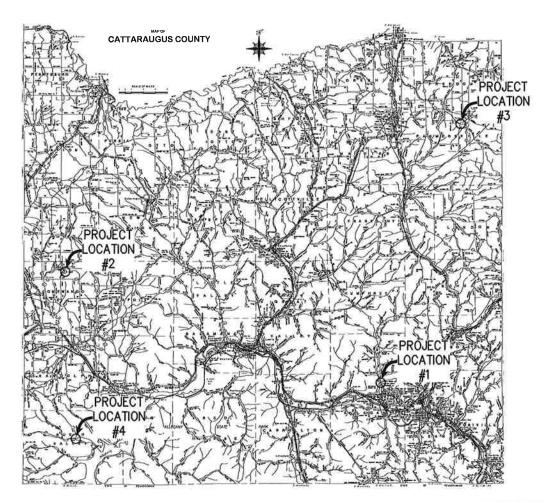
CATTARAUGUS COUNTY, NEW YORK

2019 Bridge Painting Program CONTRACT DRAWINGS

GPI JOB. NO. 2019009 P.I.N. 5761.99



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Cattaraugus County Department of Public Works



KATHLEEN M. ELLIS MARK C. BURR, P.E. DIRECTOR OF ENGINEERING COMMISSIONER

> 8810 N.Y.S. RTE. 242. LITTLE VALLEY, NEW YORK 14755

PROJECT LOCATION #1 (B.I.N. 3360260) ALLEGANY BRIDGE NO. 66, CHAPIN CROSS ROAD OVER FIVE MILE CREEK

PROJECT LOCATION #2 (B.I.N. 3320960) CONEWANGO BRIDGE NO. 32, STODDARD ROAD OVER MILL CREEK

PROJECT LOCATION #3 (B.I.N. 3321310) FARMERSVILLE BRIDGE NO. 8, COUNTY ROAD 21 OVER ELTON CREEK

PROJECT LOCATION #4 (B.I.N. 3323210) SOUTH VALLEY BRIDGE NO. #4, COUNTY ROAD 33 OVER BONE RUN

Greenman-Pedersen, Inc.

Consulting Engineers

4950 Genesee Street, Suite 100, Buffalo, New York 14225 403 Main Street, Suite 330, Buffalo, New York 14203 400 Andrews Street, Suite 610, Rochester, New York 14604 200 Harrison Street, Suite H-2, Jamestown, New York 14701







COV-1

GENERAL NOTES

- ON MEMBERS THAT REQUIRE TOTAL PAINT REMOVAL, THE CONTRACTOR SHALL CLEAN THE EXISTING STEEL TO THE LEVEL WHICH MEETS SSPC-SP10 (NEAR - WHITE BLAST CLEANING) REQUIREMENTS.
- THE ONLY PAINT SYSTEMS APPROVED FOR THIS PROJECT ARE THOSE WHICH ARE ON THE NYSDOT APPROVED LIST FOR SECTION 780-01 STRUCTURAL STEEL PAINTS - CLASS 1
- THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A SIGNED PROPERTY RELEASE FROM THE LAND OWNER OF THE STAGING AREA PRIOR TO BEGINNING ANY WORK.
- THE CONTRACTOR SHALL REMOVE THE EXISTING CORRUGATED BEAM GUIDE RAIL TO CLEAN, PRIME, AND PAINT THE POSTS AND BACKUP CHANNEL. AFTER PAINTING, THE CORRUGATED RAIL SHALL BE REINSTALLED IN PLACE, AT NO TIME SHALL THE STRUCTURE BE OPEN TO TRAFFIC WITHOUT HAVING THE GUIDE RAIL IN PLACE, PAYMENT FOR REMOVAL AND REINSTALLING THE RAIL SHALL BE INCLUDED IN ITEM 573.01 (STRUCTURAL STEEL PAINTING FIELD APPLIED - TOTAL REMOVAL).
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC ON THE EXISTING STRUCTURE AT ALL TIMES. THE CONTRACTOR SHALL HAVE A SUFFICIENT NUMBER OF FLAGGERS AT EACH SITE TO MAINTAIN TRAFFIC. SEGREGATED WORK AREAS MAY BE REQUIRED TO MAINTAIN TRAFFIC.
- THE CONTRACTOR SHALL PROTECT THE PUBLIC (TRAFFIC) FROM THE ABRASIVE BLASTING OPERATIONS AT ALL TIMES AND SPECIAL CARE IS TO BE TAKEN WITH THE STRUCTURES HAVING OPEN GRATE STEEL
- THE SOLID WASTE MATERIAL GENERATED BY THE PRESSURE WASHING OPERATION MAY CONTAIN MORE THAN 2% BY WEIGHT OF ORGANIC MATERIAL. THE CONTRACTOR IS ALERTED TO THE NEED TO CAREFULLY INSPECT THE STRUCTURE PRIOR TO BIDDING FOR THE EXISTENCE OF ORGANIC MATTER SUCH AS SAND, PAPER, BIRD NESTS, ANIMAL DROPPINGS, OTHER TRASH AND DEBRIS, AND LOOSE RUST AND PAINT, WHILE TREATMENT AND DISPOSAL OF THIS WASTE IS COVERED UNDER ITEM 571.03 - DISPOSAL OF HAZARDOUS SOLID PAINT WASTE, THE MATERIAL MUST BE STORED IN SEPARATE CONTAINERS FROM THE PAINT WASTE AND MARKED AS "BRIDGE WASHING WASTE" REQUIREMENTS ARE PROVIDED IN SECTION 571 OF THE STANDARD SPECIFICATIONS, AS REVISED IN THIS CONTRACT,
- 8. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING BRUSH AND ANY OTHER DEBRIS WHICH WOULD
- 9. THE CONTRACTOR SHALL NOTE WHAT TYPE OF ABRASIVE MEDIA IS ALLOWED FOR EACH OF THE STRUCTURES ON THE TABLE BELOW.
- 10. STEEL ABUTMENTS ARE TO BE PAINTED TO NEAR WATER LINE AS DETERMINED IN FIELD.

