-5, C-25, PB-12, C-24, PB-11, C-20, PB-8, C-16, P-7	PED P-7	-	1	158	-		
CONTROLLER	S-5, C-25, PB-12, C-24, PB-11, C-20, PB-8, C-17, P-8	PED P-8	-	1	152	-		
CONTROLLER	S-5, C-25, PB-12, C-24, PB-11, C-22, P-9	PED P-9	-	1	76	-		
CONTROLLER	S-5, C-25, PB-12, C-26, PB-14, C-29, P-11	PED P-11	-	1	72	-		
TOTAL					2830	648		

TABLE OF SIGNAL HEADS										
HEAD	BRACKET	FACE	MODULES					SECTION		
			680.810101 RED BALL - 12 IN.	680.810102 RED ARROW - 12 IN.	680.810103 YELLOW BALL - 12 IN.	680.810104 YELLOW ARROW - 12 IN.	680.810105 GREEN BALL - 12 IN.		680.810106 GREEN ARROW - 12 IN.	680.810107 TRAFFIC SIGNAL SECTION, TYPE I - 12 IN.
A	680.81230008	7	1	-	1	-	1	-	3	1
B	680.81230008	6	1	-	1	-	1	-	3	1
C	680.81230008	5	-	1	-	2	-	1	4	1
D	680.81230008	4	1	-	1	-	1	-	3	1
E	680.81230008	3	1	-	1	-	1	-	3	1
F	680.81230008	10	1	-	1	-	1	-	3	1
G	680.81230008	9	1	-	1	-	1	-	3	1
H	680.81230008	8	-	1	-	2	-	1	4	1
I	680.81240008	2	1	-	1	1	1	1	5	1
J	680.81230008	1	1	-	1	-	1	-	3	1
TOTAL (EACH)			8	2	8	5	8	3	34	10

APPROVED
Resolution Number 23-13
Date July 17, 2023



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N.Y. C.O.A.#: 0017609

PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE IMPROVEMENTS
(SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

TOWN OF YORKTOWN
WESTCHESTER COUNTY
NEW YORK

WESTCHESTER
400 Columbus Avenue,
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Valhalla, NY 10595
Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN
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ENGINEERING, P.E.

SCALE: AS SHOWN
DATE: 1/8/23
PROJECT NUMBER: 2006297A
DRAWING NAME: R-PL10-SGNI

SHEET TITLE: TRAFFIC SIGNAL PLAN
NYS ROUTE 118 &
UNDERHILL AVENUE
(SIGNAL NO. W-213)

SHEET NUMBER: TSP-04



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PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

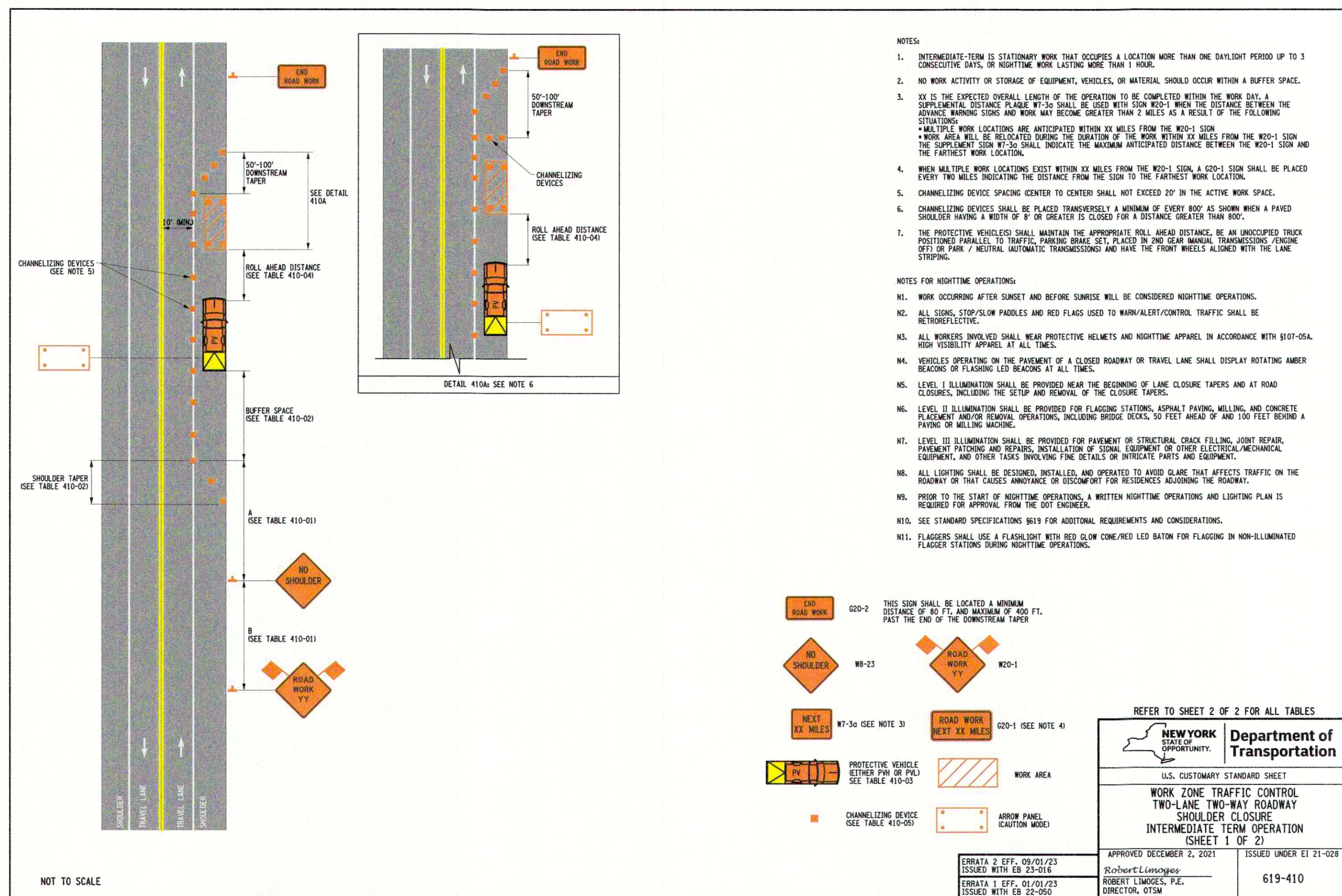
NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK

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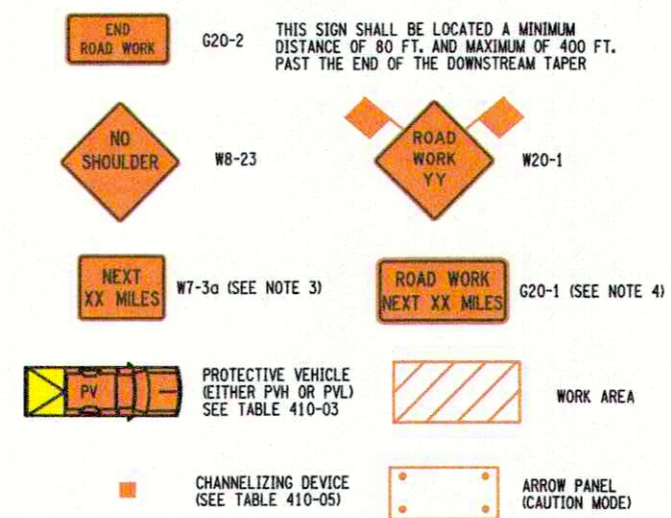
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SHEET TITLE: TWO-LANE TWO-WAY ROADWAY SHOULDER CLOSURE
SHEET NUMBER: WZTC-01



- NOTES:
1. INTERMEDIATE-TERM IS STATIONARY WORK THAT OCCUPIES A LOCATION WORK FOR MORE THAN ONE DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.
2. NO WORK ACTIVITY OR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIAL SHOULD OCCUR WITHIN A BUFFER SPACE.
3. XX IS THE EXPECTED OVERALL LENGTH OF THE OPERATION TO BE COMPLETED WITHIN THE WORK ZONE. A SUPPLEMENTAL DISTANCE PLACEMENT (W-30) SHALL BE USED WITH SIGN RW-23. WORK THE DISTANCE BETWEEN THE ADVANCE WARNING SIGN AND WORK MAY BECOME GREATER THAN 2 MILES AS A RESULT OF THE FOLLOWING SITUATIONS:
- TRUCKS WITH LOCATIONS ARE ANTICIPATED WITHIN XX MILES FROM THE RW-23 SIGN
- WORK AREA WILL BE RELOCATED DURING THE DURATION OF THE WORK WITHIN XX MILES FROM THE RW-23 SIGN
- THE SUPPLEMENTAL DISTANCE PLACEMENT (W-30) SHALL INDICATE THE MINIMUM ANTICIPATED DISTANCE BETWEEN THE RW-23 SIGN AND THE FARTHEST WORK LOCATION.
4. WHEN MULTIPLE WORK LOCATIONS EXIST WITHIN XX MILES FROM THE RW-23 SIGN, A Q20-1 SIGN SHALL BE PLACED EVERY TWO MILES INDICATING THE DISTANCE FROM THE SIGN TO THE FARTHEST WORK LOCATION.
5. CHANNELIZING DEVICE SPACING (CENTER TO CENTER) SHALL NOT EXCEED 30' IN THE ACTIVE WORK SPACE.
6. CHANNELIZING DEVICES SHALL BE PLACED TRANSVERSELY A MINIMUM OF EVERY 800' AS SHOWN WHEN A PAVED SHOULDER HAVING A WIDTH OF 8' OR GREATER IS CLOSED FOR A DISTANCE GREATER THAN 800'.
7. THE PROTECTIVE VEHICLE SHALL MAINTAIN THE APPROPRIATE ROLL AHEAD DISTANCE. BE AN UNOCCUPIED TRUCK POSITIONED PARALLEL TO TRAFFIC PARKING BRAKE SET, PLACED IN 2ND GEAR MANUAL TRANSMISSIONS (PUSH OFF) OR PARK / NEUTRAL AUTOMATIC TRANSMISSIONS AND HAVE THE FRONT WHEELS ALIGNED WITH THE LANE STRIPING.

- NOTES FOR NIGHTTIME OPERATIONS:
N1. WORK OCCURRING AFTER SUNSET AND BEFORE SUNRISE WILL BE CONSIDERED NIGHTTIME OPERATIONS.
N2. ALL SIGNS, STOP-OR-SLOW PADDLES AND RED FLAGS USED TO MANAGE/CONTROL TRAFFIC SHALL BE RETROREFLECTIVE.
N3. ALL WORKERS INVOLVED SHALL WEAR PROTECTIVE HELMETS AND NIGHTTIME APPAREL IN ACCORDANCE WITH §107-05A. SIGN VISIBILITY APPLICABLE AT ALL TIMES.
N4. VEHICLES OPERATING ON THE PAVEMENT OF A CLOSED ROADWAY OR TRAVEL LANE SHALL DISPLAY ROTATING AMBER BEACONS OR FLASHING LED BEACONS AT ALL TIMES.
N5. LEVEL I ILLUMINATION SHALL BE PROVIDED NEAR THE BEGINNING OF LINE CLOSURE TAPERS AND AT ROAD CLOSURES, INCLUDING THE SETUP AND REMOVAL OF THE CLOSURE TAPERS.
N6. LEVEL II ILLUMINATION SHALL BE PROVIDED FOR FLAGGING STATIONS, ASPHALT PAVING, MILLING, AND CONCRETE PLACEMENT AND/OR REPAIR OPERATIONS, INCLUDING BRIDGE DECKS, 50 FEET AHEAD OF AND 100 FEET BEHIND A PAVING OR MILLING MACHINE.
N7. LEVEL III ILLUMINATION SHALL BE PROVIDED FOR PAVEMENT OR STRUCTURAL CRACK FILLING, JOINT REPAIR, PAVEMENT PATCHING AND REPAIRS, INSTALLATION OF SIGNAL EQUIPMENT OR OTHER ELECTRICAL, MECHANICAL, EQUIPMENT, AND OTHER TASKS INVOLVING FINE DETAILS OR INTRICATE PARTS AND EQUIPMENT.
N8. ALL LIGHTING SHALL BE DESIGNED, INSTALLED, AND OPERATED TO AVOID GLARE THAT AFFECTS TRAFFIC ON THE ROADWAY OR THAT CAUSES ANNOYANCE OR DISCOMFORT FOR RESIDENTS ADJACENT TO THE ROADWAY.
N9. PRIOR TO THE START OF NIGHTTIME OPERATIONS, A WRITTEN NIGHTTIME OPERATIONS AND LIGHTING PLAN IS REQUIRED FOR APPROVAL FROM THE DOT ENGINEER.
N10. SEE STANDARD SPECIFICATIONS §619 FOR ADDITIONAL REQUIREMENTS AND CONSIDERATIONS.
N11. FLAGGERS SHALL USE A FLASHLIGHT WITH RED GLOW CONE/RED LED BATON FOR FLAGGING IN NON-ILLUMINATED FLAGGING STATIONS DURING NIGHTTIME OPERATIONS.



