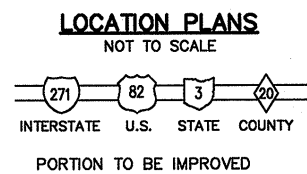
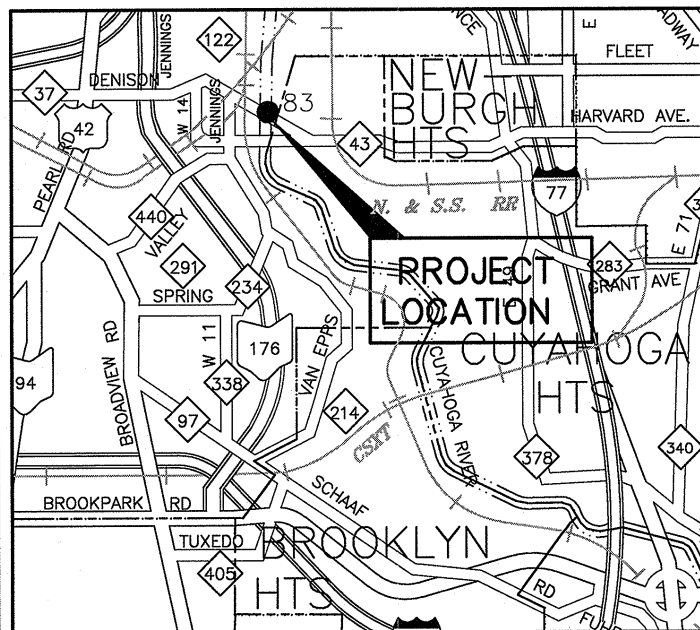
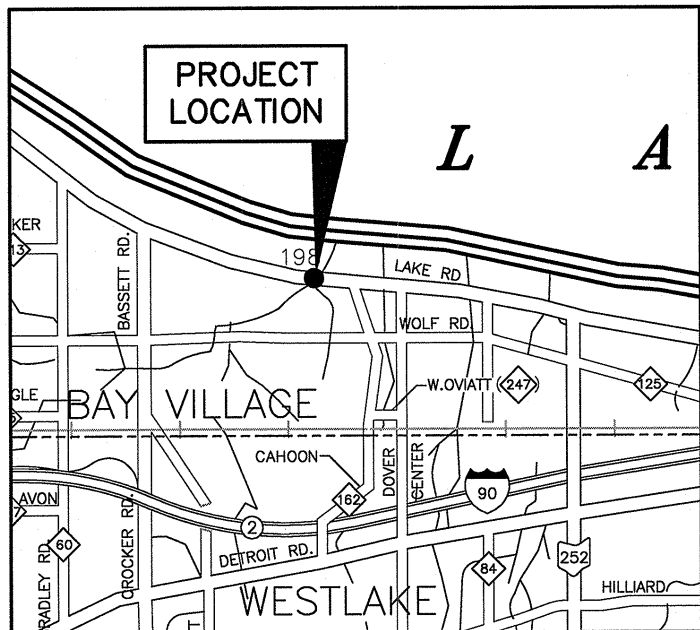
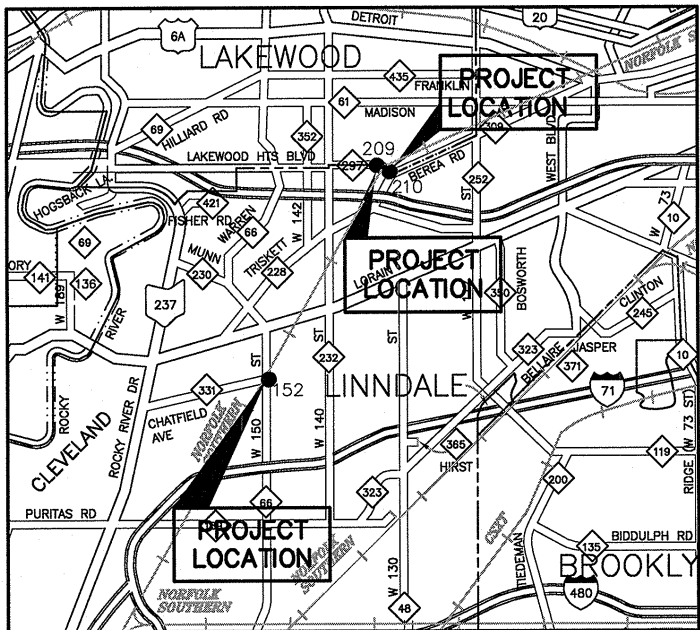


Drawing Name: 0001\_North Title Sheet.dwg Plotting Scale: 1/1



LOCATION PLANS  
NOT TO SCALE  
INTERSTATE U.S. STATE COUNTY  
PORTION TO BE IMPROVED

# CUYAHOGA COUNTY

## NORTH BRIDGE DECK SEALING PROGRAM

DENISON-HARVARD ROAD (C.R. 37 & 43) BRIDGE No. 83  
CITY OF CLEVELAND  
VILLAGE OF CUYAHOGA HEIGHTS

LAKE ROAD (U.S. ROUTE 6) BRIDGE No. 198  
CITY OF BAY VILLAGE

LAKEWOOD HEIGHTS BLVD. (C.R. 297) BRIDGE NOS. 209, 210  
CITIES OF CLEVELAND AND LAKEWOOD

WEST 150TH STREET (C.R. 66) BRIDGE No. 152  
CITY OF CLEVELAND

STATE OF OHIO

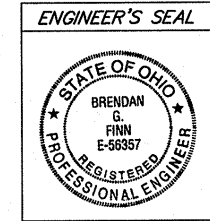
### INDEX OF SHEETS

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DENISON-HARVARD ROAD BR. NO. 83	6
LAKE ROAD BR. NO. 198	7
LAKEWOOD HTS. BLVD. BR. NO. 209	8
LAKEWOOD HTS. BLVD. BR. NO. 210	9
WEST 150TH STREET BR. NO. 152	10