SPECIAL PROCEDURES

- SURFACE PREPARATION (WITH THE EXCEPTION OF ABUTMENTS/LOCKSHEET PILING). SHALL BE SSPC-SP10 / NACE 2 NEAR WHITE BLAST CLEANING, WHEN VIEWED WITHOUT MAGNIFICATION SHALL BE FREE OF ALL VISIBLE OIL, GREASE, DUST, DIRT, MILL SCALE, RUST, COATING, OXIDES, CORROSION PRODUCTS AND OTHER FOREIGN MATTER OF AT LEAST 95% OF EACH UNIT AREA. STAINING SHALL BE LIMITED TO NO MORE THAN 5 PERCENT OF EACH UNIT AREA, AND MAY CONSIST OF LIGHT SHADOWS, SLIGHT STREAKS, OR MINOR DISCOLORATIONS CAUSED BY STAINS OF RUST, STAINS OF MILL SCALE, OR STAINS OF PREVIOUSLY APPLIED COATINGS. UNIT AREA SHALL BE APPROXIMATELY 3 IN. X 3 IN. (9 SQ. IN.). SURFACE PREPARATION OF ABUTMENTS/LOCKSHEET PILING (ALL BRIDGES)/NACE 3 NEAR — COMMERCIAL BLAST CLEANING, WHEN VIEWED WITHOUT MAGNIFICATION, THE SURFACE SHALL BE FREE OF ALL VISIBLE OIL, GREASE, DUST, DIRT, MILL SCALE, RUST, COATING, OXIDES, CORROSION PRODUCTS AND OTHER FOREIGN MATTER OF AT LEAST 66-2/3% OF UNIT AREA. WHICH SHALL BE A SQUARE 3 IN. X 3 IN. (9 SQ. IN.). LIGHT SHADOWS, SLIGHT STREAKS, OR MINOR DISCOLORATIONS, CAUSED BY STAINS OF RUST, STAINS OF MILL SCALE, OR STAINS OF PREVIOUSLY APPLIED COATING IN LESS THAN 33-1/3% OF THE UNIT AREA IS ACCEPTABLE.
- SHOULD THE CONTRACTOR CONDUCT ANY STORAGE, STAGING, SPOILING, OR OTHER PROJECT-RELATED ACTIVITIES ON PRIVATE PROPERTY, HE SHALL SUBMIT TO THE COUNTY A SIGNED PROPERTY RELEASE FOR EACH PROPERTY OWNER BEFORE BEGINNING WORK
- 3. IF THE CONTRACTOR, HAVING BEEN ADVISED BY THE OWNER OR HIS REPRESENTATIVE THAT SUCH WORK REQUIRES INSPECTION OR TESTING, COVERS SUCH WORK BEFORE OBTAINING CONFIRMATION FROM OWNER THAT ALL REQUIRED INSPECTION OR TESTING HAS BEEN COMPLETED. THEN THE CONTRACTOR WILL BEAR ALL SUCH "EXPENSES."
- 4. THE CONTRACTOR SHALL PROVIDE TWO (2) WET/DRY BULB THERMOMETERS AND THE APPROPRIATE GRAPHS OR CHARTS FOR INTERPRETING BOTH THE RELATIVE HUMIDITY AND THE DEW POINT.
- WHERE A BIN PLATE IS ATTACHED TO THE EXISTING STEEL ABUTMENTS, THE CONTRACTOR SHALL REMOVE, STORE, AND REMOUNT IT AFTER FINISHING PAINTING OPERATIONS, COST TO BE INCLUDED IN ITEM 573.01000X - STRUCTURAL STEEL PAINTING FIELD APPLIED TOTAL REMOVAL.
- 6. THE CONTRACTOR SHALL IMPLEMENT PROGRAMS AND PROCEDURES WHICH COMPLY WITH THE REQUIREMENTS OF THE SPECIFICATION AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL OSHA AND EPA STANDARD REGULATIONS
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TREATMENT AND DISPOSAL OF WASTE.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATING OF ALL WORK WITH EXISTING UTILITIES IN
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A TESTING SUBCONTRACTOR FOR LEAD MONITORING TESTING AS REQUIRED TO MEET THE INTENT OF THE SPECIFICATION. COST TO BE INCLUDED IN THE APPROPRIATE ITEMS OF WORK.
- 10. THE CONTRACTOR SHALL PERFORM ALL MAINTENANCE AND PROTECTION OF TRAFFIC FOR THE SITES BID. ALL OPERATIONS SHALL CONFORM TO THE NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS - 2009 EDITION (NATIONAL MUTCD) AND NEW WORK STATE SUPPLEMENT TO THE MUTCD. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 619.01XXXX

SPECIAL NOTES

- THE NORTHERN LONG EARED BAT (MYOTIS SEPTENTRONALIS) IS LISTED AS A FEDERALLY THREATENED SPECIES STATEWIDE. THIS PROJECT IS NOT ANTICIPATED TO INVOLVE THE REMOVAL OF TREES GREATER THAN THREE (2) INCHES IN DIAMETER (DIAMETER BREAST HEIGHT (DBH)), IF PROJECT CONDITIONS CHANGE AND TREE REMOVALS ARE NECESSARY, WHETHER UNDER CLEARING AND GRUBBING OR TREE REMOVALS, THE ENGINEER MUST BE NOTIFIED PRIOR TO THE START OF ANY TREE REMOVAL. TREE REMOVALS WILL BE ALLOWED ONLY AFTER COORDINATION AND APPROVAL BY THE ENGINEER IN CONSULTATION WITH THE CONSTRUCTION ENVIRONMENTAL COORDINATOR
- 2. ALL BRIDGES HAVE THE POTENTIAL OF BEING SUMMER ROOSTING HABITAT FOR THE NORTHERN LONG-EARED BAT (NLEB). THE CONTRACTOR SHALL NOTIFY THE EIC AT LEAST 10 DAYS PRIOR TO THE START OF WORK AT EACH BRIDGE, A BRIDGE/BAT SURVEY WILL BE CONDUCTED BY THE COUNTY FOR THE PRESENCE OF THE BLEB FOR ANY BRIDGE WORK THAT WILL TAKE PLACE BETWEEN MARCH 31 AND OCTOBER 1 AND/OR INVOLVES ACCESS TO THE UNDERSIDE OF THE BRIDGE OR DRILLING DOWN TO THE UNDERSIDE OF THE BRIDGE, INCLUDING BRIDGE PAINTING AND WASHING. THE SURVEY WILL BE CONDUCTED AND RESULTS PROVIDED WITHIN SEVEN (7) DAYS OF THE CONTRACTOR'S NOTIFICATION. NO WORK ON THAT BRIDGE CAN COMMENCE UNTIL THE BRIDGE IS CLEARED THROUGH THE EIC.