NEW YORK STATE OF NEW YORK
Department of Transportation
U.S. CUSTOMARY STANDARD SHEET
WORK ZONE TRAFFIC CONTROL
TWO-LANE TWO-WAY ROADWAY
SHOULDER CLOSURE
INTERMEDIATE TERM OPERATION
(SHEET 1 OF 2)
APPROVED DECEMBER 2, 2021
ISSUED UNDER EIT 21-028
619-410

TABLE 410-01: ADVANCE WARNING SIGN SPACING
ROAD TYPE | DISTANCE BETWEEN SIGNS (A FT.) | B (FT.)
URBAN (≤ 30 MPH) | 100 | 100
URBAN (35-40 MPH) | 200 | 200
URBAN (45 MPH) | 300 | 300
RURAL | 500 | 500

TABLE 410-02: LONGITUDINAL BUFFER SPACE AND TAPER LENGTHS
ROAD TYPE | LONGITUDINAL BUFFER SPACE (FT.) | TAPER LENGTH (FT.) | SHOULDER TAPER LENGTH (FT.)

TABLE 410-03: PROTECTIVE VEHICLE REQUIREMENTS
CLOSURE TYPE | ROAD TYPE & SPEED | EXPOSURE CONDITIONS | PPH-TMA | PVL-TMA

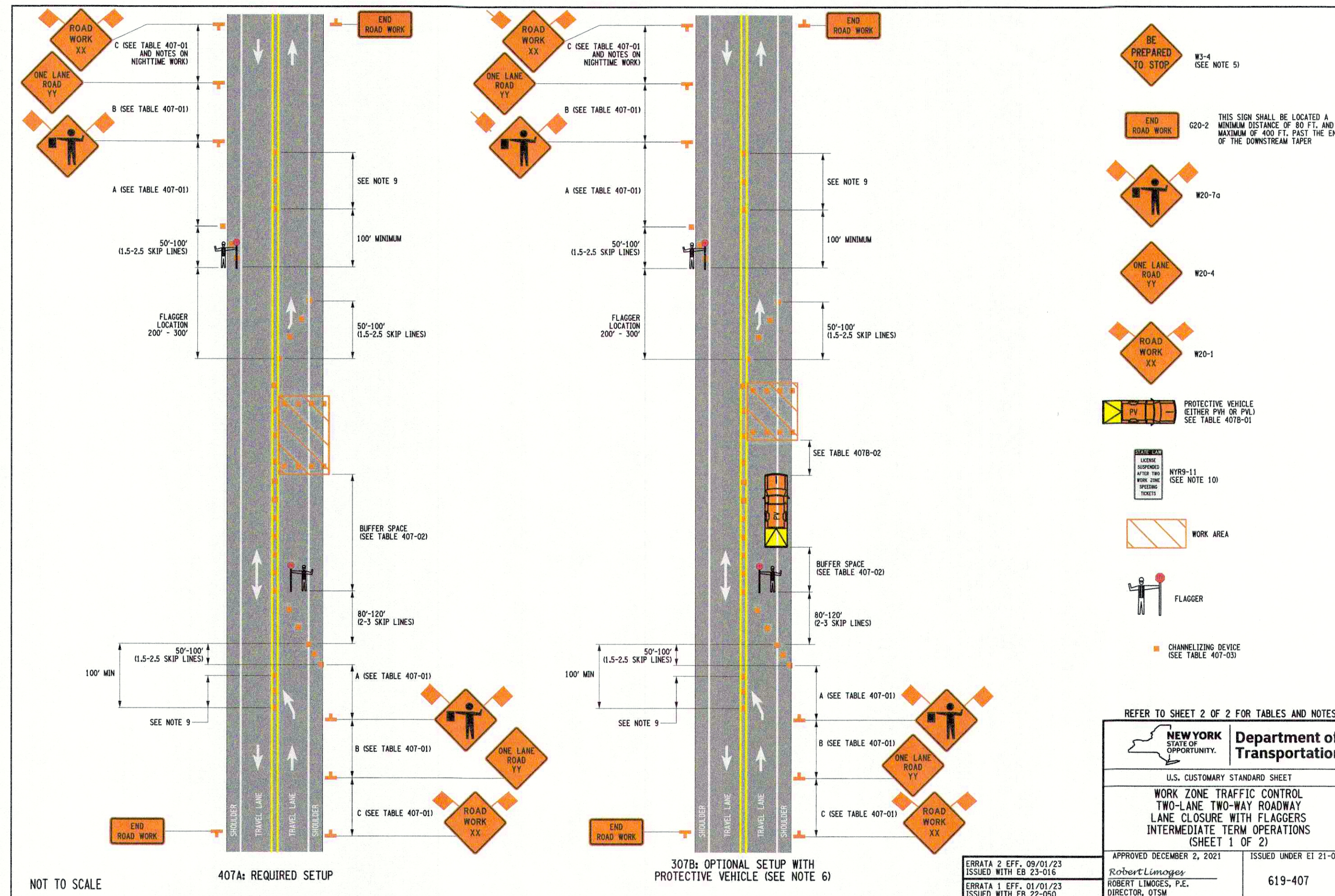
TABLE 410-04: ROLL AHEAD DISTANCE FOR PROTECTIVE VEHICLES
ROAD TYPE | PROTECTIVE VEHICLE LIGHT MINIMUM GROSS WEIGHT | ROLL AHEAD DISTANCE (FT.)

