



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

November 5, 2008

USACE Raleigh Regulatory Field Office  
3331 Heritage Trade Drive, Suite 105  
Wake Forest, NC 27857

ATTN: Mr. John Thomas  
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permits 23, 33, and Section 401 Permit**  
for replacement of Bridges 256 & 257 on US 52 over Norfolk Southern Railroad in  
Forsyth County, Federal Aid Project Number NHF-52 (4), State Project No. 8.1622801,  
T.I.P. No. U-2826A.

Debit \$240.00 from WBS No. 34871.1.1.

Dear Sir,

The North Carolina Department of Transportation (NCDOT) proposes to replace bridges 256 and 257 in Forsyth County. There will be 132 feet of permanent surface water impacts and 101 feet of temporary surface water impacts to three unnamed tributaries to Brushy Fork Creek. These impacts occur as a result of the placement of five corrugated steel pipes.

Please see the enclosed copies of the permit drawings, design plans, Ecosystem Enhancement Program (EEP) acceptance letter, and Pre-Construction Notification (PCN) for the above-referenced project. The Categorical Exclusion (CE) was completed for this project in March 2004 and was distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of June 16, 2009 and a review date of April 28, 2009.

**MAILING ADDRESS:**

NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
NATURAL ENVIRONMENT UNIT  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

TELEPHONE: 919-715-1334 or  
919-715-1335

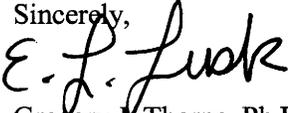
FAX: 919-715-5501

WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

**LOCATION:**

2728 CAPITAL BLVD. SUITE 240  
RALEIGH NC 27604

A copy of this permit application will be posted on the NCDOT Website at: <http://www.ncdot.org/doh/preconstruct/pe/>. If you have any questions or need additional information, please call Deanna Riffey at (919) 715-1409.

Sincerely,  
  
for Gregory J. Thorpe, Ph.D.  
Environmental Management Director, PDEA

W/attachment

Mr. Brian Wrenn, NCDWQ (5 Copies)  
Ms. Marla Chambers, NCWRC  
Ms. Marella Buncick, USFWS

W/o attachment (see website for attachments)

Dr. David Chang, P.E., Hydraulics  
Mr. Mark Staley, Roadside Environmental  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Victor Barbour, Project Services Unit  
Mr. S.P. Ivey, P.E., Division 9 Engineer  
Mr. Kent Boyer, Division 9 Environmental Officer  
Mr. Jay Bennett, P.E., Roadway Design  
Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Art McMillan, P.E., Highway Design  
Mr. Scott McLendon, USACE, Wilmington  
Mr. Todd Jones, NCDOT External Audit Branch  
Ms. Beth Harmon, EEP  
Mr. Ma'ad Hassan, PDEA

**Office Use Only:**

Form Version March 05

**USACE Action ID No.** \_\_\_\_\_ **DWQ No.** \_\_\_\_\_

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

**I. Processing**

1. Check all of the approval(s) requested for this project:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Section 404 Permit              | <input type="checkbox"/> Riparian or Watershed Buffer Rules      |
| <input type="checkbox"/> Section 10 Permit                          | <input type="checkbox"/> Isolated Wetland Permit from DWQ        |
| <input checked="" type="checkbox"/> 401 Water Quality Certification | <input type="checkbox"/> Express 401 Water Quality Certification |

2. Nationwide, Regional or General Permit Number(s) Requested: 23, 33
3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here:
4. If payment into the North Carolina Ecosystem Enhancement Program (NCEEP) is proposed for mitigation of impacts, attach the acceptance letter from NCEEP, complete section VIII, and check here:
5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here:

**II. Applicant Information**

1. Owner/Applicant Information

Name: Gregory J. Thorpe, Ph.D., Environmental Management Director

Mailing Address: North Carolina Department of Transportation  
1598 Mail Service Center, Raleigh, NC 27699

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Telephone Number: 919-733-3141 Fax Number: 919-715-5501

E-mail Address: \_\_\_\_\_

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)

Name: \_\_\_\_\_

Company Affiliation: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

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Telephone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

### III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed site plan showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: replacement of Bridges 256 & 257 on US 52 over SR 2456 (Liberty St) and the Norfolk Southern Railroad
2. T.I.P. Project Number or State Project Number (NCDOT Only): U-2826 A
3. Property Identification Number (Tax PIN): \_\_\_\_\_
4. Location  
County: Forsyth Nearest Town: Winston-Salem  
Subdivision name (include phase/lot number): \_\_\_\_\_  
Directions to site (include road numbers/names, landmarks, etc.): I-40 west to US 52 west from 26<sup>th</sup> Street to Glen Avenue.
5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)  
Decimal Degrees (6 digits minimum): 36.1173 °N 80.2354 °W
6. Property size (acres): \_\_\_\_\_
7. Name of nearest receiving body of water: Brushy Fork Creek
8. River Basin: Yadkin-Pee Dee (HUC 03040101)  
(Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at <http://h2o.enr.state.nc.us/admin/maps/>.)
9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: urban principal main artery

10. Describe the overall project in detail, including the type of equipment to be used:

Bridge numbers 256 & 257 will be replaced at their existing location with new dual structures. Each of the new structures will have a clear roadway width of approximately 52 feet. This width will accommodate three 12-foot travel lanes, 6-foot inside and 10-foot outside shoulders. The structure carrying the northbound traffic will be approximately 418 feet in length. The second structure carrying the southbound traffic will be approximately 405 feet in length. A temporary onsite detour will be required to maintain traffic. Heavy duty excavation equipment will be used such as trucks, dozers, cranes and other equipment necessary for roadway construction.

11. Explain the purpose of the proposed work: Improve safety and efficiency of overall traffic operations.

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#### **IV. Prior Project History**

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules.

Onsite field meeting held July 10, 2007 with USACE, John Thomas and Sue Homewood, NCDWQ. The USACE is not requiring mitigation for UT 2 and 3, but is requiring mitigation for UT 4 at a 1:1 ratio. Action Id# 200801611.

#### **V. Future Project Plans**

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.

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#### **VI. Proposed Impacts to Waters of the United States/Waters of the State**

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. Each impact must be listed separately in the tables below (e.g., culvert installation should be listed separately from riprap dissipater pads). Be sure to indicate if an impact is temporary. All proposed impacts, permanent and temporary, must be listed, and must be labeled and clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) should be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate.

Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts:

Permanent Impacts: There will be 132 feet of permanent surface water impacts due to placement of five new corrugated steel pipes (CSP) for two intermittent unnamed tributaries (UT 2 and UT 3) to Brushy Fork Creek and one perennial unnamed tributary to Brush Fork Creek (UT 4).

Temporary Impacts: There will be 0.03 acres (101 feet) of temporary channel impacts to Brushy Fork Creek due to the placement of CSPs.

Utility Impacts: There will be no impacts to surface waters or wetlands from sewer, water, electric or other utilities associated with this bridge replacement project.

2. Individually list wetland impacts. Types of impacts include, but are not limited to mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

Wetland Impact Site Number (indicate on map)	Type of Impact	Type of Wetland (e.g., forested, marsh, herbaceous, bog, etc.)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Area of Impact (acres)
					0

3. List the total acreage (estimated) of all existing wetlands on the property: N/A

4. Individually list all intermittent and perennial stream impacts. Be sure to identify temporary impacts. Stream impacts include, but are not limited to placement of fill or culverts, dam construction, flooding, relocation, stabilization activities (e.g., cement walls, rip-rap, crib walls, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included. To calculate acreage, multiply length X width, then divide by 43,560.

Stream Impact Number (indicate on map)	Stream Name	Type of Impact	Perennial or Intermittent?	Average Stream Width Before Impact	Impact Length (linear feet)	Area of Impact (acres)
Site 1	UT 2 Brushy Fork	24" CSP&18" CSP	Intermittent	6 feet	55	0.01
Site 1	UT 2 Brushy Fork	Temp. pipe placement	Intermittent	6 feet	25	0.01
Site 2	UT 3 Brushy Fork	15" CSP&24" CSP	Intermittent	3 feet	31	0.01
Site 2	UT 3 Brushy Fork	Temp. pipe placement	Intermittent	3 feet	45	0.01
Site 3	UT 4 Brushy Fork	18" CSP	Perennial	8 feet	46	0.01
Site 3	UT 4 Brushy Fork	Temp. pipe placement	Perennial	8 feet	31	0.01
Total Stream Impact (by length and acreage)					233	0.06

5. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.). Open water impacts include, but are not limited to fill, excavation, dredging, flooding, drainage, bulkheads, etc.