AVERAGE **ABRASIVE** STREAM STREAM DESCRIPTION B.I.N. VERTICAL MEDIA DIRECTION CLASS CLEARANCE ALLOWED ALLEGANY BRIDGE NO. 66, CHAPIN CROSS ROAD OVER FIVE MILE CREEK B.I.N. 3360260 NORTH 11 FT. ± F OR S C (T) CONEWANGO BRIDGE NO. 32. STODDARD ROAD OVER MILL CREEK B.I.N. 3320960 14 FT. ± NORTH C (T) F OR S 12 FT. ± FARMERSVILLE BRIDGE NO. 8. COUNTY ROAD 21 OVER ELTON CREEK B.I.N. 3321310 NORTH C (T) F OR S SOUTH VALLEY BRIDGE NO. 4, COUNTY ROAD 33 OVER BONE RUN B.I.N. 3323210 8 FT. + NORTH C (T)

- (S) SILICA SAND OR OTHER TYPE OF NON-METALLIC ABRASIVE.
- (F) FERROUS METALLIC ABRASIVE (SSPC-AB-3)
- (T) TROUT WATERS

SPECIAL NOTE - RIGHT OF WAY

- ALL WORK TO BE PERFORMED UNDER THIS CONTRACT WILL BE WITHIN THE PUBLIC RIGHT-OF-WAY (ROW) IN ACCORDANCE WITH SECTION 105-15 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR IS TO ASSURE HIMSELF THAT ALL WORK IS BEING PERFORMED WITHIN THE ROW, INCLUDING BUT NOT LIMITED TO VEHICLE ACCESS; STORAGE OF EQUIPMENT, MATERIALS, DEBRIS AND WASTE; LANDSCAPING; VEGETATION REMOVAL AND MANAGEMENT: GRADING, SEEDING AND THI INSTALLATION OF TURF; AND THE INSTALLATION OF ANY FENCES OR PROTECTIVE
- 2. IF CONTRACTOR IS UNABLE TO IDENTIFY THE LIMITS OF THE RIGHTS-OF-WAY WHEN THE CONTRACT CALLS FOR WORK IN THOSE VICINITIES, THE CONTRACTOR MUST CONTACT THE PROJECT ENGINEER FOR DEFINITIVE BOUNDARY DETERMINATIONS BEFORE ANY WORK MAY BE INITIATED AT THOSE LOCATIONS (STANDARD SPECIFICATIONS SECTIONS 105-10 AND 625),
- IN ACCORDANCE WITH SECTION 105-15 OF THE STANDARD SPECIFICATIONS, RELEASES FOR ANY NON-ESSENTIAL CONTRACT WORK OUTSIDE OF THE EXISTING RIGHTS-OF-WAY, INCLUDING PLANTINGS, LANDSCAPING OR DRIVEWAY ENHANCEMENT, WILL BE PROVIDED BY THE PROJECT ENGINEER AND IN NO INSTANCE ARE TO BE SECURED BY THE CONTRACTOR THE CONTRACTOR SHALL NOT INVADE UPON PRIVATE PROPERTIES, LANDS OR BUILDINGS OUTSIDE OF THE RIGHTS-OF-WAY FOR ANY REASON WITHOUT FIRST SECURING WRITTEN PERMISSION FROM THE PROPERTY OWNER (STANDARD SPECIFICATIONS SECTION 105-15).
- 4. THE CONTRACTOR WILL BE HELD LIABLE FOR ANY DAMAGES DONE. ANY SUCH INJURIES OR DAMAGES SHALL BE SATISFACTORILY REPAIRED OR ITEMS REPLACED AT THE CONTRACTOR'S EXPENSE (STANDARD SPECIFICATIONS SECTION 107-08).