TABLE 410-05: CHANNELIZING DEVICE APPLICATION FOR INTERMEDIATE-TERM STATIONARY WORK ZONES
WORK ZONE PROVISIONS | MUTCD COMPLIANT CHANNELIZING DEVICE | TYPE III BARRIAGES

TABLE 410-06: REQUIRED SIGN SIZES*
SIGN | NON-FREEMAY | FREEMAY
Q20-2 | 36x18 | 48x24
W20-1 | 36x36 | 48x48
W21-5 | 36x36 | 48x48
W7-30 | 24x18 | 36x30
Q20-1 | 36x18 | 48x24
WARNING FLAG | 18x18 | 18x18

NEW YORK STATE OF NEW YORK
Department of Transportation
U.S. CUSTOMARY STANDARD SHEET
WORK ZONE TRAFFIC CONTROL
TWO-LANE TWO-WAY ROADWAY
SHOULDER CLOSURE
INTERMEDIATE TERM OPERATION
(SHEET 2 OF 2)
APPROVED APRIL 8, 2022
ISSUED UNDER EIT 22-008
619-410

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.



NEW YORK DEPARTMENT OF TRANSPORTATION
 U.S. CUSTOMARY STANDARD SHEET
WORK ZONE TRAFFIC CONTROL
TWO-LANE TWO-WAY ROADWAY
LANE CLOSURE WITH FLAGGERS
INTERMEDIATE TERM OPERATIONS
 (SHEET 1 OF 2)

APPROVED DECEMBER 2, 2021
 Robert C. Longinos, P.E., DIRECTOR, OTSM

ISSUED UNDER ET 21-028
 619-407

TABLE 407-01: ADVANCE WARNING SIGN SPACING

ROAD TYPE	A (FT.)	B (FT.)	C (FT.)	XX	YY
URBAN (≤ 30 MPH)	100	100	100	AHEAD	AHEAD
URBAN (35-40 MPH)	200	200	200	AHEAD	AHEAD
URBAN (45 MPH)	300	300	300	1000 FT. AHEAD	1000 FT. AHEAD
RURAL	500	500	500	1500 FT. AHEAD	1500 FT. AHEAD

TABLE 407-02: LONGITUDINAL BUFFER SPACE

PRECONSTRUCTION POSTED SPEED (MPH)	LONGITUDINAL BUFFER SPACE (FT.) ¹ OF SKIP LINES
25	155/4
30	200/5
35	250/6
40	305/8
45	360/9
50	425/11
55	495/13

TABLE 407-03: CHANNELIZING DEVICE APPLICATION FOR INTERMEDIATE-TERM STATIONARY WORK ZONES

WORK ZONE PROVISIONS	MINIMUM POSTING DISTANCE (FT.)	MUTCO COMPLIANT CHANNELIZING DEVICE						
		CONES	STANDARD CONES	TALL CONES	EXTRA TALL CONES	TEMPORARY TUBULAR MARKERS	PERMANENT TUBULAR MARKERS	VERTICAL PANELS
INTERMEDIATE-TERM STATIONARY WORK ZONES INVOLVE WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS OR NIGHTTIME WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR	20 FT. *	X						X
SHOULDER/BERMING/SHIPPING TAPERS	40 FT.	X						X
MARKING FOR TRANSVERSE BUMPS ¹	N/A	X ²		X ²				X ²
TRANSVERSE DEVICE WITHIN CLOSED TRAFFIC LANE AND/OR SHOULDER	80 FT.	X	X	X	X			X
REMOVAL OF EXISTING CURB RAIL	80 FT.	X	X	X	X			X

TABLE 407-04: REQUIRED SIGN SIZES*

STATION	NON-FREEMAY	FREEMAY
G20-2	36x48	48x24
W3-4	36x36	48x48
W20-1	36x36	48x48
W20-4	36x36	48x48
W20-7	36x36	48x48
WARNING FLAG	18x18	18x18

TABLE 407B-01: PROTECTIVE VEHICLE REQUIREMENTS

CLOSURE TYPE	ROAD TYPE & SPEED	NON-FREEMAY	
		≥ 45 MPH	35 - 40 MPH
WORKERS ON FOOT OR WORK VEHICLE EXPOSED TO TRAFFIC	EXPOSURE CONDITIONS (SEE NOTE 1)	P/W+TMA	P/W+TMA
LANE CLOSURE OR SHOULDER CLOSURE	-NO WORKERS ON FOOT OR WORK VEHICLE EXPOSED TO TRAFFIC -OTHER HAZARDS EXPOSED (IE EQUIPMENT, MATERIALS, EXCAVATION)	P/W+TMA	SEE NOTE 2
SHOULDER CLOSURE OR ENCROACHMENT	-NO WORKERS ON FOOT OR WORK VEHICLE EXPOSED TO TRAFFIC -OTHER HAZARDS EXPOSED (IE EQUIPMENT, MATERIALS, EXCAVATION)	P/W+TMA	SEE NOTE 2

LEGEND
 P/W - PROTECTIVE VEHICLE LIGHT MINIMUM GROSS WEIGHT 9,000 LBS. OR GREATER (SEE NOTE 4)
 P/W - PROTECTIVE VEHICLE NEAR MINIMUM GROSS WEIGHT 22,000 LBS. OR GREATER
 TMA - TRUCK/TRAILER MOUNTED IMPACT ATTENUATOR

NOTES
 1. THE EXPOSURE CONDITIONS ASSUME THERE IS NO POSITIVE PROTECTION PRESENT.
 2. EITHER A PROTECTIVE LIGHT (P/W) OR THE STANDARD BUFFER SPACE (SEE TABLE 011-03) SHALL BE PROVIDED.
 3. TRUCK/TRAILER MOUNTED IMPACT ATTENUATORS (TMA) SHALL NOT BE MOUNTED/INSTALLED ON VEHICLES WITH A GROSS VEHICLE WEIGHT LESS THAN WHAT IS MINIMALLY REQUIRED BY THE MANUFACTURER OF THE TMA.
 4. THE USE OF A PROTECTIVE VEHICLE LIGHT (P/W) AS A STATION VEHICLE IS LIMITED TO NON-FREEMAY ROADWAYS WHERE THE POSTED SPEED LIMITS IS ≤ 40 MPH UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