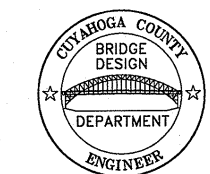
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ORDINANCE OF CONSENT NO. \_\_\_\_\_ N/A  
PASSED \_\_\_\_\_ N/A

UNDERGROUND UTILITIES  
TWO (2) WORKING DAYS  
**BEFORE YOU DIG**  
CALL 1-800-362-2764 (TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE  
NON MEMBERS  
MUST BE CALLED DIRECTLY  
- AND -  
CALL 1-800-925-0988 (TOLL FREE)  
OHIO OIL & GAS PRODUCERS  
UNDERGROUND PROTECTION SERVICE

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE
MT-35.10	4/20/01	TC-41.20	1/19/01				
MT-95.32	9/05/06	TC-52.10	1/19/07			800	1/19/07
MT-95.60	4/19/02	TC-52.20	1/19/07			1047	3/10/04
MT-95.61	4/19/02	TC-71.10	1/19/07			1089	3/10/04
MT-97.10	9/05/06	TC-73.10	1/19/01				
MT-105.10	10/18/02						
MT-105.11	10/18/02						
MT-110.20	10/18/02						
						SPECIAL PROVISIONS	



SIGNED: *Brendan G. Finn*  
DATE: April 9, 2007



2100 SUPERIOR VIADUCT  
CLEVELAND, OHIO 44113  
(216) 348-3800

### PROJECT DESCRIPTION

THE PROPOSED PROJECT CONSISTS OF THE PLACEMENT OF A PENETRATING CONCRETE SEALER TO THE CONCRETE DECKS OF THE FIVE (5) LISTED STRUCTURES.

### EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA 0.0 ACRE  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA 0.0 ACRE  
NOTICE OF INTENT EARTH DISTURBED AREA 0.0 ACRE

### 2005 SPECIFICATIONS

THE STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, SHALL GOVERN THIS IMPROVEMENT EXCEPT WHEN MODIFIED BY THE PLANS, SPECIAL PROVISIONS, SUPPLEMENTAL SPECIFICATIONS OR PROPOSAL NOTES.

ROBERT C. KLAIBER, Jr., P.E., P.S.  
COUNTY ENGINEER

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED *Robert C. Klaiber, Jr.* 4/10/2007  
COUNTY ENGINEER DATE

BOARD OF COMMISSIONERS  
CUYAHOGA COUNTY

*Sam Hadan* 5/10/2007  
COUNTY COMMISSIONER DATE  
*James L. Moore* 5/10/2007  
COUNTY COMMISSIONER DATE  
*Robert J. Jones* 5/10/2007  
COUNTY COMMISSIONER DATE

JOURNAL NO. 294 PAGE - DATE 5/10/2007

RESOLUTION NO. 072009

DESIGN AGENCY  
CUYAHOGA COUNTY ENGINEER  
BRIDGE DESIGN DEPARTMENT

DATE  
REVIEWED BGF  
CHECKED JDH  
DESIGNED/DRAWN DMH/BAH  
STRUCTURE FILE NOS. 183244 180426 183043 183045

TITLE SHEET

DENISON-HARVARD ROAD (C.R. 37 & 43)  
LAKE ROAD (U.S. ROUTE 6)  
LAKEWOOD HTS. BLVD (C.R. 297)  
W 150TH ST. (C.R. 66)

Drawing Name: 0002\_North\_General\_Notes.dwg Plotting Scale: 1/1

# GENERAL NOTES

## DESIGN SPECIFICATIONS, LOADING & STRESSES

This set of plans is for crack sealing/healing of the concrete decks on all structures. No strengthening, structural steel repair or concrete repair work is included.

## DECK PROTECTION METHOD

Gravity—fed Resin

## EXISTING PLANS

The original design plans for these structures are available at the Cuyahoga County Engineer's Office located at 2100 Superior Viaduct, Cleveland, Ohio.

The Contractor should become familiar with these plans prior to bidding this project.

## EXISTING STRUCTURE VERIFICATION

Details and dimensions shown on these plans pertaining to the existing structures have been obtained from plans of the existing structures and from field observations and measurements. Consequently, they are indicative of the existing structures and the proposed work, but they shall be considered tentative and approximate. The Contractor is referred to CMS Sections 102.05 and 105.02 for details.

Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a prebid examination of the existing structures by the Contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field.

## GENERAL PROVISIONS

All references to the General Provisions (Section 100) of the Ohio Department of Transportation's Construction and Material Specifications (ODOT CMS) that are cited in the itemized specifications, supplemental specifications, proposal notes, plans or elsewhere in the contract documents shall, for the purpose of this contract be considered and taken as meaning the Cuyahoga County Engineer's General Provisions as contained in the "Cuyahoga County Engineer's Specification Booklet". The subsection numbers and topics used in the County's General Provisions correspond to those contained in the ODOT CMS.

## DEFINITIONS AND TERMS

Wherever there appears, in the standard specifications, supplemental specifications or proposal notes, the term "The State", "Director of Transportation", "Department", "Engineer", or any other terms designating any representative or employee of the state or its department of transportation, such term shall, for the purpose of this contract, be considered and taken as meaning and designating the respective board officer or employee of Cuyahoga County whose duty of function is to deal with the subject matter in connection with which such term is used specifically:

The State – shall mean Cuyahoga County

Department – shall mean the Cuyahoga County Engineer's Office

Director – shall mean the Cuyahoga County Engineer, his deputies or any engineer designated as the County Engineer's representative

Engineer – shall mean the duly authorized agent or representative of the Cuyahoga County Engineer's Office acting within the scope of his/her authority for the purposes of construction engineering and administration of the contract

Laboratory – shall mean any laboratory designated by the County

## WORK ON MORE THAN ONE STRUCTURE

This project includes work on more than one (1) structure. The Contractor may work on two (2) or more structures simultaneously subject to the specific written approval of the Engineer. The following requirements apply to this contract:

- The progress schedule required in 108.02 shall also show the Contractor's plan to carry out the work required on each structure individually and give start and completion dates for each structure.
- The requirements of 108.03 shall apply specifically to each structure.
- The requirements of 108.04 shall apply specifically to each structure. In determining whether the Contractor has complied with the requirement to assure the least interference with traffic, the Engineer shall additionally take into consideration such factors as:
  - The length and duration of lane closures;
  - The rideability of the newly sealed bridge deck;
  - Access to driveways;
  - Unnecessary periods of inactivity by the Contractor;
  - Whether the opening of work on a second structure will be to the prejudice or detriment of work already begun on another structure.
- The requirements of 108.05 shall apply specifically to each structure. The Contractor shall at all times employ sufficient labor and equipment for prosecuting the several classes of work to full completion in the manner and time required by these specifications.
- Liquidated damages, based on the total contract as specified in 108.07, shall apply for each calendar day that a specified structure remains uncompleted after the structure's specific completion date, as determined by the Contractor's originally approved progress schedule. Due account will be taken of any adjustment of the specific structure's completion date granted under 108.06.

## RIGHT-OF-WAY

All work shall be performed within existing Right-of-Way.

## WORK LIMITS

The work limits for each structure are defined on the individual Site Plan sheets. The work limits are for physical construction only. The installation and operation (including erection, maintenance and removal) of all temporary traffic control and temporary traffic control devices required by these plans, except where otherwise noted, shall be provided by the Contractor whether inside or outside these work limits.

## CONSTRUCTION TRAFFIC

All construction traffic shall use acceptable truck routes to access the construction area. Use of local residential streets is strictly prohibited unless allowed in writing by the local law enforcement authority.

## NOTIFICATION

The Contractor shall notify in writing the following agencies at least 72 hours before implementing any substantial change in traffic patterns or the closing of any street to traffic:

The Cuyahoga County Engineer – Public Information Office and the Bridge Maintenance and Inspection Department.

The Greater Cleveland Regional Transit Authority;

The Cities of Cleveland, Bay Village, Lakewood, and the Village of Cuyahoga Heights Boards of Education;

The Police, Fire, and Service Departments for the Cities of Cleveland, Bay Village, Lakewood, and the Village of Cuyahoga Heights.

The City of Cleveland Commissioner of Traffic Engineering, Commissioner of Engineering and Construction, Commissioner of Emergency Medical Services, Police Traffic Commissioner, and Fire Chief.

## FIELD OFFICE

There is no pay quantity provided for a field office in these plans.

## CELLULAR PHONE

The Contractor shall provide two (2) cellular phones for use by Cuyahoga County Engineers, Supervisors and/or Inspectors.

Payment for all material, labor and equipment, installation and maintenance of the phones shall be made at the contract bid price for Item Special – Cellular Phone.

## CONTINGENCY QUANTITIES

The Contractor shall not order materials or perform work for items designated by plan note to be used "as directed by the engineer" or "contingency" unless authorized by the Engineer. The actual work locations and quantities used for such items shall be incorporated into the final subsidiary agreement governing completion of this project.

DESIGN AGENCY  
CUYAHOGA COUNTY ENGINEER  
BRIDGE DESIGN DEPARTMENT

DATE	1830473
REVIEWED	BGF
CHECKED	JDH
DESIGNED/DRAWN	DMW/BAH
REVISED	1830481 1833405

GENERAL NOTES

DEVISON—HARVARD ROAD (C.R. 37 & 43)  
LAKE ROAD (U.S. ROUTE 6)  
LAKEWOOD HTS. BLVD (C.R. 297) W 150TH ST. (C.R. 66)

2  
10

Drawing Name: 0003\_South General Notes.dwg Plotting Scale: 1/1

ITEM 614 – MAINTAINING TRAFFIC

The current average daily traffic (ADT) for each bridge structure are as follows:

DENISON–HARVARD ROAD BR. No. 83	ADT = 10000	Trucks = 16%
LAKE ROAD BR. No. 198	ADT = 9500	Trucks = 2%
LAKEWOOD HTS. BLVD BR. No. 209	ADT = 11000	Trucks = 4%
LAKEWOOD HTS. BLVD BR. No. 210	ADT = 11000	Trucks = 4%
W 150TH ST. BR. No. 152	ADT = 36600	Trucks = 3%

Due to the high percentage of truck traffic on Harvard–Denison Road Bridge No. 83, and the high overall ADT on West 150th Street Bridge No.152, the Contractor may find it preferable to work on these structures either at night or on weekends. If so, then the Contractor shall seek approval for such work from the municipality in accordance with any local ordinance(s) governing such work. It is assumed that all work on the remaining structures can be performed during normal working hours.

Floodlighting of the work site for operations conducted during night time periods shall be accomplished so that the lights do not cause glare to the drivers on the roadway. If glare is detected, the light placement and shielding shall be adjusted to the satisfaction of the Engineer before work proceeds.

No lane closures in the rush hour direction of traffic flow will be permitted weekdays between 6:00 am to 8:00 am and 5:00 pm to 7:00 pm. No work shall be performed, and all existing lanes shall be open to traffic during the following designated holidays or events:

New Years Day	(January 1)
Memorial Day	(Last Monday in May)
Independence Day	(July 4)
Labor Day	(First Monday in September)
Thanksgiving Day	(Fourth Thursday in November)
Christmas Day	(December 25)
(other holiday or event)	

The period of time that the lanes are to be open depends on the day of the week on which the holiday or event falls. The following schedule shall be used to determine this period:

Sunday	12:00N Friday	Through	12:00N Monday
Monday	12:00N Friday	Through	12:00N Tuesday
Tuesday	12:00N Monday	Through	12:00N Wednesday
Wednesday	12:00N Tuesday	Through	12:00N Thursday
Thursday	12:00N Wednesday	Through	12:00N Monday
Friday	12:00N Thursday	Through	12:00N Monday
Saturday	12:00N Friday	Through	12:00N Monday

Through traffic shall be maintained at all times in accordance with Section 614 and the details and notes on standard construction drawings MT–95.32, MT–95.60, MT–95.61 and MT–97.10. For a structure having only two (2) lanes of travel, one (1) lane having a minimum width of ten feet (10’–0”) shall be open to traffic at all times during the hours permitted. For structures with more than two (2) lanes of travel, a minimum of one (1) lane (ten feet (10’–0”) minimum width) in each direction shall be open to traffic at all times during the hours permitted. The standard drawings listed above and on the title sheet can be followed and/or adapted for most locations.