Open Water Impact Site Number (indicate on map)	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)	Area of Impact (acres)
Total Open Water Impact (acres)				

6. List the cumulative impact to all Waters of the U.S. resulting from the project:

Stream Impact (acres):	0.06
Wetland Impact (acres):	0
Open Water Impact (acres):	0
Total Impact to Waters of the U.S. (acres)	0.06
Total Stream Impact (linear feet):	233

7. Isolated Waters

Do any isolated waters exist on the property?  Yes  No

Describe all impacts to isolated waters, and include the type of water (wetland or stream) and the size of the proposed impact (acres or linear feet). Please note that this section only applies to waters that have specifically been determined to be isolated by the USACE.

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8. Pond Creation

If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.

Pond to be created in (check all that apply):  uplands  stream  wetlands  
Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.): \_\_\_\_\_

Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.): \_\_\_\_\_

Current land use in the vicinity of the pond: \_\_\_\_\_

Size of watershed draining to pond: \_\_\_\_\_ Expected pond surface area: \_\_\_\_\_

**VII. Impact Justification (Avoidance and Minimization)**

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts.

With the exception of the “do nothing “ alternative, there are no means of avoiding impacts to waters of the U.S.. NCDOT will minimize impacts to the streams through the use of Best Management Practices. NCDOT will locate the temporary detour on the west side of US 52, which is the opposite side as the streams. Steep side slopes in the areas of the streams will be used to help minimize stream impacts.

**VIII. Mitigation**

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on January 15, 2002, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCEEP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ's Draft Technical Guide for Stream Work in North Carolina (see DWQ website for most current version.).

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.

Onsite field meeting held July 10, 2007 with USACE, John Thomas. He is not requiring mitigation for UT 2 and 3, but is requiring mitigation for UT 4 at a 1:1 ratio. EEP is providing the mitigation for 46 feet of stream impacts.

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2. Mitigation may also be made by payment into the North Carolina Ecosystem Enhancement Program (NCEEP). Please note it is the applicant's responsibility to contact the NCEEP at (919) 715-0476 to determine availability, and written approval from the NCEEP indicating that they are will to accept payment for the mitigation must be attached to this form. For additional information regarding the application process for the NCEEP, check the NCEEP website at <http://www.nceep.net/pages/inlieureplace.htm>. If use of the NCEEP is proposed, please check the appropriate box on page five and provide the following information:

Amount of stream mitigation requested (linear feet): 46  
Amount of buffer mitigation requested (square feet): 0  
Amount of Riparian wetland mitigation requested (acres): 0  
Amount of Non-riparian wetland mitigation requested (acres): 0  
Amount of Coastal wetland mitigation requested (acres): 0

#### **IX. Environmental Documentation (required by DWQ)**

1. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? Yes  No
2. If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)?  
Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation.  
Yes  No

3. If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter. Yes  No

**X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)**

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

1. Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 02B .0243 (Catawba) 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify \_\_\_\_\_)? Yes  No
2. If "yes", identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
1		3 (2 for Catawba)	
2		1.5	
Total			

\* Zone 1 extends out 30 feet perpendicular from the top of the near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

3. If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Riparian Buffer Restoration / Enhancement, or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0244, or .0260. \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**XI. Stormwater (required by DWQ)**

Describe impervious acreage (existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property. If percent impervious surface exceeds 20%, please provide calculations demonstrating total proposed impervious level. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**XII. Sewage Disposal (required by DWQ)**

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.

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**XIII. Violations (required by DWQ)**

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?

Yes  No

Is this an after-the-fact permit application? Yes  No

**XIV. Cumulative Impacts (required by DWQ)**

Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? Yes  No

If yes, please submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent North Carolina Division of Water Quality policy posted on our website at <http://h2o.enr.state.nc.us/nwetlands>. If no, please provide a short narrative description: \_\_\_\_\_

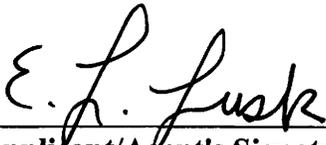
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**XV. Other Circumstances (Optional):**

It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).

As of January 31, 2008 the United States Fish and Wildlife Service lists three federally protected species for Forsyth County the bog turtle, red-cockaded woodpecker, and small-anthered bittercress. No suitable habitat was found for the red-cockaded wood pecker, small-anthered bittercress, or bog turtle within the project study area. This project will have no effect on the above mentioned species. No further documentation or concurrence from the USFWS is required.



11.5.08

Applicant/Agent's Signature

Date

(Agent's signature is valid only if an authorization letter from the applicant is provided.)



October 30, 2008

Mr. John Thomas  
U. S. Army Corps of Engineers  
Raleigh Regulatory Field Office  
3331 Heritage Trade Drive, Suite 105  
Wake Forest, North Carolina 27587

Dear Mr. Thomas:

Subject: EEP Mitigation Acceptance Letter:

**U-2826A, Winston-Salem – Replace Bridge Numbers 256 and 257 on US 52 over the Norfolk Southern Railroad; Yadkin River Basin (Cataloging Unit 03040101); Central Piedmont (CP) Eco-Region**

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the stream mitigation for the unavoidable impact associated with the above referenced project. As indicated in the NCDOT's mitigation request dated October 24, 2008, stream mitigation from EEP is required for approximately 46 feet of warm stream impacts.

Stream restoration mitigation associated with this project will be provided in accordance with Section X of the Amendment No. 2 to the Memorandum of Agreement between the N. C. Department of Environment and Natural Resources, the N. C. Department of Transportation, and the U. S. Army Corps of Engineers fully executed on March 8, 2007 (Tri-Party MOA). In the mitigation request, the NCDOT indicated this project would only require stream mitigation at a 1:1 ratio. EEP commits to implement sufficient stream mitigation up to 46 stream restoration credits to offset the impacts associated with this project by the end of the MOA year in which this project is permitted. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

A handwritten signature in black ink that reads "James B. Gilmore for".

William D. Gilmore, P.E.  
EEP Director

cc: Mr. Gregory J. Thorpe, Ph.D., NCDOT-PDEA  
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit  
File: U-2826A

*Restoring... Enhancing... Protecting Our State*



North Carolina Ecosystem Enhancement Program, 1652 Mail Service Center, Raleigh, NC 27699-1652 / 919-715-0476 / [www.nceep.net](http://www.nceep.net)



October 30, 2008

Mr. Gregory J. Thorpe, Ph.D.  
Environmental Management Director  
Project Development and Environmental Analysis Branch  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

**U-2826A, Winston-Salem – Replace Bridge Numbers 256 and 257 over the Norfolk Southern Railroad, Forsyth County**

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the stream mitigation for the subject project. Based on the information supplied by you on October 24, 2008, mitigation for the impacts associated with the project are only required at a 1:1 ratio. The impacts are located in CU 03040101 of the Yadkin River Basin in the Central Piedmont (CP) Eco-Region, and are as follows:

Warm Stream: 46 feet

EEP commits to implementing sufficient stream restoration mitigation to offset the impacts associated with this project by the end of the MOA Year in which this project is permitted, in accordance with Section X of the Amendment No. 2 to the Memorandum of Agreement between the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, fully executed on March 8, 2007. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

A handwritten signature in black ink that reads "James B. Stampell for".