TABLE 407B-02: ROLL AHEAD DISTANCE FOR PROTECTIVE VEHICLES

PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	STATIONARY OPERATION	
	PROTECTIVE VEHICLES WEIGHING 9,500 TO 21,999 LBS. GVW	PROTECTIVE VEHICLES WEIGHING 22,000 LBS. OR GREATER GVW
45 - 55	150/4	120/2
≥ 60	120/3	90/2

- NOTES:**
- INTERMEDIATE-TERM IS STATIONARY WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.
 - WHEN A SIDE ROAD OR DRIVEWAY INTERSECTS THE ROADWAY WITHIN A WORK ZONE TRAFFIC CONTROL AREA, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES AND/OR FLAGGERS SHALL BE PLACED AS NEEDED. ADDITIONAL FLAGGERS SHALL BE LOCATED AT ALL INTERSECTIONS AND COMMERCIAL DRIVEWAYS LOCATED WITHIN OR NEAR THE ACTIVE WORK SPACE, NO WORK ACTIVITY, EQUIPMENT, OR STORAGE OF VEHICLES OR MATERIALS SHALL OCCUR WITHIN THE BUFFER SPACE AT ANY TIME.
 - CHANNELIZING DEVICE SPACING CENTER TO CENTER SHALL NOT EXCEED 20' IN THE ACTIVE WORK SPACE.
 - CHANNELIZING DEVICES SHALL BE PLACED TRANSVERSELY A MINIMUM OF EVERY 800' AS SHOWN WHEN A PAVED SHOULDER HAVING A WIDTH OF 8' OR GREATER IS CLOSED FOR A DISTANCE GREATER THAN 800'.
 - IF THE TRAFFIC IS EXPECTED TO QUEUE PAST THE W20-4 AND W3-4 SIGN SHOULD BE ADDED HALFWAY BETWEEN THE W20-4 AND W3-4 SIGNS.
 - IF CONDITION WARRANTS, PROTECTIVE VEHICLE WITH APPROPRIATE ROLL AHEAD DISTANCE MAY BE USED IN ADVANCE OF THE WORK AREA TO USE PROTECTIVE VEHICLE BUFFER SPACE SHALL BE PROVIDED ACCORDINGLY, AND THE WHEELS SHALL BE ALIGNED WITH THE LANE STRIPING.
 - FLAGGER SIGN (W20-7) AND ONE LANE AHEAD SIGN (W20-4) SHALL BE REMOVED, COVERED OR TURNED AWAY FROM ROAD SIGNS WHEN FLAGGER OPERATIONS ARE NOT OCCURRING.
 - ALL FLAGGERS SHALL USE 24" MINIMUM OCTAGON SHAPED STOP/STOPPED OR PADDLES HAVING 6" STAFF, THE PADDLE IS THE PREFERRED DEVICE, BUT THE FLAG MAY BE USED AT INTERSECTIONS WHERE THE STOP/STOPPED PADDLE WOULD OBTAIN CONTRASTING INFORMATION TO OTHERS TRAVELING IN OPPOSITE DIRECTIONS/LESS OF THE INTERSECTION OR DURING INCIDENT MANAGEMENT SITUATIONS.
 - CENTRALLINE CONES MAY BE ADDED TO ENHANCE THE VISIBILITY OF THE FLAGGER STATION IF CONES ARE USED, PLACE THEM 100 FT. MINIMUM FROM FLAGGER.
 - THE W20-1 SIGN IS RECOMMENDED, WHEN USED, IT SHALL BE PLACED IN ADVANCE OF THE FIRST ADVANCE WARNING SIGN. THE PLACEMENT DISTANCE SHALL BE 1000' FOR POSTED SPEED LIMITS OF 45 MPH OR HIGHER, AND 500' - 550' FOR POSTED SPEED LIMITS OF LESS THAN 45 MPH.

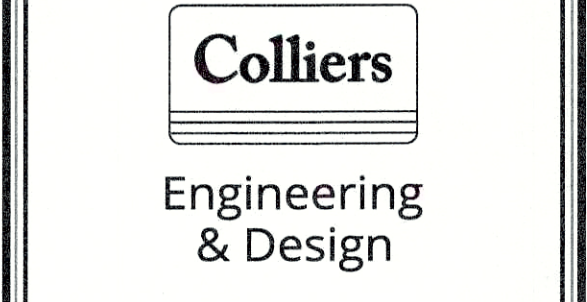
- NOTES FOR NIGHTTIME OPERATIONS:**
- WORK OCCURRING AFTER SUNSET AND BEFORE SUNRISE WILL BE CONSIDERED NIGHTTIME OPERATIONS.
 - ALL SIGNS, STOP / SLOW PADDLES AND RED FLAGS USED TO WARN / ALERT / CONTROL TRAFFIC SHALL BE RETROREFLECTIVE.
 - ALL WORKERS INVOLVED SHALL WEAR PROTECTIVE HELMET AND NIGHTTIME APPAREL IN ACCORDANCE WITH 9107-05A, HIGH VISIBILITY APPAREL AT ALL TIMES.
 - VEHICLES OPERATING ON THE PAVEMENT OF A CLOSED ROADWAY OR TRAVEL LANE SHALL DISPLAY ROTATING AMBER BEACONS AT ALL TIMES.
 - LEVEL II ILLUMINATION SHALL BE PROVIDED FOR THE BEGINNING OF LANE CLOSURE TAPERS AND AT ROAD CLOSURES, INCLUDING THE SETUP AND REMOVAL OF THE CLOSURE TAPERS.
 - LEVEL III ILLUMINATION SHALL BE PROVIDED FOR FLAGGING STATIONS, ASPHALT PAVING, MILLING, AND CONCRETE PLACEMENT AND/OR REMOVAL OPERATIONS, INCLUDING BRIDGE DECKS, 50 FEET AHEAD OF AND 100 FEET BEHIND A PAVING OR MILLING MACHINE.
 - LEVEL III ILLUMINATION SHALL BE PROVIDED FOR PAVEMENT OR STRUCTURAL CRACK FILLING, JOINT REPAIR, PAVEMENT PATCHING AND REPAIRS, INSTALLATION OF SIGNAL EQUIPMENT OR OTHER ELECTRICAL/MECHANICAL, AND OTHER TASKS INVOLVING FINE DETAILS OR INTRICATE PARTS AND EQUIPMENT.
 - ALL LIGHTING SHALL BE DESIGNED, INSTALLED, AND OPERATED TO AVOID CLARE THAT AFFECTS TRAFFIC ON THE ROADWAY OR THAT CAUSES ANNOYANCE OR DISCOMFORT FOR RESIDENCES.
 - PRIOR TO THE START OF NIGHTTIME OPERATIONS, A WRITTEN NIGHTTIME OPERATIONS AND LIGHTING PLAN IS REQUIRED FOR APPROVAL FROM THE DOT ENGINEER.
 - SEE STANDARD SPECIFICATIONS §619 FOR ADDITIONAL REQUIREMENTS AND CONSIDERATIONS.
 - FLAGGERS SHALL USE A FLASHLIGHT WITH A RED LOW CONE-POWERED LED BATTERY FOR FLAGGING IN NON-ILLUMINATED FLAGGER STATIONS DURING NIGHTTIME OPERATIONS.