For each structure, the Contractor shall develop a Maintenance of Traffic Plan (including a plan drawing) and present it to the Engineer for approval before beginning work at each specific structure. The plan shall conform to the Ohio Manual of Uniform Traffic Control Devices, latest revision, the referenced standard construction drawings, the above permitted lane closure times, and the ODOT Specifications Manual. No work shall begin on a particular structure until the Maintenance of Traffic Plan for that structure has been approved by the Engineer.

Immediately prior to the start of any work, the Contractor shall install construction warning signs OC–4 or OC–6 facing traffic entering the project, and OC–8 signs facing traffic leaving the project; their placement shall be as shown in the Ohio Manual of Uniform Traffic Control Devices (Figure C–19). Additional OC–4 and/or OC–6 signs shall be placed after each major intersection, in both directions. Also, an OW–128 sign shall be placed on the approaches to the project a minimum of 500 feet in advance of the work limits. If determined necessary by the Engineer, additional OC–4, OC–6 and OC–8 signs shall be appropriately placed on the major intersecting street(s) in the immediate vicinity of the work. The traffic control devices shown on the standard construction drawings shall be in addition to those indicated above.

The Contractor shall divert traffic from normal channels by using plastic drums and any temporary traffic signs, temporary pavement markings, flashing arrow panels, etc. necessary for the completion of the work. If approved by the Engineer, 42” tall cones can be used in place of the plastic drums as specified on the standard drawings. All traffic control devices used shall conform to the Ohio Manual of Uniform Traffic Control Devices for streets and highways, and shall be furnished, erected, maintained and removed by the Contractor.

Existing traffic control devices (signs and/or traffic signals) located within the work area which are required for interim traffic control shall be relocated to points approved by the Engineer. Existing traffic control devices not required for interim traffic control but, in the opinion of the Engineer, may conflict with the Maintenance of Traffic Plan shall be covered or temorarily removed during work operations. All shall be restored to their original condition upon completion of the required work.

All access to abutting property shall be maintained in a safe and satisfactory manner. The Contractor shall also maintain adequate pedestrian walks at all intersections, including asphalt concrete walks, where directed by the Engineer. The length and duration of lane closures and/or traffic restrictions shall be at the approval of the Engineer. The intent is to minimize the impact to the traveling public. Lane closures or restrictions in which no work is anticipated within a reasonable time frame, as determined by the Engineer, shall not be permitted. The level of utilization of maintenance of traffic devices shall be commensurate with the work in progress.

Whenever any work is being done over a traveled lane or shoulder, the Contractor shall supply sufficient safety equipment as approved by the Cuyahoga County Engineer or his representative to protect the traveling public from any construction debris, overspray or the like. If traveled lanes under any structure are to be closed for reasons of safety, the method and time of closure must be approved prior to implementation. Personal cars shall not be parked within the given Work Limits.

If, during the project, the Engineer determines that the approved Maintenance of Traffic Plan is not performing as desired, the work shall be suspended until the problems are resolved and the Maintenance of Traffic Plan is revised to the satisfaction of the Engineer. Any costs or delays incurred as a result of the failure of the approved Maintenance of Traffic Plan to perform to the satisfaction of the Engineer shall be the full responsibility of the Contractor.

If, in the opinion of the Engineer, the Contractor fails to comply with these requirements or the provisions of the approved Maintenance of Traffic Plan, the Engineer shall suspend work until all requirements are complied with. Any costs or delays incurred as a result of the failure shall be the full responsibility of the Contractor.

During non–working hours, all lanes shall be in full operation with all traffic control signs and road construction ahead signs (except OW–128), removed or covered and all channelizing devices removed from the pavement surfaces. Channelizing devices may be stored or deployed temporarily adjacent to the shoulder to minimize the nightly traffic control setup time.

No extensions of time shall be granted for delays in material deliveries, unless such delays are industry–wide, or for labor strikes, unless such strikes are area–wide.

Should the Contractor fail to meet any of these requirements, the Contractor may be assessed liquidated damages in accordance with 108.07.

Payment for all the items required to maintain traffic in accordance with these requirements shall be included in the lump sum price bid for Item 614 – Maintaining Traffic.

ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR

In addition to the requirements of 614 and the latest edition of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD), and if approved by the Engineer, a uniformed law enforcement officer and official patrol car with working top mounted emergency flashing lights, shall be provided for controlling traffic for the following tasks:

- 1) For lane closures: during initial set–up periods, tear down periods, substantial shifts of closure point, or where new lane closures are initiated.
- 2) During the entire advanced preparation and closure sequence, where complete blockage of traffic is required.
- 3) During traffic signal installation.

The law enforcement officers (LEOs) are considered to be employed by the Contractor and the Contractor shall be responsible for their actions. Although they are employed by the Contractor, the Project Engineer shall have control over their placement. Any Patrol car utilized shall be a public safety vehicle as required by the Ohio Revised Code.