William D. Gilmore, P.E.  
EEP Director

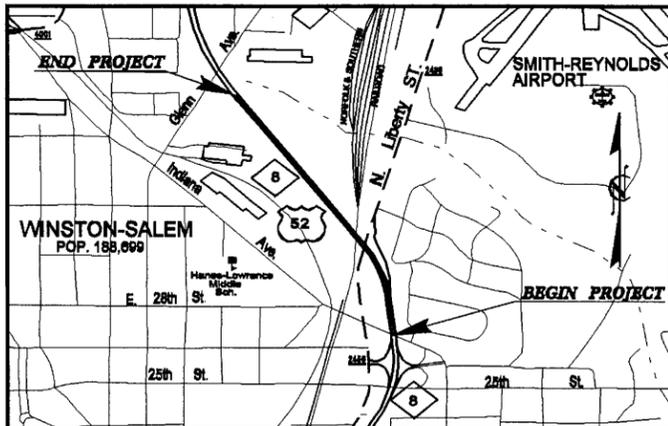
cc: Mr. John Thomas, USACE – Raleigh  
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit  
File: U-2826A

*Restoring... Enhancing... Protecting Our State*



North Carolina Ecosystem Enhancement Program, 1652 Mail Service Center, Raleigh, NC 27699-1652 / 919-715-0476 / [www.nceep.net](http://www.nceep.net)

See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Conventional Symbols



VICINITY MAP

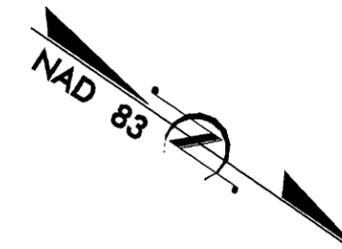
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**FORSYTH COUNTY**

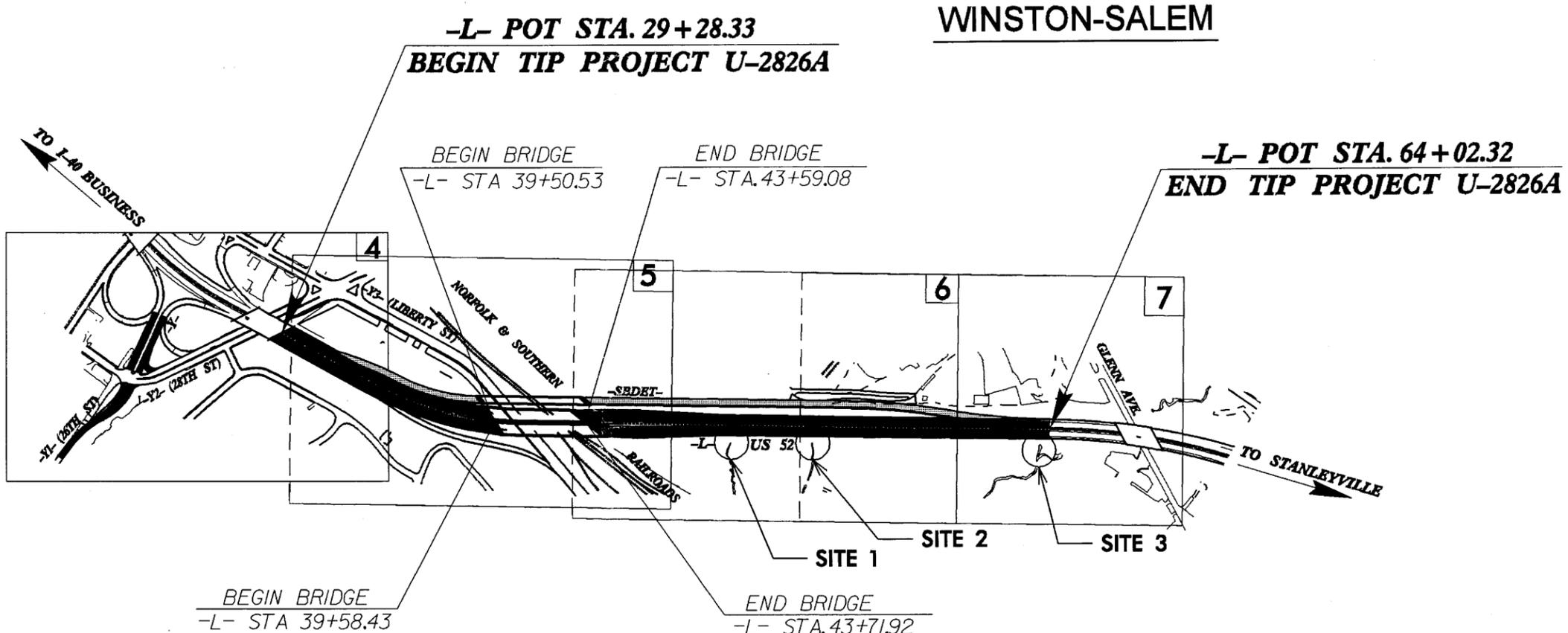
LOCATION: US 52 OVER THE NORFOLK SOUTHERN RAILROAD  
IN WINSTON-SALEM

TYPE OF WORK: GRADING, PAVING, DRAINAGE, RESURFACING, WIDENING,  
CURB & GUTTER, SIGNING, SIGNALS, STRUCTURES,  
AND INTELLIGENT TRANSPORTATION SYSTEMS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2826A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34871.1.1	NHF-52 (4)	P.E.	
34871.2.2	NHF-52 (14)	RW & UTIL.	
Permit Drawing			
Sheet 1 of 7			



TIP PROJECT: U-2826A



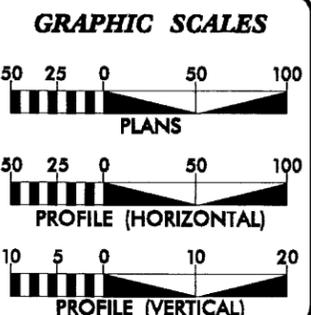
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF WINSTON-SALEM

THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES

CLEARING ON THIS PROJECT SHOULD BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

CONTRACT:



**DESIGN DATA**

ADT 2009 =	77,800
ADT 2030 =	77,600
DHV =	10 %
D =	50 %
T =	12 % *
V =	55 MPH
V (DETOUR) =	45 MPH
* TTST 7 %	DUAL 5%
FUNC CLASS =	FREWAY

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT U-2826A	=	0.580 MILES
LENGTH STRUCTURE TIP PROJECT U-2826A	=	0.078 MILES
TOTAL LENGTH TIP PROJECT U-2826A	=	0.658 MILES

\* LENGTHS BASED ON NBL BRIDGES

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2004 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: DECEMBER 19, 2007

LETTING DATE: JUNE 16, 2009

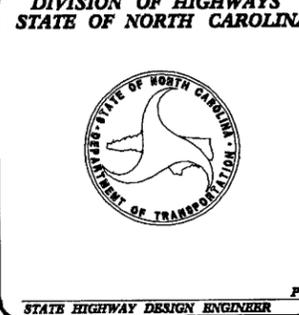
ROGER D. THOMAS, PE  
PROJECT ENGINEER

BRIAN P. ROBINSON  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

STATE HIGHWAY DESIGN ENGINEER



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AT HY244728  
wshunt

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2826A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34871.1.1	NHF-52 (4)	P.E.	
34871.2.2	NHF-52 (14)	RW & UTIL.	
Permit Drawing			
Sheet 2 of 7			

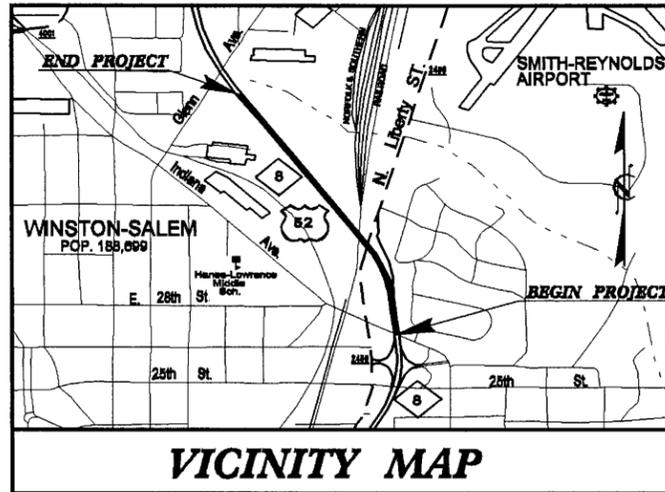
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**FORSYTH COUNTY**

LOCATION: US 52 OVER THE NORFOLK SOUTHERN RAILROAD  
IN WINSTON-SALEM

TYPE OF WORK: GRADING, PAVING, DRAINAGE, RESURFACING, WIDENING,  
CURB & GUTTER, SIGNING, SIGNALS, STRUCTURES,  
AND INTELLIGENT TRANSPORTATION SYSTEMS

See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Conventional Symbols



VICINITY MAP



WALKERTOWN QUAD.