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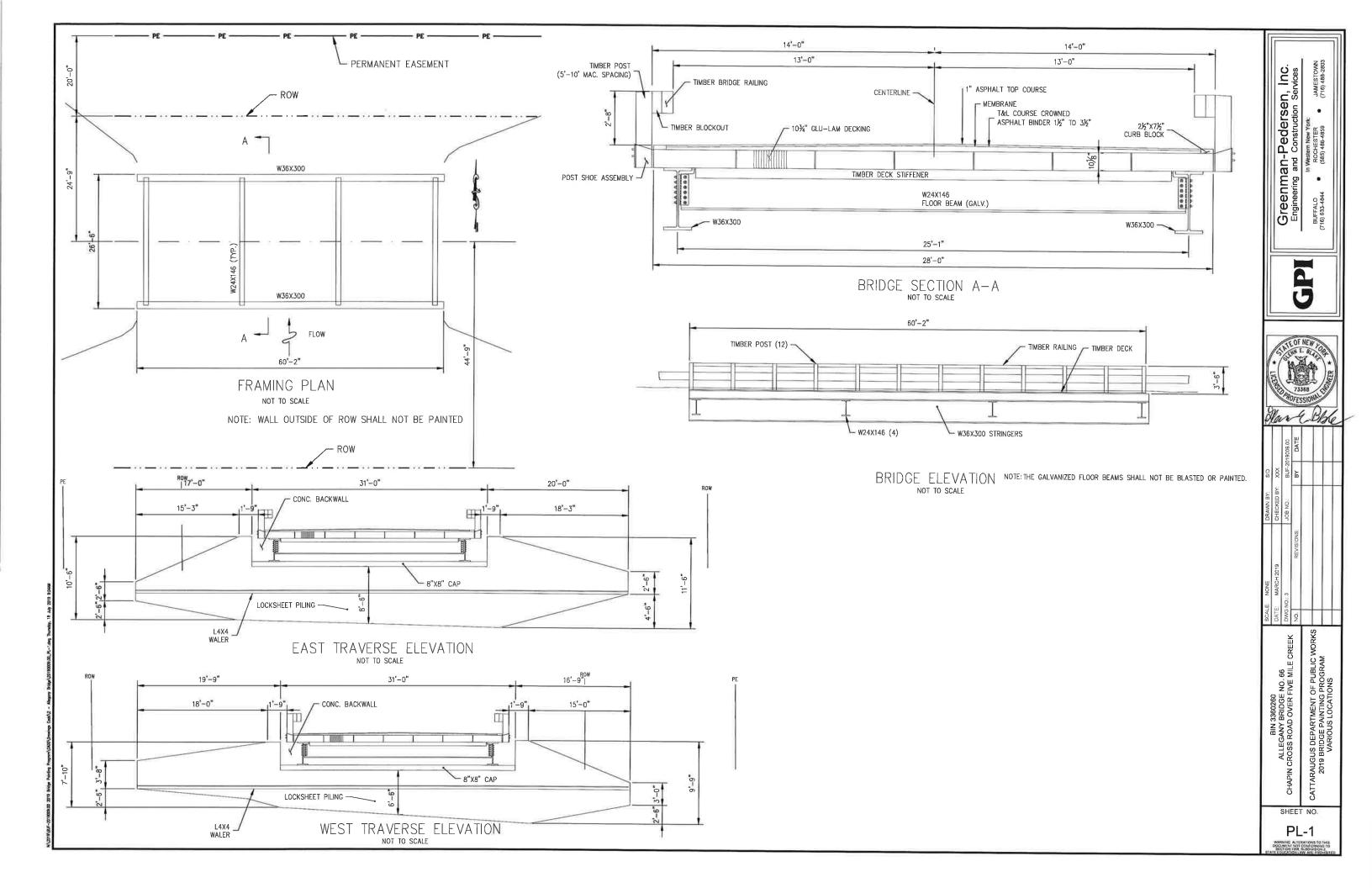
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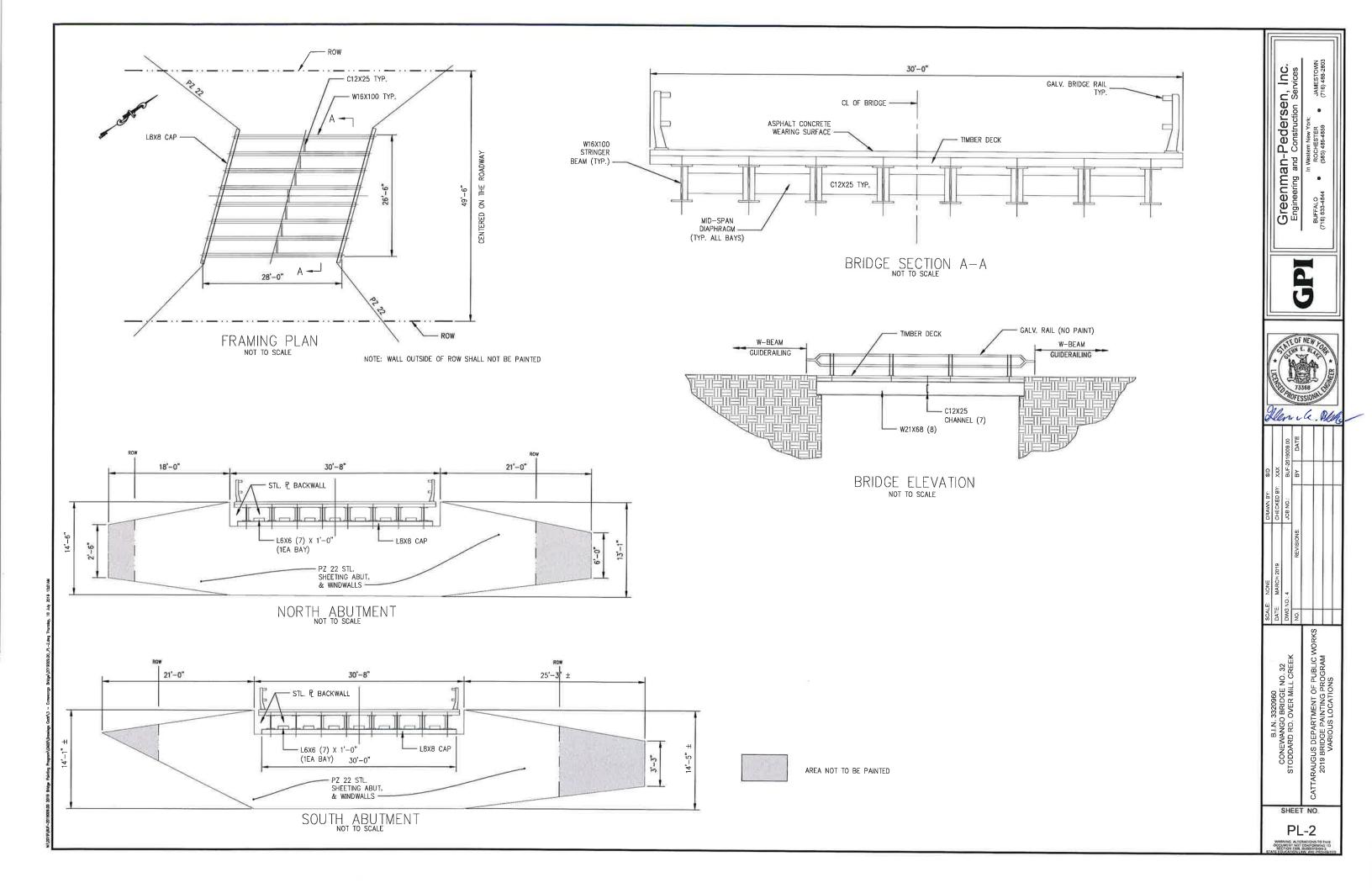