The hours paid shall include minimum show–up time required by the law enforcement agency involved. The Contractor shall make arrangements for these services with:

City of Bay Village Police Department 350 Dover Center Road Phone: (440) 871–1234	City of Cleveland Division of Police 1300 Ontario Street Phone: (216) 621–1234	City of Lakewood Police Department 12650 Detroit Ave. Phone: (216) 521–6773
Village of Cuyahoga Heights Police Department 5480 Grant Ave. Phone: (216) 883–6800		

Law enforcement officers required by the traffic maintenance tasks above shall be paid for on a unit price (hourly) basis under Item 614 – Law Enforcement Officer with Patrol Car. The following contingency quantity has been included for use as directed by the Engineer:

Item 614 – Law Enforcement Officer with Patrol Car	70 Hours
--	----------

Law enforcement officers (LEOs) should not be used where the OMUTCD intends that flaggers be used. However, if the Contractor wishes to utilize LEOs for flagging and traffic control other than for that required in the plans, he may do so at his own expense. Payment for utilizing LEOs in this manner will be included under Item 614 – Maintaining Traffic.

MAINTENANCE OF TRAFFIC STANDARD CONSTRUCTION DRAWINGS

Reference to Item 740.05, Type C and Item 740.05, Type B on the standard construction drawings or elsewhere in the plans shall be considered to read as reference to Item 740.06, Type I and Item 740.06, Type II, respectively.

Drawing Name: 0004\_North General Notes.dwg Plotting Scale: 1/1

# GENERAL NOTES

## INSTALLATION OF PAVEMENT MARKINGS

The Contractor may reduce the number of through traffic lanes by 50%, or as directed by the Engineer, in order to remove pavement markings, or to install temporary or permanent pavement markings.

All temporary pavement markings and signs required for a particular lane closure or traffic pattern shall be installed on a single work day, and the corresponding traffic pattern, as detailed in the approved Maintenance of Traffic Plan, shall be implemented immediately.

Although permanent pavement markings are to be installed after proper sealing of the concrete bridge deck(s), pavement marking plan sheets have not been included in the contract plans. In lieu of a pavement marking plan, the Contractor shall, prior to the start of work on any structure, prepare an inventory and log of all existing pavement markings, including lane widths, no passing zones, channelizations, etc. for use in restoring the markings at the end of the work on the structure. He shall deliver two (2) copies of the inventory and log to the Engineer before beginning any pavement marking removals.

The Contractor shall be responsible for the layout of the various final pavement markings, including location of no passing zones, center lines, lane lines, channelizing lines, lane arrows, etc. on the newly sealed concrete deck surface(s), in accordance with Section 641.06.

The final pavement markings shall be placed as soon as the sealer has properly cured. The final pavement markings shall be restored to their original patterns and locations unless directed otherwise by the Engineer.

The cost of logging and pre-marking shall be included in the price bid for the various pavement marking items. No separate payment will be made.

All pavement marking quantities are included in the General Summary & Estimated Quantities table, sheet 5/10, as estimates of the type and quantity of the various pavement markings to be installed under Item 642. Payment shall be based on the measurements of the final quantities installed.

## ITEM 512 – TREATING CONCRETE BRIDGE DECKS WITH GRAVITY–FED RESIN. AS PER PLAN

All work and material shall be in accordance with sections 512.02 and 512.06 of the ODOT CMS, except as modified below.

The material used for treating the concrete bridge decks shall be:

MARK 135 SAFE–T–SEAL	DURAGUARD HM SEALER	DURAL 335 FLOWABLE CRACK SEALER
Poly–Carb	ChemMasters	Tamms Industries, Co.
33095 Bainbridge Road	300 Edwards Street	7405 Production Drive
Salon, OH 44139	Madison, OH 44057–3112	Mentor, OH 44060
(440) 248–1223	(440) 428–2105	1–800–862–2667

The Cuyahoga County Engineer’s Bridge Maintenance and Inspection Department shall be notified at least 72 hours prior to any deck surface preparation work commencing. The Bridge Maintenance and Inspection Department may elect to have its representative on site to witness the surface preparation and/or the deck sealing operations.

No extra payment will be made for the removal of the existing pavement markings.  
All expansion joints shall be masked during the application process.  
No standing water shall be present during application of the gravity–fed resin.

The entire sealed area of the bridge deck shall have sand broadcast by mechanical means at the rate specified in section 512.06C of the ODOT CMS. The sand shall be a uniformly graded aggregate conforming to the quality requirements of Section 703 of the ODOT CMS and shall conform to the following limits for grading:

SIEVE SIZE	% PASSING MAX.
4.5 mm (No. 4)	100
2.36 mm (No. 8)	90 – 100
850 um (No. 20)	5 – 15
300um (No. 50)	0 – 5

It is the intention of this specification to allow the use of commercially available blast sands applied by common lawn broadcast type seeder/spreader. Sand shall be placed between 45 to 75 minutes behind the resin spreading front depending on air and surface temperature. The Contractor shall provide timely and sufficient broadcast of the aggregate to insure that the skid resistance on the deck does not drop below 40 after curing of the resin. If the surface contains large, deep cracks, the low viscosity liquid could run completely through the concrete slab. In these areas, a second coat will be required after the first coat has started to cure.

Before the resin hardens, imperfections or spalls with standing liquid shall be filled with commercial quality concrete or sandblast sand, and finished to a uniform surface. The sand shall have a maximum moisture content of 0.5 of the percent of absorption when treated in accordance to California Test 226.

Cleaning and flushing of equipment, tools, etc. shall be done with an appropriate solvent, as approved by the Engineer, in such a manner as to minimize personal and environmental hazards.