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

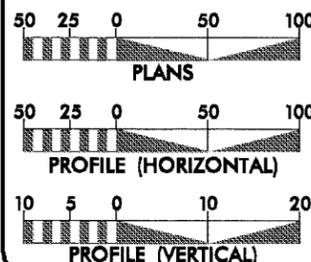
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF WINSTON-SALEM

THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES

CLEARING ON THIS PROJECT SHOULD BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

**CONTRACT:**

GRAPHIC SCALES



DESIGN DATA

ADT 2009 = 77,800  
ADT 2030 = 77,600  
DHV = 10 %  
D = 50 %  
T = 12 % \*  
V = 55 MPH  
V (DETOUR) = 45 MPH  
\* TTST 7 % DUAL 5%  
FUNC CLASS = FREEWAY

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-2826A = 0.580 MILES  
LENGTH STRUCTURE TIP PROJECT U-2826A = 0.078 MILES  
TOTAL LENGTH TIP PROJECT U-2826A = 0.658 MILES

\* LENGTHS BASED ON NBL BRIDGES

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**

1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
DECEMBER 19, 2007

LETTING DATE:  
JUNE 16, 2009

ROGER D. THOMAS, PE  
PROJECT ENGINEER

BRIAN P. ROBINSON  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.  
ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.  
STATE HIGHWAY DESIGN ENGINEER

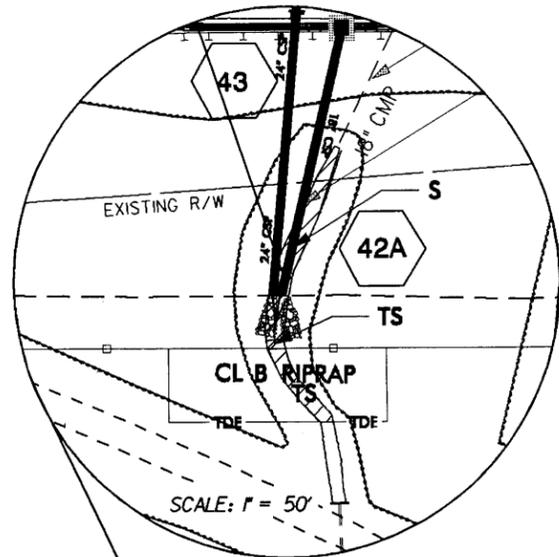
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA



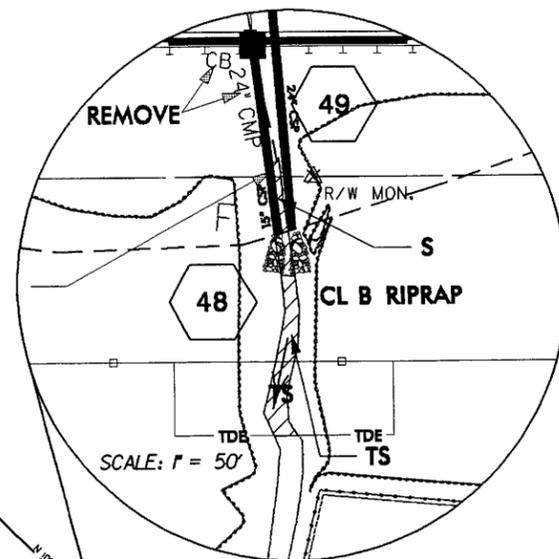
STATE HIGHWAY DESIGN ENGINEER

PROJECT REFERENCE NO. U-2826A	SHEET NO. 6
PERMIT SHEET NO. 4	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Permit Drawing sheet 3 of 7	