NEW YORK DEPARTMENT OF TRANSPORTATION
 U.S. CUSTOMARY STANDARD SHEET
WORK ZONE TRAFFIC CONTROL
TWO-LANE TWO-WAY ROADWAY
LANE CLOSURE WITH FLAGGERS
INTERMEDIATE TERM OPERATION
 (SHEET 2 OF 2)

APPROVED APRIL 6, 2022
 Robert C. Longinos, P.E., DIRECTOR, OTSM

ISSUED UNDER ET 22-008
 619-407

APPROVED
 Resolution Number 23-13
 Date July 17, 2023



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REV	DATE	DESCRIPTION	BY	CHKD
1	4/29/24	REVISED PER NYSDOT COMMENTS 3/19/24	M.J.A.	
2	4/29/24	REVISED PER NYSDOT COMMENTS	J.F.M.	
3	5/14/24	REVISED PER NYSDOT COMMENTS	M.L.A.	

Philip John Grealy
 NEW YORK LICENSED PROFESSIONAL ENGINEER
 LICENSE NUMBER: 059858-S
 COLLIER ENGINEERING & DESIGN CT, P.C.
 N.Y. C.O.A.#: 0017609

PRELIMINARY HIGHWAY IMPROVEMENT PLANS
 FOR UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE

TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK

WESTCHESTER
 400 Columbus Avenue, Suite 180E
 Valhalla, NY 10595
 Phone: 914.347.7500
 COLLIER ENGINEERING & DESIGN
 ARCHITECTURAL, LANDSCAPE ARCHITECTURE, SURVEYING, C.T.P.C.

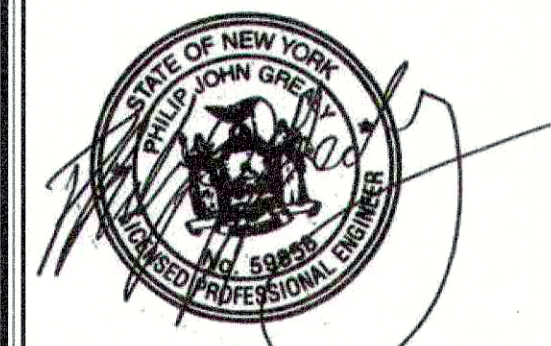
SCALE: AS SHOWN	DATE: 1/8/23	DRAWN BY: M.J.A.	CHECKED BY: R.G.D.
PROJECT NUMBER: 2006297A	DRAWING NAME: R.PL11-WZTC		

SHEET TITLE: **TWO-LANE TWO-WAY ROADWAY LANE CLOSURE WITH FLAGGERS**

SHEET NUMBER: **WZTC-02**

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

REV	DATE	DESCRIPTION	DRAWN BY	DATE	DATE	DATE
1	4/29/24	REVISED PER NYSDOT COMMENTS RECEIVED 3/19/24	M.J.A.	4/29/24		
2	4/29/24	REVISED PER NYSDOT 4/25/24 COMMENTS	J.F.M.	4/29/24		
3	5/14/24	REVISED PER NYSDOT 5/22/24 COMMENTS	M.J.A.	5/14/24		



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COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A.#: 0017609

PRELIMINARY HIGHWAY IMPROVEMENT PLANS
FOR
UNDERHILL AVENUE IMPROVEMENTS (SEQR # 22-092)