Payment for this item shall be made under:

ITEM	UNIT	DESCRIPTION
512	SQ YD	Treating Concrete Bridge Decks with Gravity–Fed Resin, As Per Plan

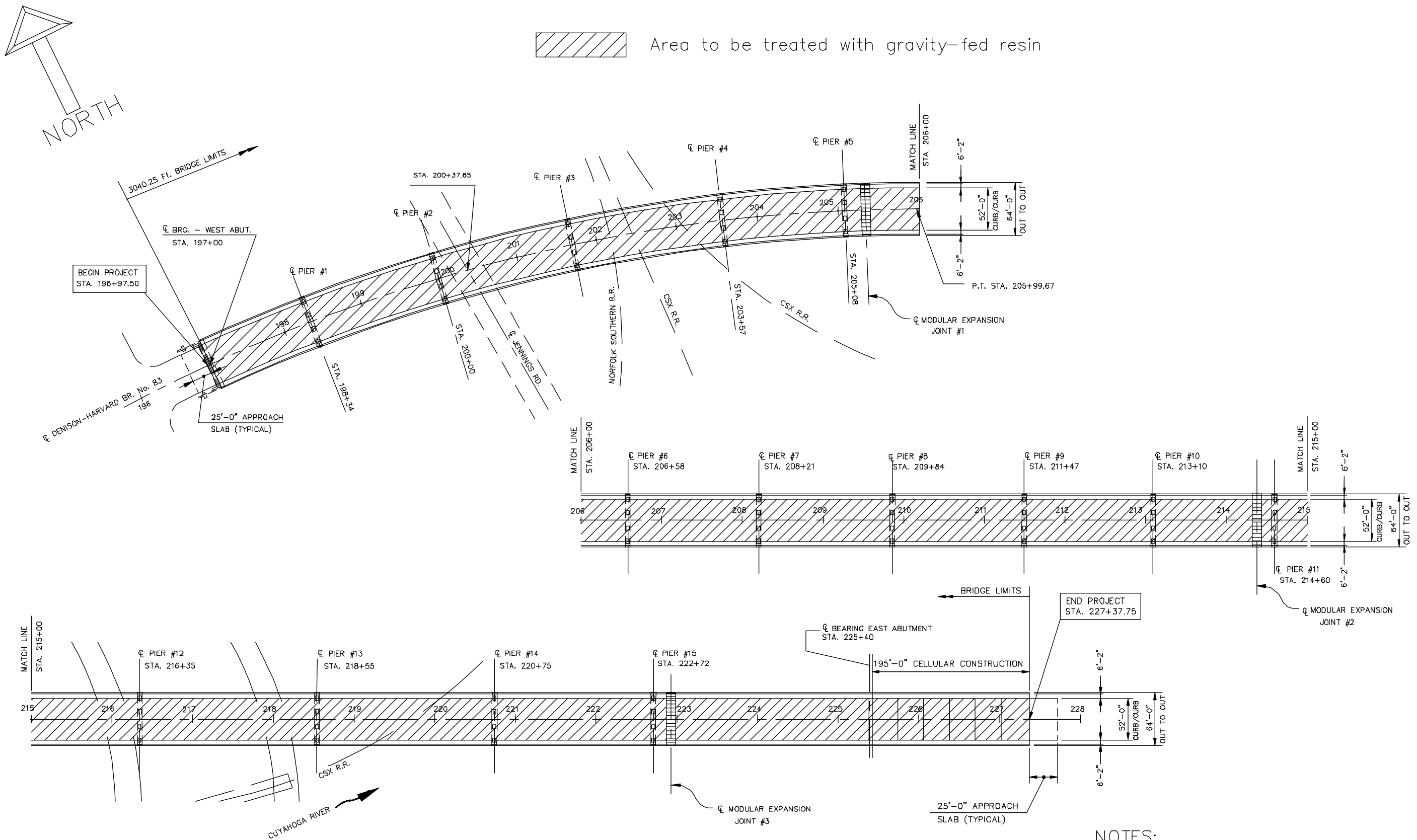
DESIGNED/DRAWN	CHECKED	REVIEWED	DATE
DMW/BAH	JDH	BGF	180406 180406 180406 180406
REVISED	STRUCTURE FILE NOS.	180406 180406 180406 180406	

## GENERAL NOTES

DENISON–HARVARD ROAD (C.R. 37 & 43)  
LAKE ROAD (U.S. ROUTE 6)  
LAKEWOOD HTS. BLVD (C.R. 297)  
W 150TH ST. (C.R. 66)



Drawing Name: 0006\_083\_Denison-Harvard.dwg Plotting Scale: 1/1



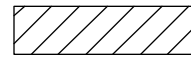
## PLAN

ITEM 512 — TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN, AS PER PLAN

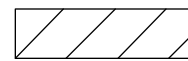
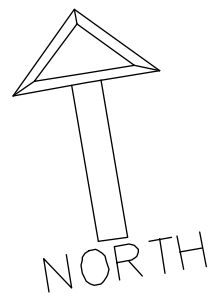
Calculation: STA. 196+97.50 to STA. 227+37.75 = 3040.25 Ft  
 $3040.25 \text{ Ft} \times 52 \text{ Ft} \times (1 \text{ Sq Yd} / 9 \text{ Sq Ft}) = \underline{17,566 \text{ Sq Yd}}$