**SITE 1**



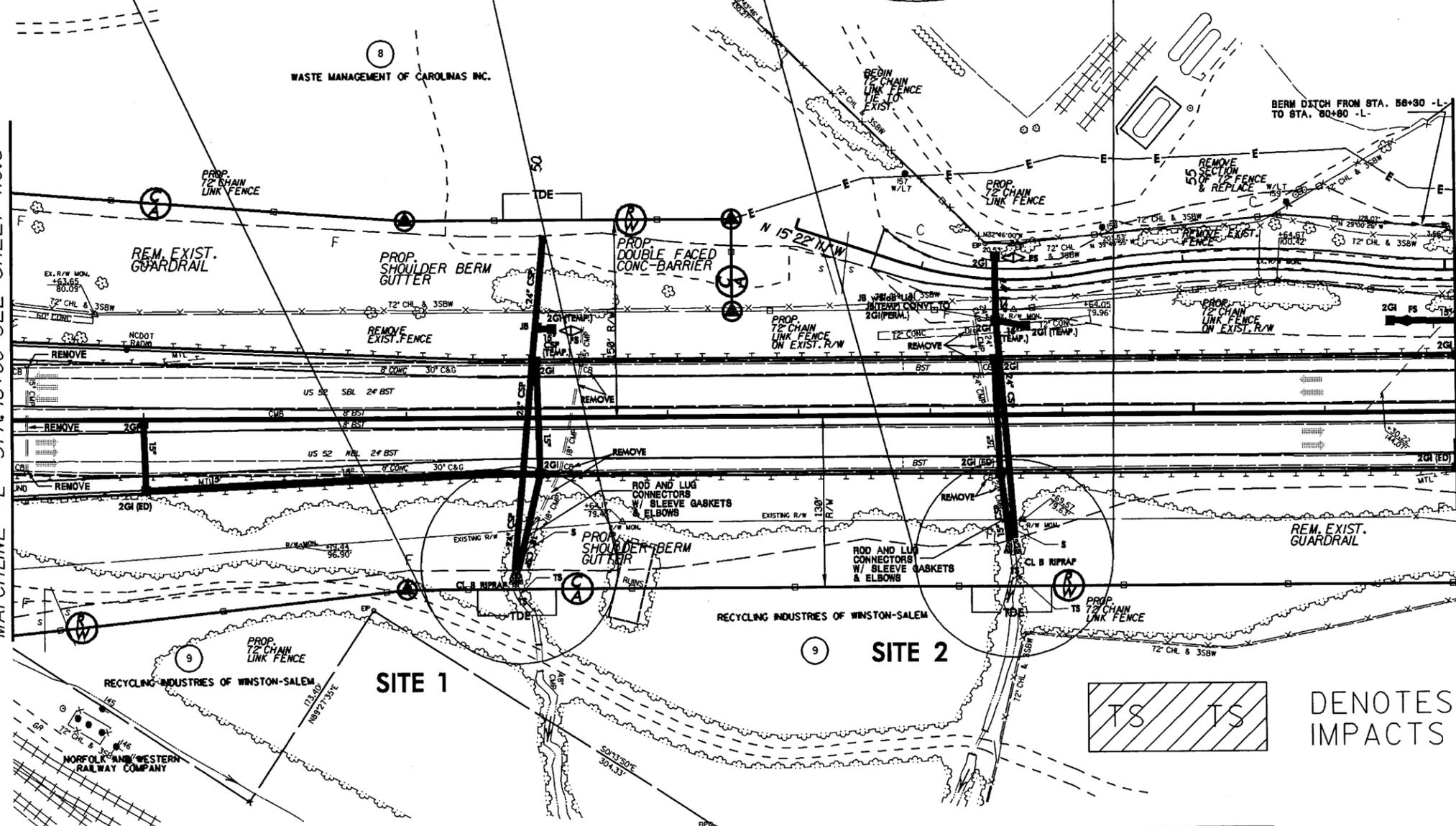
**SITE 2**



REVISIONS

MATCHLINE -L- STA. 46+00 SEE SHEET NO.5

MATCHLINE -L- STA. 57+00 SEE SHEET NO.7



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER

07-AUG-2008 14:01  
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8/17/99



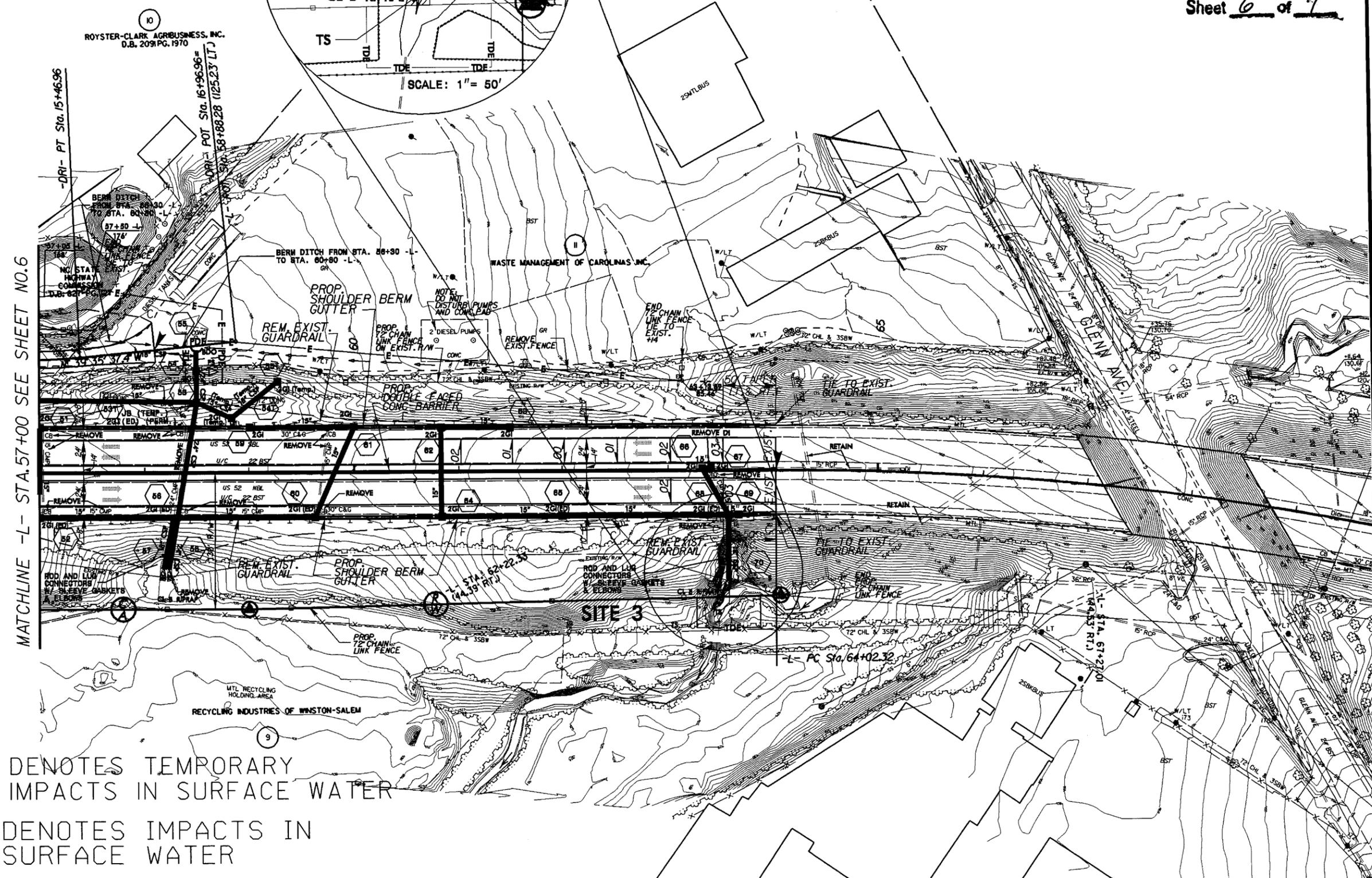
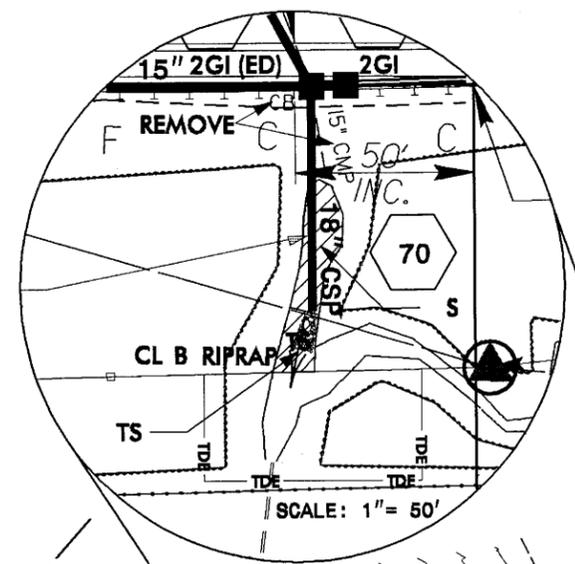


PROJECT REFERENCE NO. U-2826A	SHEET NO. 7
PERMIT SHEET NO. 2	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

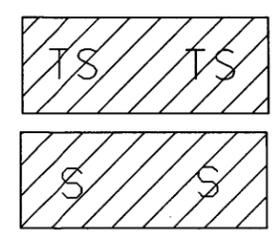
NOTE: SEE SHEET 12 FOR PROFILE -L-  
SEE SHEET 17 FOR PROFILE -DRI-

Permit Drawing  
Sheet 6 of 7

# SITE 3



MATCHLINE -L- STA. 57+00 SEE SHEET NO. 6



TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

S S DENOTES IMPACTS IN SURFACE WATER

REVISIONS

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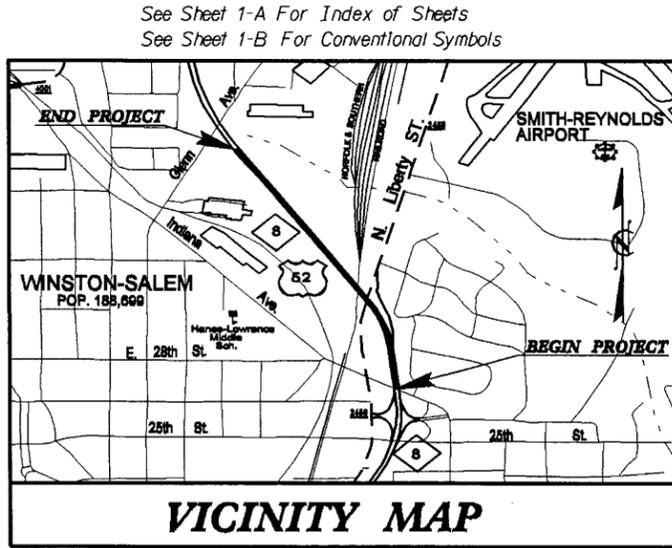
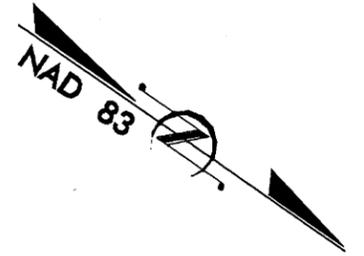
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2826A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34871.1.1	NHF-52 (4)	P.E.	
34871.2.2	NHF-52 (14)	R/W & UTIL.	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