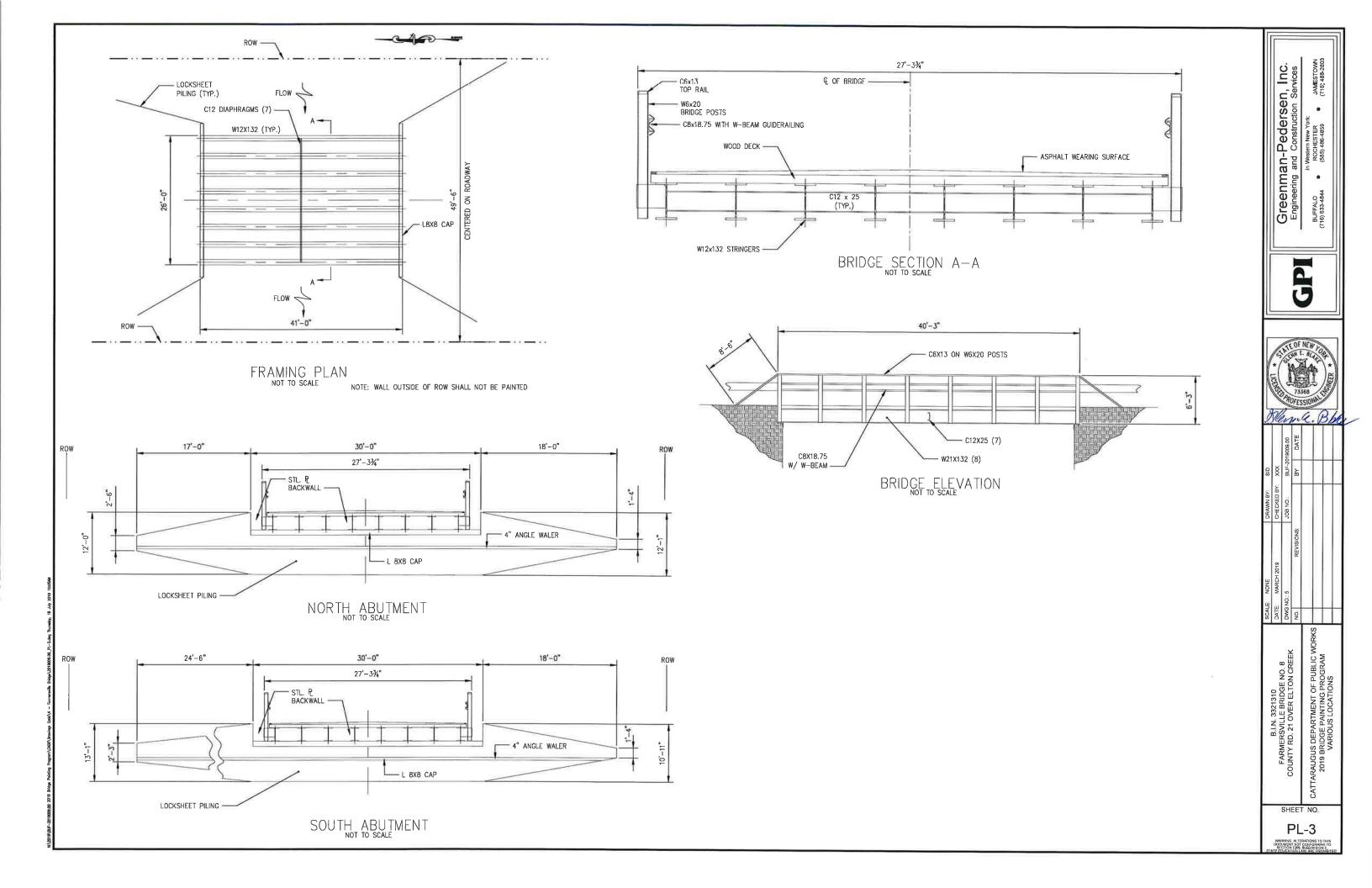


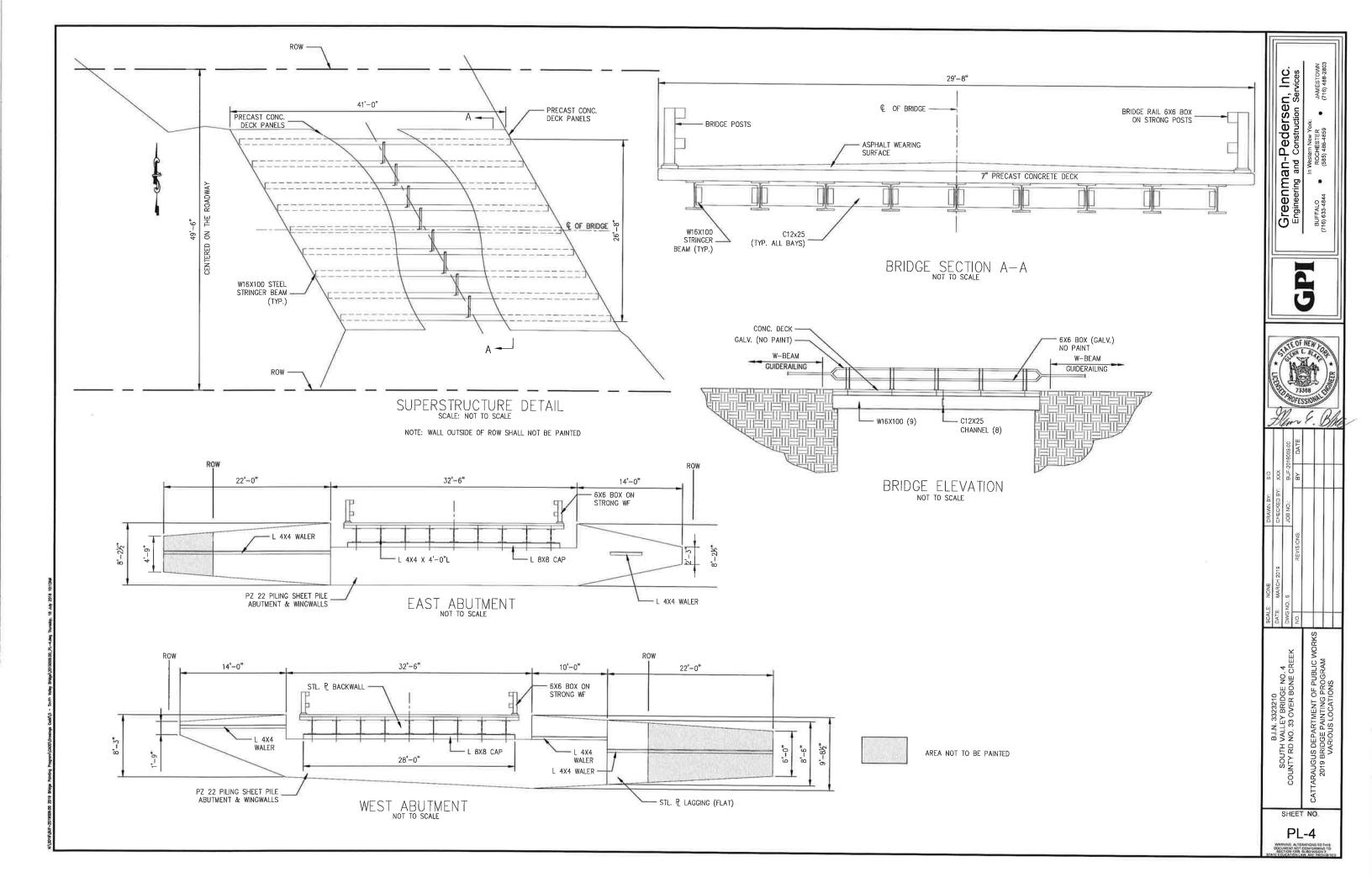
SHEET NO.