### NOTES:

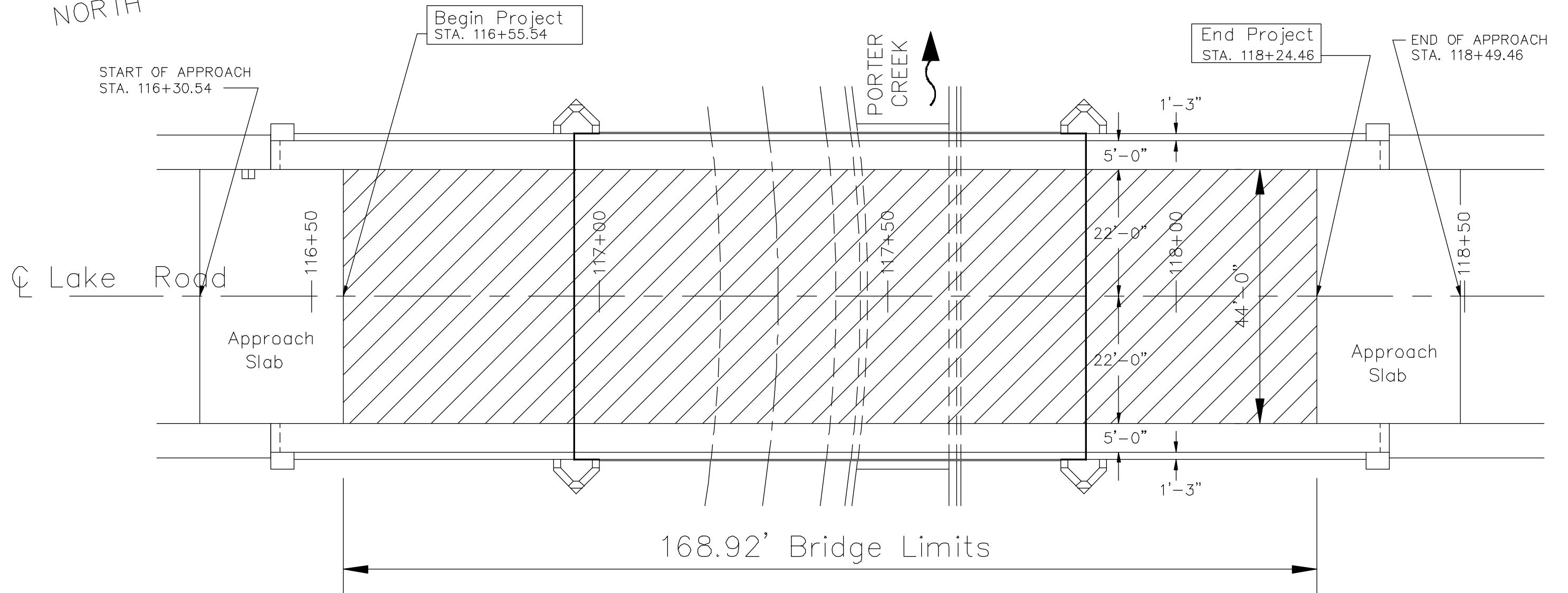
1. Calculation quantities shown are carried to the General Summary & Estimated Quantities table, Sheet 5/10.
2. For General Notes, see Sheets 2/10 — 4/10.
3. For Pavement Marking calculations, see Sheet 5/10.



Area to be treated with gravity-fed resin



Area to be treated with gravity-fed resin



## PLAN

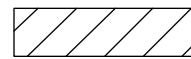
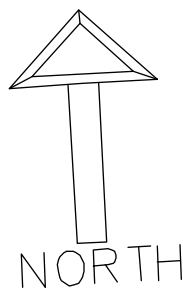
### NOTES:

1. Calculation quantities shown are carried to the General Summary & Estimated Quantities table, Sheet 5/10.
2. For General Notes, see Sheets 2/10 - 4/10.
3. For Pavement Marking calculations, see Sheet 5/10.

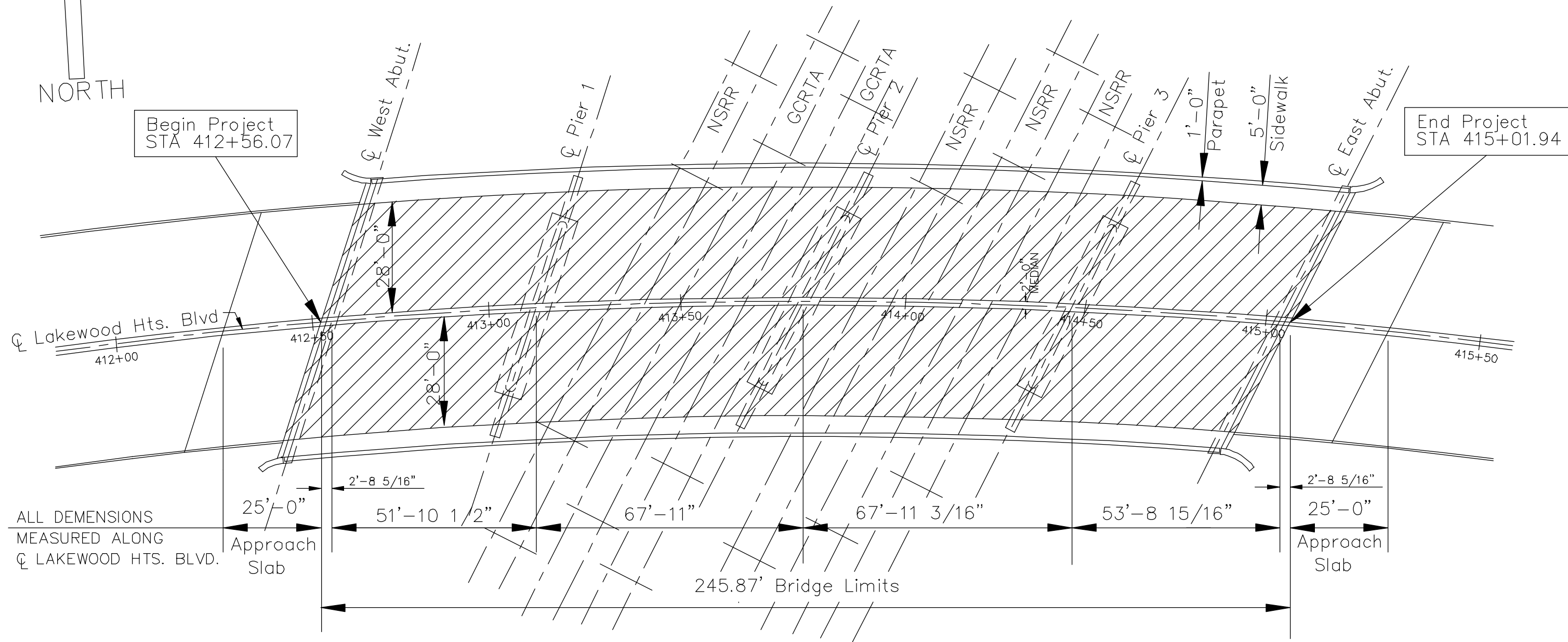
ITEM 512 - TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN, AS PER PLAN

Calculation: STA. 116+55.54 to STA. 118+24.46 = 168.92 Ft

$168.94 \text{ Ft} \times 44 \text{ Ft} \times (1 \text{ Sq Yd} / 9 \text{ Sq Ft}) = \underline{826 \text{ Sq Yd}}$



Area to be treated with gravity-fed resin



## PLAN

### NOTES:

1. Calculation quantities shown are carried to the General Summary & Estimated Quantities table, Sheet 5/10.
2. For General Notes, see Sheets 2/10 - 4/10.
3. For Pavement Marking calculations, see Sheet 5/10.