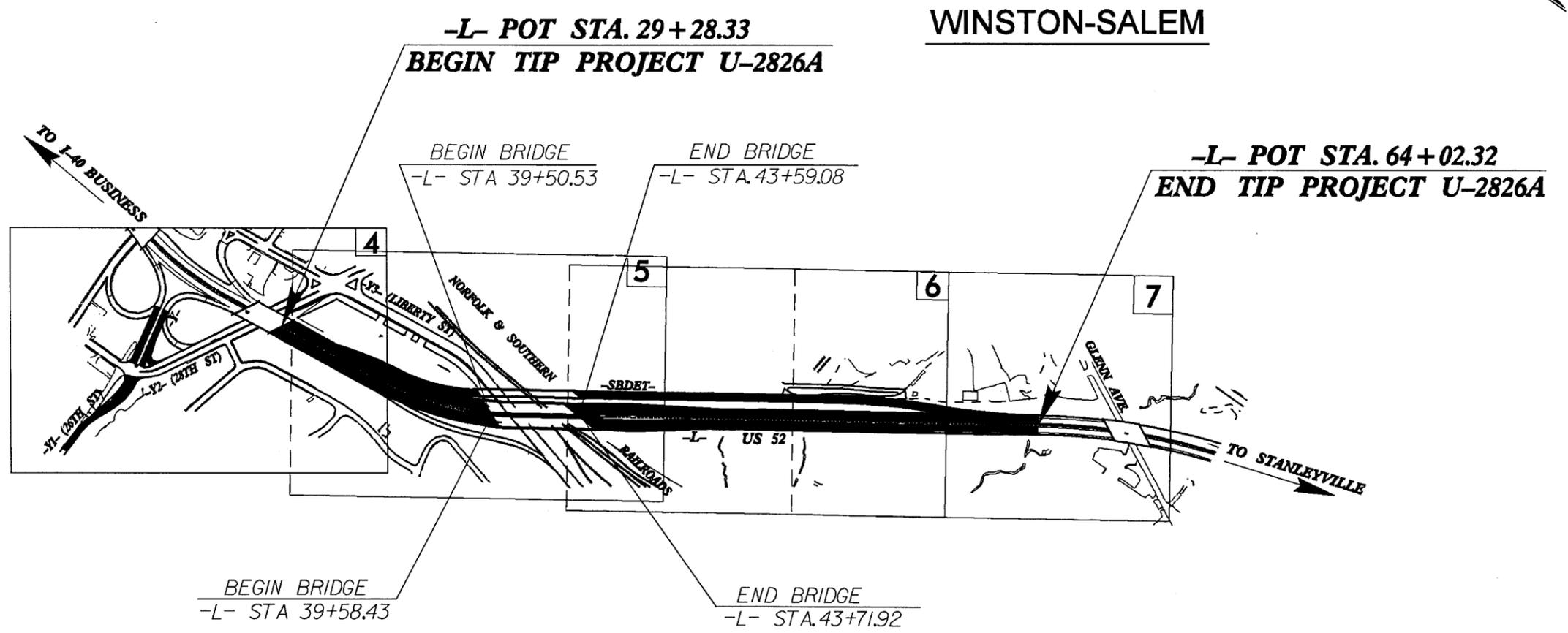
**FORSYTH COUNTY**

LOCATION: US 52 OVER THE NORFOLK SOUTHERN RAILROAD  
IN WINSTON-SALEM

TYPE OF WORK: GRADING, PAVING, DRAINAGE, RESURFACING, WIDENING,  
CURB & GUTTER, SIGNING, SIGNALS, STRUCTURES,  
AND INTELLIGENT TRANSPORTATION SYSTEMS



**TIP PROJECT: U-2826A**

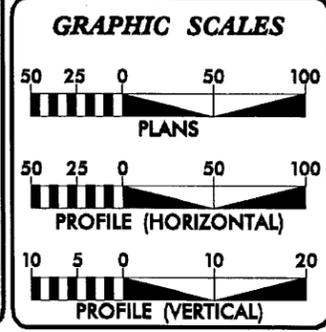


THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF WINSTON-SALEM

THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES

CLEARING ON THIS PROJECT SHOULD BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

ADT 2009 =	77,800
ADT 2030 =	77,600
DHV =	10 %
D =	50 %
T =	12 % *
V =	55 MPH
V (DETOUR) =	45 MPH
* TTST 7 %	DUAL 5%
FUNC CLASS =	FREWAY

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT U-2826A	=	0.580 MILES
LENGTH STRUCTURE TIP PROJECT U-2826A	=	0.078 MILES
TOTAL LENGTH TIP PROJECT U-2826A	=	0.658 MILES

\* LENGTHS BASED ON NBL BRIDGES

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
DECEMBER 19, 2007

LETTING DATE:  
JUNE 16, 2009

ROGER D. THOMAS, PE  
PROJECT ENGINEER

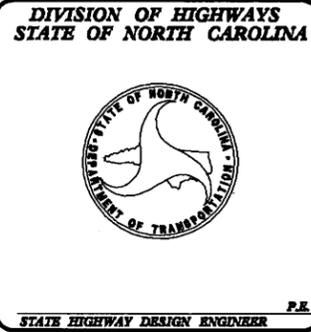
BRIAN P. ROBINSON  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.



05-AUG-2008 15:26  
I:\PROJECTS\2007\U-2826A\rdy\_tsh.dgn  
\$\$\$\$\$USERNAME\$\$\$\$\$

**CONTRACT:**

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# CONVENTIONAL PLAN SHEET SYMBOLS

### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	----- 
Property Corner	----- 
Property Monument	----- 
Parcel/Sequence Number	----- 
Existing Fence Line	----- 
Proposed Woven Wire Fence	----- 
Proposed Chain Link Fence	----- 
Proposed Barbed Wire Fence	----- 
Existing Wetland Boundary	----- 
Proposed Wetland Boundary	----- 
Existing High Quality Wetland Boundary	----- 
Existing Endangered Animal Boundary	----- 
Existing Endangered Plant Boundary	----- 

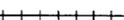
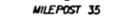
### BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	----- 
Sign	----- 
Well	----- 
Small Mine	----- 
Foundation	----- 
Area Outline	----- 
Cemetery	----- 
Building	----- 
School	----- 
Church	----- 
Dam	----- 

### HYDROLOGY:

Stream or Body of Water	----- 
Hydro, Pool or Reservoir	----- 
River Basin Buffer	----- 
Flow Arrow	----- 
Disappearing Stream	----- 
Spring	----- 
Swamp Marsh	----- 
Proposed Lateral, Tail, Head Ditch	-----
False Sump	-----

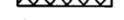
### RAILROADS:

Standard Gauge	----- 
RR Signal Milepost	----- 
Switch	----- 
RR Abandoned	----- 
RR Dismantled	----- 

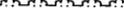
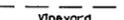
### RIGHT OF WAY:

Baseline Control Point	----- 
Existing Right of Way Marker	----- 
Existing Right of Way Line	----- 
Proposed Right of Way Line	----- 
Proposed Right of Way Line with Iron Pin and Cap Marker	----- 
Proposed Right of Way Line with Concrete or Granite Marker	----- 
Existing Control of Access	----- 
Proposed Control of Access	----- 
Existing Easement Line	----- 
Proposed Temporary Construction Easement	----- 
Proposed Temporary Drainage Easement	----- 
Proposed Permanent Drainage Easement	----- 
Proposed Permanent Utility Easement	----- 

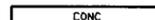
### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	----- 
Existing Curb	----- 
Proposed Slope Stakes Cut	----- 
Proposed Slope Stakes Fill	----- 
Proposed Wheel Chair Ramp	----- 
Curb Cut for Future Wheel Chair Ramp	----- 
Existing Metal Guardrail	----- 
Proposed Guardrail	----- 
Existing Cable Guiderail	----- 
Proposed Cable Guiderail	----- 
Equaility Symbol	----- 
Pavement Removal	----- 

### VEGETATION:

Single Tree	----- 
Single Shrub	----- 
Hedge	----- 
Woods Line	----- 
Orchard	----- 
Vineyard	-----

### EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	----- 
Bridge Wing Wall, Head Wall and End Wall	----- 
MINOR:	
Head and End Wall	----- 
Pipe Culvert	----- 
Footbridge	----- 
Drainage Box: Catch Basin, DI or JB	----- 
Paved Ditch Gutter	----- 
Storm Sewer Manhole	----- 
Storm Sewer	----- 

### UTILITIES:

POWER:	
Existing Power Pole	----- 
Proposed Power Pole	----- 
Existing Joint Use Pole	----- 
Proposed Joint Use Pole	----- 
Power Manhole	----- 
Power Line Tower	----- 
Power Transformer	----- 
U/G Power Cable Hand Hole	----- 
H-Frame Pole	----- 
Recorded U/G Power Line	----- 
Designated U/G Power Line (S.U.E.*)	----- 

### TELEPHONE:

Existing Telephone Pole	----- 
Proposed Telephone Pole	----- 
Telephone Manhole	----- 
Telephone Booth	----- 
Telephone Pedestal	----- 
Telephone Cell Tower	----- 
U/G Telephone Cable Hand Hole	----- 
Recorded U/G Telephone Cable	----- 
Designated U/G Telephone Cable (S.U.E.*)	----- 
Recorded U/G Telephone Conduit	----- 
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

### WATER:

Water Manhole	----- 
Water Meter	----- 
Water Valve	----- 
Water Hydrant	----- 
Recorded U/G Water Line	----- 
Designated U/G Water Line (S.U.E.*)	----- 
Above Ground Water Line	----- 