GN-1









GENERAL NOTES

- THE TYPICAL DETAILS DEPICTED ON THE STANDARD SHEETS AND IN THE MUTCH REFLECT THE MINIMUM
- THE CONTRACTOR MUST SUBMIT TO THE ENGINEER, IN WRITING, PROPOSED REVISIONS TO THE TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE FIVE (5) WORK DAYS PRIOR TO THE PLANNED IMPLEMENTATION OF SUCH PROPOSED REVISIONS. EXCEPT FOR CHANGES THAT ALTER THE SCOPE OF THE TRAFFIC CONTROL PLAN, SUCH CHANGES IN SCOPE MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE THIRTY (30) WORKING DAYS PRIOR TO IMPLEMENTATION OF SUCH REVISIONS.
- THE CONTRACTOR SHALL PROVIDE THE ENGINEER, IN WRITING, WITH THE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF STAFF WHO ARE AUTHORIZED TO SECURE LABOR, MATERIALS, AND EQUIPMENT FOR EMERGENCY REPAIRS OUTSIDE NORMAL WORKING HOURS. THE ENGINEER WILL PROVIDE THE SUBMITTED INFORMATION TO REGIONAL MANAGEMENT, THE NEW YORK STATE POLICE, THE RESIDENT ENGINEER, AND THE LOCAL POLICE.

ACTIVITY AREA

- THE CONTRACTOR SHALL MAINTAIN A MINIMUM 500 FT, LONGITUDINAL DISTANCE BETWEEN CONSTRUCTION OPERATIONS ON ALTERNATE SIDES OF THE ROADWAY, UNLESS OTHERWISE APPROVED BY
- WHEN TWO OR MORE AREAS ARE ADJACENT, OVERLAP, OR ARE IN CLOSE PROXIMITY, THE CONTRACTOR SHALL ENSURE THERE ARE NO CONFLICTING SIGNS AND THAT LANE CONTINUITY IS MAINTAINED THROUGHOUT ALL WORK AREAS

SIGNS

- THE LOCATIONS OF THE SIGNS SHOWN ON THE WORK ZONE TRAFFIC CONTROL PLANS AND DETAILS MAY BE ADJUSTED BASED ON SIGHT DISTANCE AND OTHER CONSIDERATIONS. THE FINAL LOCATIONS OF SIGNS ARE SUBJECT TO APPROVAL OF THE ENGINEER.
- ANY EXISTING SIGNS, INCLUDING OVERHEAD SIGNS, WHICH CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL SIGN LAYOUT SHALL BE COVERED, REMOVED, STORED OR RESET, AS APPROVED BY THE ENGINEER, ALL APPROPRIATE EXISTING SIGNS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND/OR LOCATION UNLESS OTHERWISE REPLACED IN THIS CONTRACT:
- 3. SIGNS AT OR NEAR INTERSECTIONS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT A MOTORIST'S
- ALL WARNING AND REGULATORY SIGNS SHALL BE POSTED ON BOTH SIDES OF MULTI-LANE DIVIDED. HIGHWAYS, MULTI-LANE RAMPS, AND ONE-WAY STREETS IN CASES WHERE LANE RESTRICTIONS REDUCE THE TRAVEL LANE TO ONE LANE, SIGNS SHALL BE POSTED ON THE RIGHT SIDE OF THE ACTIVE TRAVEL LANE, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER
- SIGNS MOUNTED ON THE MEDIAN OF DIVIDED HIGHWAYS WHERE MEDIAN BARRIER IS IN PLACE MAY BE MOUNTED ON THE BARRIER WITH A SADDLE TYPE BRACKET, LAYING THE SIGN DOWN IN A HORIZONTAL POSITION IS NOT PERMITTED.
- THE DIMENSIONS OF WORK ZONE TRAFFIC CONTROL SIGNS ARE DESCRIBED IN THE MUTCH. ANY CHANGES TO THE DIMENSIONS SHALL BE APPROVED BY THE ENGINEER OR BY HIS/HER DESIGNEE,
- 7. BRIDGES ARE TO REMAIN OPEN AT ALL TIMES. THE W-BEAM GUIDE RAIL MUST BE REMOVED BEFORE PAINTING AND REINSTALLED BEFORE TRAFFIC IS PLACED ON THAT SIDE OF THE BRIDGE.