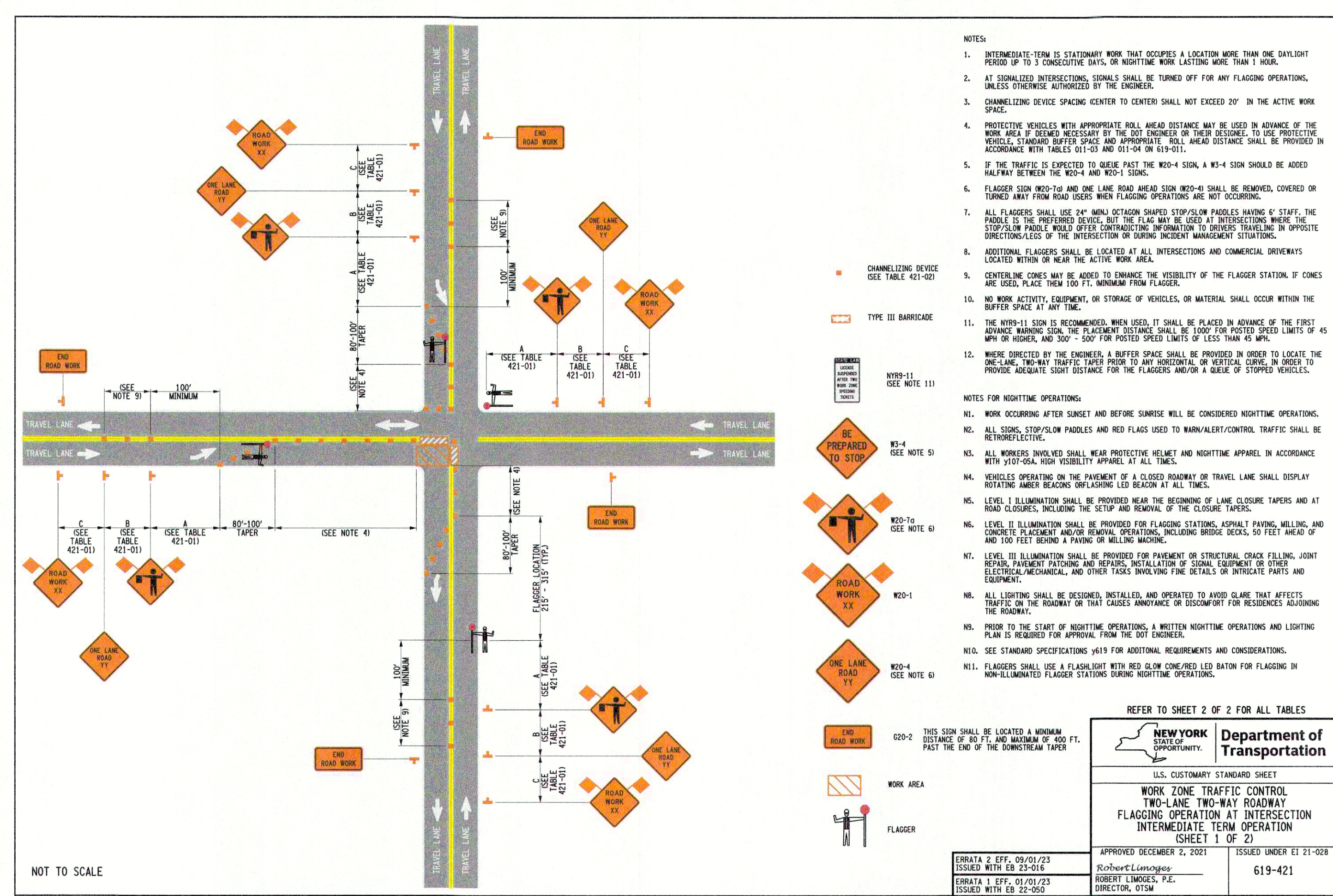
NYS ROUTE 118 (S.H. 148) AT UNDERHILL AVENUE
TOWN OF YORKTOWN WESTCHESTER COUNTY NEW YORK

Colliers WESTCHESTER
400 Columbus Avenue, Suite 180E
Valhalla, NY 10595
Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING C.T.P.C.

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/8/23	M.J.A.	R.G.D.
PROJECT NUMBER:	DRAWING NAME:		
20006297A	R.PL11-WZTC		