### TV:

TV Satellite Dish	----- 
TV Pedestal	----- 
TV Tower	----- 
U/G TV Cable Hand Hole	----- 
Recorded U/G TV Cable	----- 
Designated U/G TV Cable (S.U.E.*)	----- 
Recorded U/G Fiber Optic Cable	----- 
Designated U/G Fiber Optic Cable (S.U.E.*)	----- 

### GAS:

Gas Valve	----- 
Gas Meter	----- 
Recorded U/G Gas Line	----- 
Designated U/G Gas Line (S.U.E.*)	----- 
Above Ground Gas Line	----- 

### SANITARY SEWER:

Sanitary Sewer Manhole	----- 
Sanitary Sewer Cleanout	----- 
U/G Sanitary Sewer Line	----- 
Above Ground Sanitary Sewer	----- 
Recorded SS Forced Main Line	----- 
Designated SS Forced Main Line (S.U.E.*)	----- 

### MISCELLANEOUS:

Utility Pole	----- 
Utility Pole with Base	----- 
Utility Located Object	----- 
Utility Traffic Signal Box	----- 
Utility Unknown U/G Line	----- 
U/G Tank; Water, Gas, Oil	----- 
AG Tank; Water, Gas, Oil	----- 
U/G Test Hole (S.U.E.*)	----- 
Abandoned According to Utility Records	-----
End of Information	-----

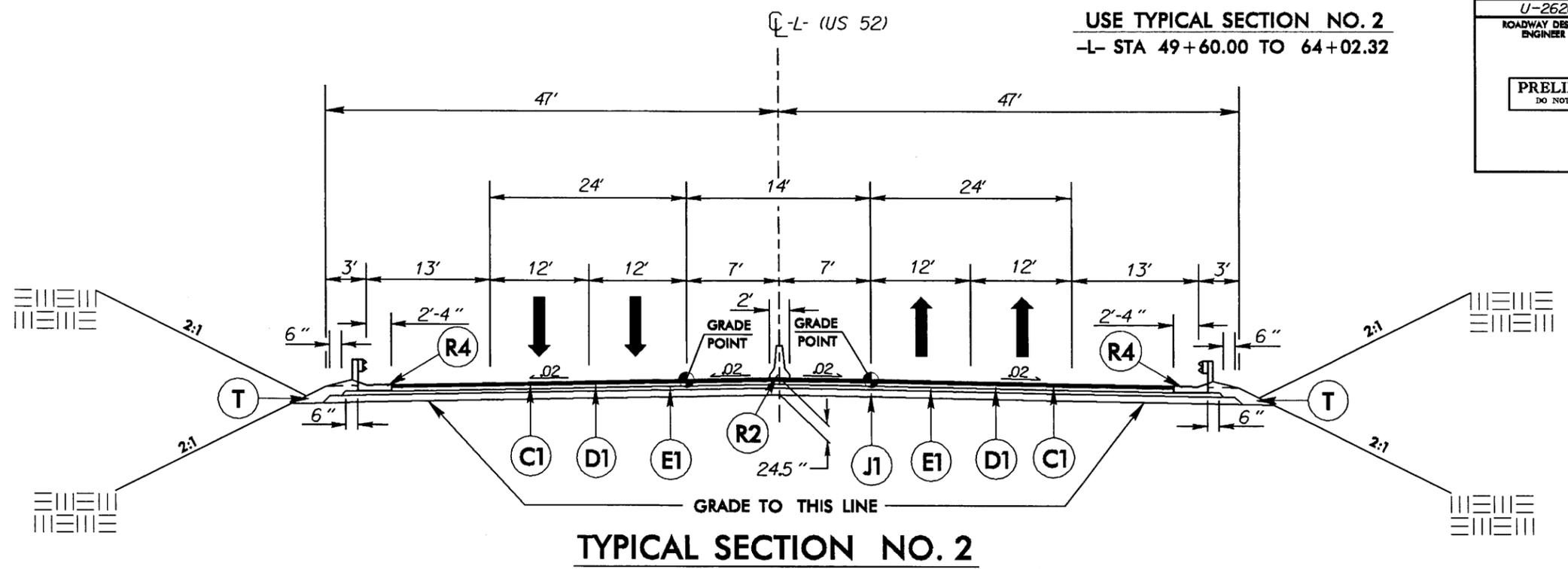


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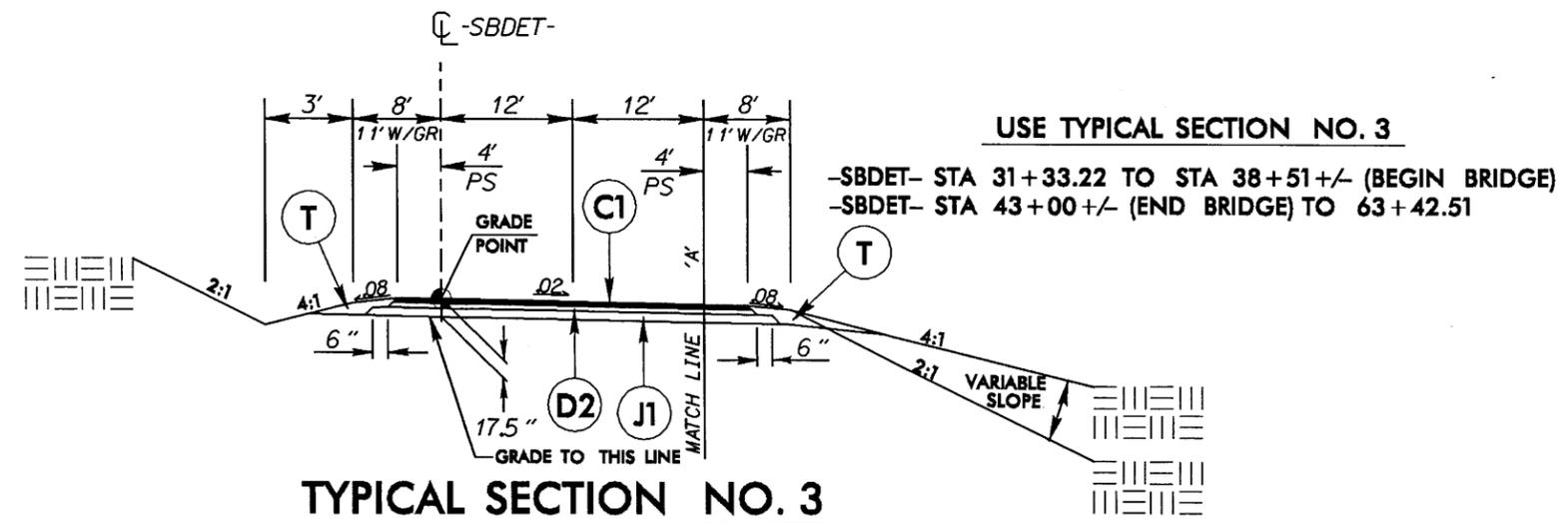
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C1	4", TYPE 812.5C
D1	3", TYPE 119.0C
D2	3 1/2", TYPE 119.0C
E1	7 1/2", TYPE B25.0C
E2	4 1/2", TYPE B25.0C
J1	10", ABC
R2	CONCRETE MEDIAN BARRIER
R3	SINGLE FACED CONC. BARRIER
R4	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

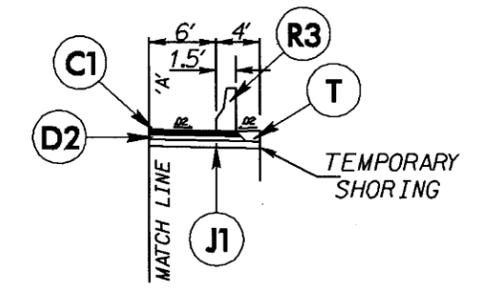
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ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



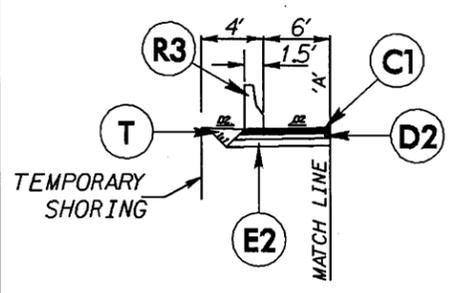
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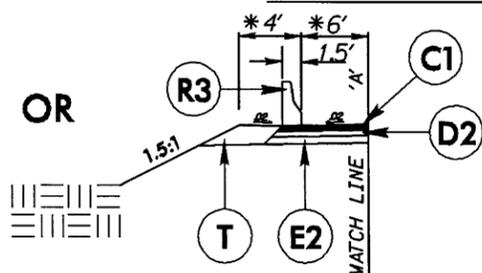
**TYPICAL SECTION NO. 3**



**TYPICAL SECTION NO. 3A**  
TO BE USED IN CONJUNCTION WITH TYP. SECT. NO. 3  
-SBDDET- STA. 34+00.00 TO STA. 38+74+/- RT.