CHANNELIZING DEVICES

WHERE POSSIBLE ALL CHANNELIZING AND GUIDING DEVICES ARE TO BE PLACED SO AS TO PROVIDE A MINIMUM 2 FT. LATERAL CLEARANCE TO THE TRAVELED WAY.

PUBLIC ACCESS

PROPERTY OWNERS WHOSE DRIVEWAYS WILL BE MADE INACCESSIBLE SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST 24 HOURS PRIOR TO RESTRICTING USE OF THE DRIVEWAY. FOR MULTIPLE ACCESS PROPERTIES, AT LEAST ONE DRIVEWAY SHALL BE OPEN AT ALL TIMES, ACCESS SHALL BE RESTORED TO ALL DRIVEWAYS AS SOON AS POSSIBLE

LANE CLOSURES

- THE CONTRACTOR SHALL LOCATE LANE CLOSURES TO PROVIDE OPTIMUM VISIBILITY, LE. BEFORE CURVES AND CRESTS. TO THE EXTENT CONDITIONS PERMIT.
- THE ENGINEER MAY REQUIRE THAT ALL LANES BE RE-OPENED AT ANY TIME IF THE ROUTE IS NEEDED FOR EMERGENCY PURPOSES. THIS COULD INCLUDE INCIDENTS AT LOCATIONS OUTSIDE THE CONTRACT

LANE WIDTHS

UNLESS AUTHORIZED BY THE ENGINEER, THE MINIMUM LANE WIDTHS FOR WORK ZONE TRAVEL LANES SHALL BE AS FOLLOWS: FREEWAYS AND/OR EXPRESSWAYS IS 11 FT. THE MINIMUM LANE WIDTH FOR ALL OTHER TYPES OF ROADWAYS IS 10 FT.

BARRIER/SHADOW VEHICLES

- BARRIER AND SHADOW VEHICLES SHALL BE REQUIRED AS PER STANDARD SHEET TITLED "WORK ZONE TRAFFIC CONTROL LEGENDS AND NOTES" (619-11).
- NO WORK ACTIVITY, EQUIPMENT, VEHICLES AND/OR MATERIALS SHALL BE LOCATED BETWEEN THE BARRIER OR SHADOW VEHICLE AND THE ACTIVE WORK AREA (ROLL AHEAD DISTANCE).
- THE CONTRACTOR MY BE REQUIRED TO PROVIDE A BARRIER VEHICLE IN CONJUNCTION WITH POLICE PRESENTS IN THE WORK ZONE, TO BE INCLUDED IN THE UNIT BID PRICE FOR BASIC WORK ZONE TRAFFIC CONTROL

Standard Sheet M619-11

TABLE NY6H-3 ADVANCE WARNING SIGN SPACING (ENGLISH)

				_ (,	
	DISTANCE BETWEEN SIGNS			SIGN LEGEND		
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*)	350	350	350	1000 FT	AHEAD	
RURAL	500	500	500	1500 FT	1000 FT	
EXPRESSWAY / FREEWAY	1,000	1,500	2,640	1 MILE	1/2 MILE	

* PRECONSTRUCTION POSTED SPEED LIMIT

TABLE NY6H-3 ADVANCE WARNING SIGN SPACING (METRIC)

	DISTANC	E BETWEE	SIGN LEGEND		
ROAD TYPE	A (m)	(m)	C (m)	XX	YY
URBAN (≤30 MPH*)	30	30	30	AHEAD	AHEAD
URBAN (35-40 MPH*)	60	60	60	AHEAD	AHEAD
URBAN (≥45 MPH*)	100	100	100	1000 FT	AHEAD
RURAL	150	150	150	1500 FT	1000 FT
EXPRESSWAY / FREEWAY	300	450	800	1 MILE	1/2 MILE

* PRECONSTRUCTION POSTED SPEED LIMIT

UNBAN:
(MEETS MORE THAN 1 OF THE FOLLOWING CRITERIA) SIDEWALKS, BICYCLE USAGE, CURBING,
CLOSED DRAINAGE SYSTEMS, DRIVEWAY DENSITIES GREATER THAN 24 DRIVEWAYS/MI, MINOR
COMMERCIAL DRIVEWAY DENSITIES OF 10 DRIVEWAYS/MI OR GREATER, MAJOR COMMERCIAL
DRIVEWAYS, NUMEROUS RIGHT OF WAY CONSTRAINTS, HIGH DENSITY OF CROSS STREETS, 85TH
PERCENTILE SPEEDS OF 45 MPH OR LESS.

RURAL: ANY AREA NOT EXHIBITING MORE THAN ONE OF ABOVE CHARACTERISTICS,

EXPRESSWAY:
DIVIDED HIGHWAYS FOR THROUGH TRAFFIC WITH FULL OR PARTIAL CONTROL OF ACCESS AND CENERALLY WITH GRADE SEPARATIONS AT MAJOR CROSSROADS.

FREEWAYS/NIERSTATE LOCAL OR INTERREGIONAL HIGH-SPEED, DIVIDED, HIGH-VOLUME FACILITIES WITH FULL OR PARTIAL CONTROL OF ACCESS.

WORK DURATION DEFINITIONS

LONG-TERM STATIONARY IS WORK THAT OCCUPIES A LOCATION MORE THAN 3 CONSECUTIVE DAYS

INTERMEDIATE-TERM STATIONARY IS WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.

SHORT-TERM STATIONARY IS DAYTIME WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR WITHIN A SINGLE DAYLIGHT PERIOD.

SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.

MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

TABLE 6C-2 LONGITUDINAL BUFFER SPACE

PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	DISTANCE
25	155 FT
30	200 FT
35	250 FT
40	305 FT
45	360 FT
50	425 FT
55	495 FT
60	570 FT
65	645 FT

TABLE 6C-3 TAPER LENGTH CRITERIA FOR TEMP. TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)		
MERGING TAPER	L		
SHIFTING TAPER	L/2		
SHOULDER TAPER	L/3		
ONE-LANE, TWO-WAY TRAFFIC TAPER	100 FT MAXIMUM		
DOWNSTREAM TAPER	100 FT PER LANE		

1			
I	TABLE 6H	-4 FORMULAS FOR D	DETERMINING TAPER LENGTHS
I	SPEED LIMIT (S) (MPH)	TAPER LENGTH (L) (FEET)	L = TAPER LENGTH
	(40 MPH) OR LESS	L = WS ² /60	W = WIDTH OF OFFSET (FT) S = PRE CONSTRUCTION POSTED
ı	/AS MDU)		SPEED LIMIT (MPH)

STANDARD TAPER LENGTHS

L = WS

OR MORE

LATERAL SHIFT OF TRAFFIC FLOW PATH	TEMPORARY TRAFFIC CONTROL ZONE POSTED SPEED LIMIT										
	(20 MPH)	(25 MPH)	(30 MPH)	(35 MPH)	(40 MPH)	(45 MPH)	(50 MPH)	(55 MPH)	(60 MPH)	(65 MPH)	(70 MPH
4	30	45	60	85	110	180	200	220	240	260	280
5	35	55	75	105	135	225	250	275	300	325	350
6	40	65	90	125	160	270	300	330	360	390	420
7	50	75	105	145	190	315	350	385	420	455	490
8	55	85	120	165	215	360	400	440	480	520	560
9	60	95	135	185	240	405	450	495	540	585	630
10	70	105	150	205	270	450	500	550	600	650	700
11	75	115	165	225	295	495	550	605	660	715	770
12	80	125	180	245	320	540	600	660	720	780	840

BARRIER VEHICLE USE REQUIREMENTS (LONG TERM, INTERMEDIATE TERM, AND SHORT TERM STATIONARY CLOSURES)

		USE REQUIREMENTS 4,5				
CLOSURE TYPE	EXPOSURE CONDITION 1	FREEWAY	NON-FREEWAY (PRECONSTRUCTION POSTED SPEED LIMIT)			
		FRECWAT	≥ 45 MPH	35-40 MPH	≤ 30 MPH	
	WORKERS ON FOOT OR IN VEHICLES EXPOSED TO TRAFFIC	REQUIRED ³	REQUIRED ³	REQUIRED ³	OPTIONAL	
LANE CLOSURE	NON-TRAVERSABLE HAZARD (IE. EQUIPMENT, MATERIALS, EXCAVATION) ONLY NO WORKERS EXPOSED	REQUIRED ³	REQUIRED ³	OPTIONAL ²	OPTIONAL	
	WORKERS ON FOOT OR IN VEHICLES EXPOSED TO TRAFFIC	REQUIRED ³	REQUIRED ³	OPTIONAL ²	OPTIONAL	
SHOULDER CLOSURE	NON-TRAVERSABLE HAZARD (IE. EQUIPMENT, MATERIALS, EXCAVATION) ONLY NO WORKERS EXPOSED	REQUIRED ³	OPTIONAL ²	OPTIONAL ²	OPTIONAL	

- 1. THE EXPOSURE CONDITIONS DESCRIBED IN TABLE NYI-A ASSUMES THERE IS NO POSITIVE PROTECTION (TEMPORARY TRAFFIC BARRIER) PRESENT. WHERE WORKERS OR HAZARDS ARE PROTECTED BY A TEMPORARY TRAFFIC BARRIER, BARRIER VEHICLES ARE NOT REQUIRED.
- 2. WHERE THE REQUIREMENT IS "OPTIONAL", EITHER A BARRIER VEHICLE OR THE STANDARD LONGITUDINAL BUFFER SPACE (TABLE 6C-2)
- 3. REQUIREMENTS SHALL INCLUDE PROVIDING A SEPARATE BARRIER VEHICLE FOR EACH CLOSED LANE AND EACH CLOSED PAVED SHOULDER 8' OR GREATER IN WIDTH. IF THE WORK SPACE MOVES WITHIN THE STATIONARY CLOSURE, THE BARRIER VEHICLE SHALL BE REPOSITIONED ACCORDINGLY. BARRIER VEHICLES PROTECTING NON—TRANSVERSABLE HAZARDS SHALL REMAIN IN PLACE DURING BOTH WORKING AND NON—WORKING HOURS UNTIL THE HAZARD NO LONGER EXISTS, EXCEPTIONS TO THESE REQUIREMENTS MAY BE MADE, AS APPROVED BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE WHERE BARRIER VEHICLE PLACEMENT WOULD BE INEFFECTIVE OR WOULD INTERFERE WITH
- 4. BARRIER VEHICLES ARE NOT REQUIRED FOR MILLING AND/OR PAVING OPERATIONS, BUT THE STANDARD LONGITUDINAL BUFFER SPACE (TABLE 6C-2) SHALL BE PROVIDED.
- 5. BARRIER VEHICLES ARE NOT REQUIRED FOR FLAGGING OPERATIONS, BUT THE STANDARD LONGITUDINAL BUFFER SPACE (TABLEGC-2) SHALL

PLACEMEN		E NY2-A E FOR BA	rrier veh	HICLES		
PRECONSTRUCTION		PLACEMENT DISTANCE (FT.)				
POSTED	BARRIER VEHICLES*					
SPEED LIMIT (MPH)	(18000	LBS.)	(24000 LBS.)			
(MFII)	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM		
> 55	100 FT.	200 FT.	100 FT,	200 FT,		
45 - 55	100 FT.	200 FT.	85 FT.	165 FT.		
< 45	85 FT.	165 FT.	50 FT.	100 FT-		

* AS DEFINED IN NYSDOT STANDARD SPECIFICATION 619:BARRIER VEHICLE - VEHICLE USED FOR STATIONARY SHOULDER CLOSURES, LANE CLOSURES, AND OTHER STATIONARY WORK ZONES. MINIMUM DISTANCE SHOWN REFLECTS THE ACTUAL ROLL AHEAD DISTANCE FROM MANUFACTURER.

Greenman-Pedersen, Engineering and Construction Ser

BUFFALO (716) 633-4844





WZTC-1