SHEET TITLE:
TWO-LANE TWO-WAY ROADWAY FLAGGING OPERATION AT INTERSECTION

SHEET NUMBER:
WZTC-03



- NOTES:**
- INTERMEDIATE-TERM IS STATIONARY WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.
 - AT SIGNALIZED INTERSECTIONS, SIGNALS SHALL BE TURNED OFF FOR ANY FLAGGING OPERATIONS, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
 - CHANNELIZING DEVICE SPACING (CENTER TO CENTER) SHALL NOT EXCEED 20' ON THE ACTIVE WORK SPACE.
 - PROTECTIVE VEHICLES WITH APPROPRIATE ROLL AHEAD DISTANCE MAY BE USED IN ADVANCE OF THE WORK AREA IF DEMAND NECESSARY BY THE DOT ENGINEER OR THEIR DESIGNEE. TO USE PROTECTIVE VEHICLES, STANDARD BUFFER SPACES AND APPROPRIATE ROLL AHEAD DISTANCE SHALL BE PROVIDED IN ACCORDANCE WITH TABLES 011-03 AND 011-04 ON 619-011.
 - IF THE TRAFFIC IS EXPECTED TO QUEUE NEAR THE W2-4 SIGN, A W3-4 SIGN SHOULD BE ADDED HALFWAY BETWEEN THE W2-4 AND W2-1 SIGNS.
 - FLAGGER SIGN (W2D-1) AND ONE LANE ROAD AHEAD SIGN (W2D-4) SHALL BE REMOVED, COVERED OR TURNED AWAY FROM ROAD USERS WHEN FLAGGING OPERATIONS ARE NOT OCCURRING.
 - ALL FLAGGERS SHALL USE 24" MINUS OCTAGON SHAPED STOP/SLOW PADDLES HAVING 6" STAFF. THE PADDLE IS THE PREFERRED DEVICE, BUT THE FLAG MAY BE USED AT INTERSECTIONS WHERE THE STOP/SLOW PADDLE WOULD OBTAIN CONTRADICTION TO TRAFFIC TRAVELING IN OPPOSITE DIRECTIONS/LESS OF THE INTERSECTION OR DURING INCIDENT MANAGEMENT SITUATIONS.
 - ADDITIONAL FLAGGERS SHALL BE LOCATED AT ALL INTERSECTIONS AND COMMERCIAL DRIVEWAYS LOCATED WITHIN OR NEAR THE ACTIVE WORK AREA.
 - CENTERLINE CONES MAY BE ADDED TO ENHANCE THE VISIBILITY OF THE FLAGGER STATION, IF CONES ARE USED, PLACE THEM 100 FT. MINIMUM FROM FLAGGER.
 - NO WORK ACTIVITY, EQUIPMENT, OR STORAGE OF VEHICLES, OR MATERIAL SHALL OCCUR WITHIN THE BUFFER SPACE AT ANY TIME.
 - THE NYSP-11 SIGN IS RECOMMENDED. WHEN USED, IT SHALL BE PLACED IN ADVANCE OF THE FIRST ADVANCE WARNING SIGN THE PLACEMENT DISTANCE SHALL BE 100' FOR POSTED SPEED LIMITS OF 45 MPH OR HIGHER, AND 300' - 500' FOR POSTED SPEED LIMITS OF LESS THAN 45 MPH.
 - WHERE DIRECTED BY THE ENGINEER, A BUFFER SPACE SHALL BE PROVIDED IN ORDER TO LOCATE THE ONE-LANE TWO-WAY TRAFFIC TAPER PRIOR TO ANY RESIDENTIAL OR VERTICAL CURVE, IN ORDER TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE FLAGGERS AND/OR A QUEUE OF STOPPED VEHICLES.
- NOTES FOR NIGHTTIME OPERATIONS:**
- WORK OCCURRING AFTER SUNSET AND BEFORE SUNRISE WILL BE CONSIDERED NIGHTTIME OPERATIONS.
 - ALL SIGNS, STOP/SLOW PADDLES AND RED FLAGS USED TO WARN/ALERT/CONTROL TRAFFIC SHALL BE RETROREFLECTIVE.
 - ALL WORKERS INVOLVED SHALL WEAR PROTECTIVE HELMET AND NIGHTTIME APPAREL IN ACCORDANCE WITH NYSP-004. HIGH-VISIBILITY APPAREL AT ALL TIMES.
 - VEHICLES OPERATING ON THE PAVEMENT OF A CLOSED ROADWAY OR TRAVEL LANE SHALL DISPLAY ROTATING AMBER BEACONS OR FLASHING LED BEACON AT ALL TIMES.
 - LEVEL I ILLUMINATION SHALL BE PROVIDED NEAR THE BEGINNING OF LANE CLOSURE TAPERS AND AT ROAD CLOSURES, INCLUDING THE SETUP AND REMOVAL OF THE CLOSURE TAPERS.
 - LEVEL II ILLUMINATION SHALL BE PROVIDED FOR FLAGGING STATIONS, ASPHALT PAVING, MILLING, AND CONCRETE PLACEMENT AND/OR REMOVAL OPERATIONS, INCLUDING BRIDGE DECKS, 50 FEET AHEAD OF AND 100 FEET BEHIND A PAVING OR MILLING MACHINE.
 - LEVEL III ILLUMINATION SHALL BE PROVIDED FOR PAVEMENT OR STRUCTURAL CRACK FILLING, JOINT REPAIR, PAVEMENT PATCHING AND REPAIRS, INSTALLATION OF SIGNS, EQUIPMENT OR OTHER ELECTRICAL/MECHANICAL, AND OTHER TASKS INVOLVING FINE DETAILS OR INTRICATE PARTS AND EQUIPMENT.
 - ALL LIGHTING SHALL BE DESIGNED, INSTALLED, AND OPERATED TO AVOID GLARE THAT AFFECTS TRAFFIC ON THE ROADWAY OR THAT CAUSES ANNOYANCE OR DISCOMFORT FOR RESIDENCES ADJACENT TO THE ROADWAY.
 - PRIOR TO THE START OF NIGHTTIME OPERATIONS, A WRITTEN NIGHTTIME OPERATIONS AND LIGHTING PLAN IS REQUIRED FOR APPROVAL FROM THE DOT ENGINEER.
 - SEE STANDARD SPECIFICATIONS §619 FOR ADDITIONAL REQUIREMENTS AND CONSIDERATIONS.
 - FLAGGERS SHALL USE A FLASHLIGHT WITH RED LOW CONE/RED LED BATTON FOR FLAGGING IN NON-ILLUMINATED FLAGGING STATIONS DURING NIGHTTIME OPERATIONS.
- REFER TO SHEET 2 OF 2 FOR ALL TABLES**
- NEW YORK STATE DEPARTMENT OF TRANSPORTATION**
ILL. CUSTOMARY STANDARD SHEET
WORK ZONE TRAFFIC CONTROL TWO-LANE TWO-WAY ROADWAY FLAGGING OPERATION AT INTERSECTION INTERMEDIATE TERM OPERATION (SHEET 1 OF 2)
APPROVED DECEMBER 7, 2021 ISSUED UNDER EI 21-028
Robert Limoges, P.E. DIRECTOR, OTSM 619-421
- ERRATA 2 EFF. 09/01/23 ISSUED WITH EB 23-016
ERRATA 1 EFF. 01/01/23 ISSUED WITH EB 22-026

TABLE 421-01: ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS			SIGN LEGEND	
	A (FT.)	B (FT.)	C (FT.)	XX	YY
URBAN (≤ 30 MPH)	100	100	100	AHEAD	AHEAD
URBAN (35-40 MPH)	200	200	200	AHEAD	AHEAD
URBAN (45 MPH)	350	350	350	1000 FT.	AHEAD
RURAL	500	500	500	500 FT.	1000 FT.

• PRECONSTRUCTION POSTED SPEED LIMIT

TABLE 421-02: CHANNELIZING DEVICE APPLICATION FOR INTERMEDIATE-TERM STATIONARY WORK ZONES

WORK ZONE PROVISIONS	MINIMUM DEVICE SPACING (CENTER TO CENTER)	MOTED COMPLIANT CHANNELIZING DEVICE						
		DRUMS	STANDARD CONES	TALL CONES	EXTRA TALL CONES	TUBULAR MARKERS	INTERIOR TUBULAR MARKERS	VERTICAL PANELS
SHOULDER/BERM/EDGE/SHOOTING TANKS	20 FT. • 40 FT. X	X						X
MARKING FOR TRANSVERSE BUMPS ¹	N/A	X ²		X ²				X ²
TRANSVERSE DEVICE WITHIN CLOSED TRAFFIC LANE AND/OR SHOULDER	800 FT.	X	X	X			X	X 0
REMOVAL OF EXISTING GUIDE RAIL	80 FT. 40 FT.	X	X	X	X		X	X 0

NOTES: 1. - ALLOWED, BLANK = NOT ALLOWED, 0 = OPTIONAL.
2. - A TYPE 1 OBJECT MARKER MAY BE USED IN LIEU OF CHANNELIZING DEVICE.
3. - CHANNELIZING DEVICES SHALL BE EQUIPPED WITH A FLASHING WARNING LIGHT. • SEE NOTE 3 ON SHEET 1 OF 2.

TABLE 421-03: REQUIRED SIGN SIZES*

SIGN	NON-FREEWAY	FREEWAY
W2-1	36x36	48x48
W2-4	36x36	48x48
W2D-1	36x36	48x48
G2D-2	36x18	48x24
WARNING FLAG	18x18	18x18

*FREEWAY SIZES MAY BE USED ON NON-FREEWAY, IF SPACE CONSTRAINTS DO NOT EXIST.

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