ITEM 512 - TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN, AS PER PLAN

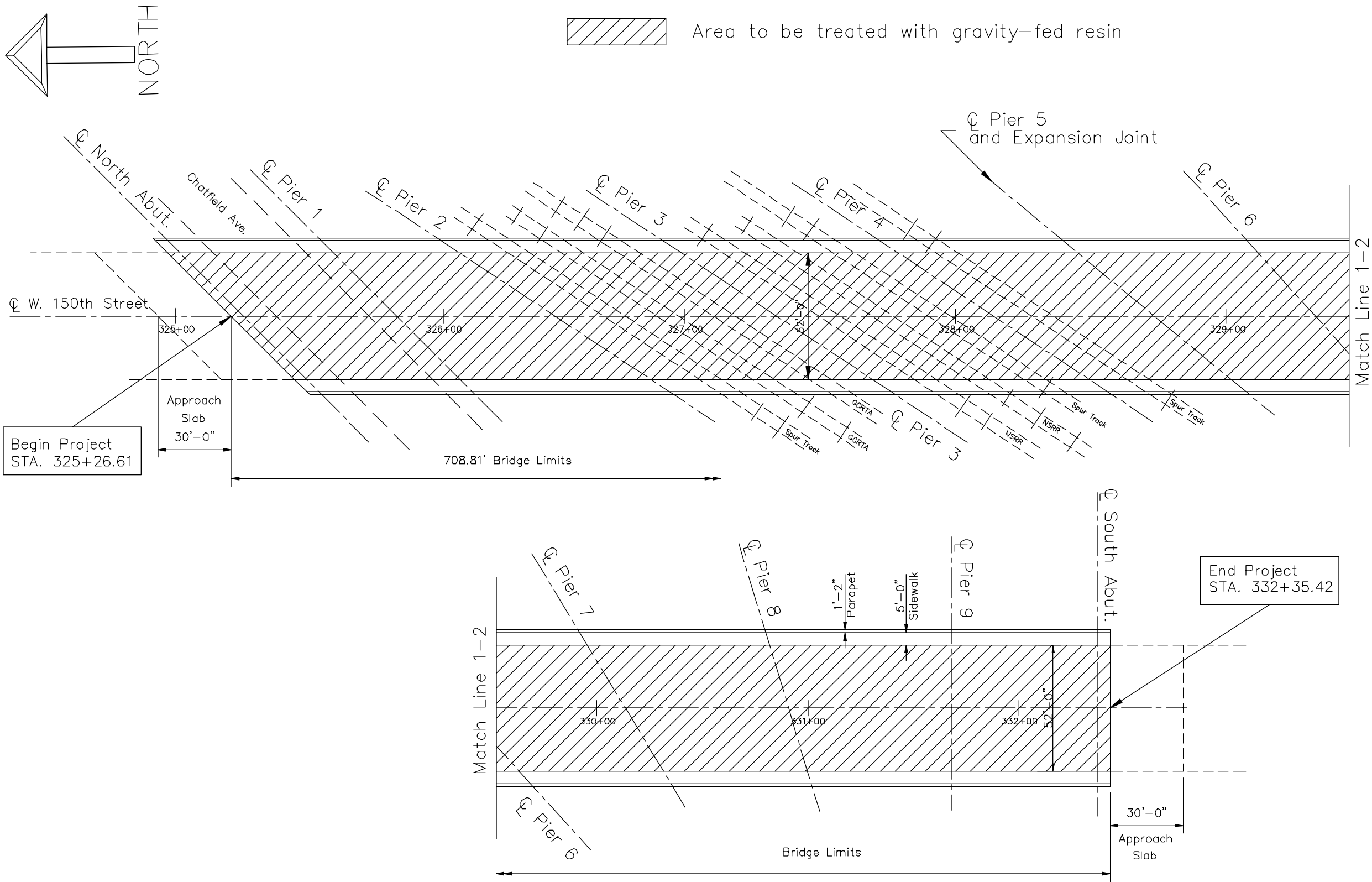
Calculation: STA. 412+56.07 to STA. 415+01.94 = 245.87 Ft

$$245.87 \text{ Ft} \times (2 \times 28 \text{ Ft}) \times (1 \text{ Sq Yd} / 9 \text{ Sq Ft}) = \underline{1530 \text{ Sq Yd}}$$





Drawing Name: 0010\_152\_W150th.dwg Plotting Scale: 1/1



# PLAN

ITEM 512 – TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN, AS PER PLAN

Calculation: STA. 325+26.61 to STA. 332+35.42 = 708.81 Ft

$708.81 \text{ Ft} \times 52 \text{ Ft} \times (1 \text{ Sq Yd} / 9 \text{ Sq Ft}) = \underline{4096 \text{ Sq Yd}}$

- NOTES:
1. Calculation quantities shown are carried to the General Summary & Estimated Quantities table, Sheet 5/10.
  2. For General Notes, see Sheets 2/10 – 4/10.
  3. For Pavement Marking calculations, see Sheet 5/10.

DESIGN AGENCY CUYAHOGA COUNTY ENGINEER BRIDGE DESIGN DEPARTMENT	DATE	REVIEWED BGF	STRUCTURE FILE NO. 1833405
	CHECKED JDH	DESIGNED/DRAWN DIMM/BAH	REVISED
SITE PLAN BRIDGE No. 152 NSRR, GORTA and CHATFIELD AVENUE	WEST 150th STREET C.R. 66		
	<div>10 10</div>		