OR

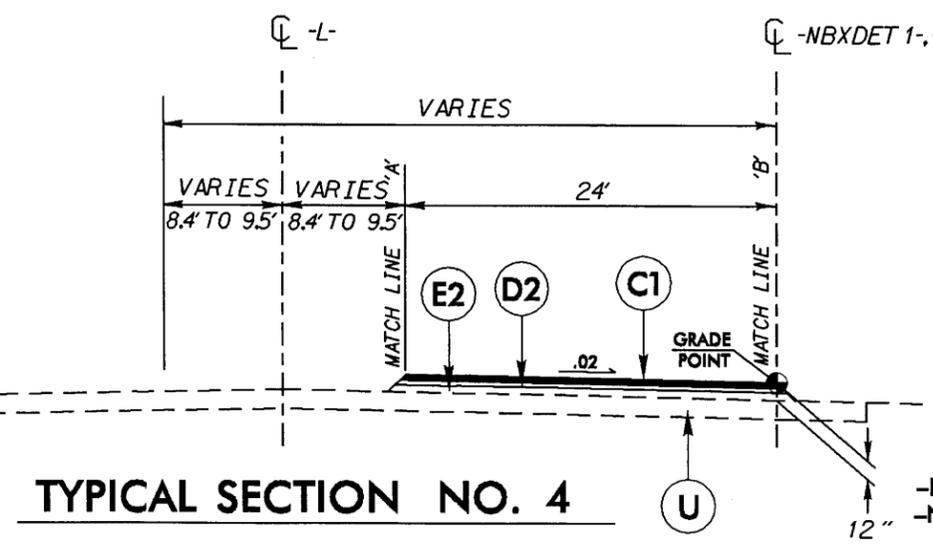


**TYPICAL SECTION NO. 4A**

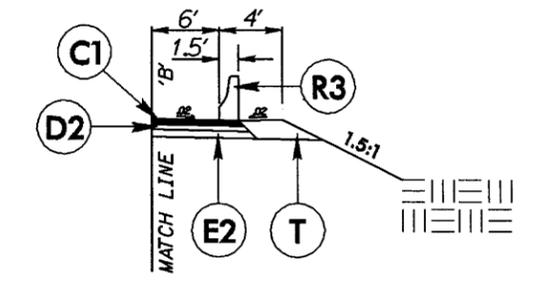
TO BE USED IN CONJUNCTION WITH TYP. SECT. NO. 4  
-NBXDET1- STA. 34+75.00 TO STA. 35+64.93 LT.  
-NBXDET2- STA. 10+00.00 TO STA. 11+50.00 LT.

OR

\* -NBXDET1- STA. 33+25.00 TO STA. 34+75.00 LT.  
\* -NBXDET2- STA. 11+50.00 TO STA. 13+50.00 LT.



**TYPICAL SECTION NO. 4**



**TYPICAL SECTION NO. 4B**

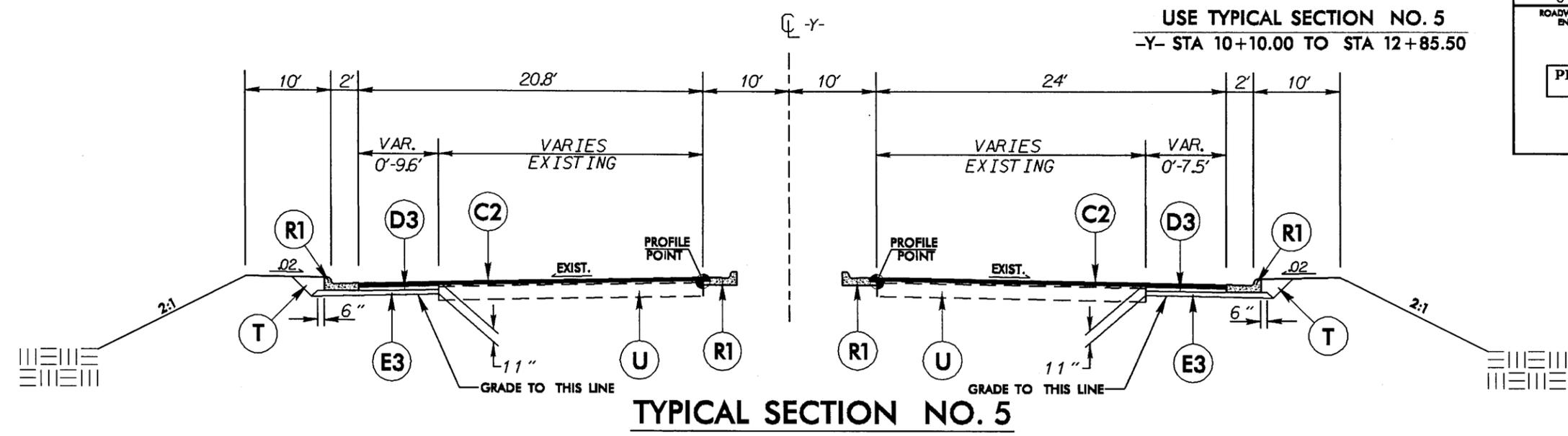
TO BE USED IN CONJUNCTION WITH TYP. SECT. NO. 4  
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-NBXDET2- STA. 10+00.00 TO STA. 13+50.00 RT.

USE TYPICAL SECTION NO. 4

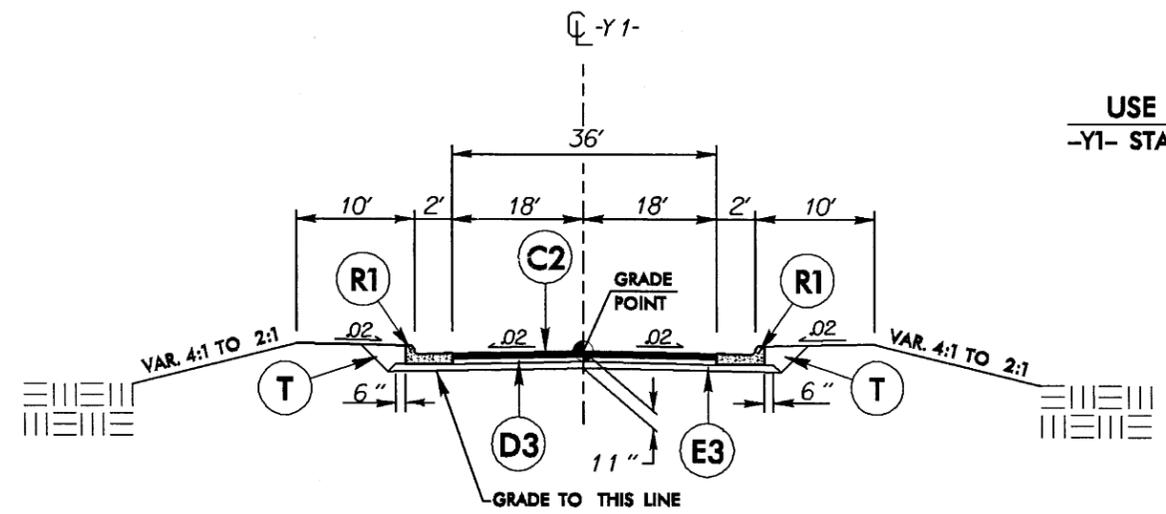
-NBXDET1- STA. 30+78.99 TO STA. 35+64.93  
-NBXDET2- STA. 10+00.00 TO STA. 16+21.00

6/2/99

PROJECT REFERENCE NO. U-2626A	SHEET NO. 2-B
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



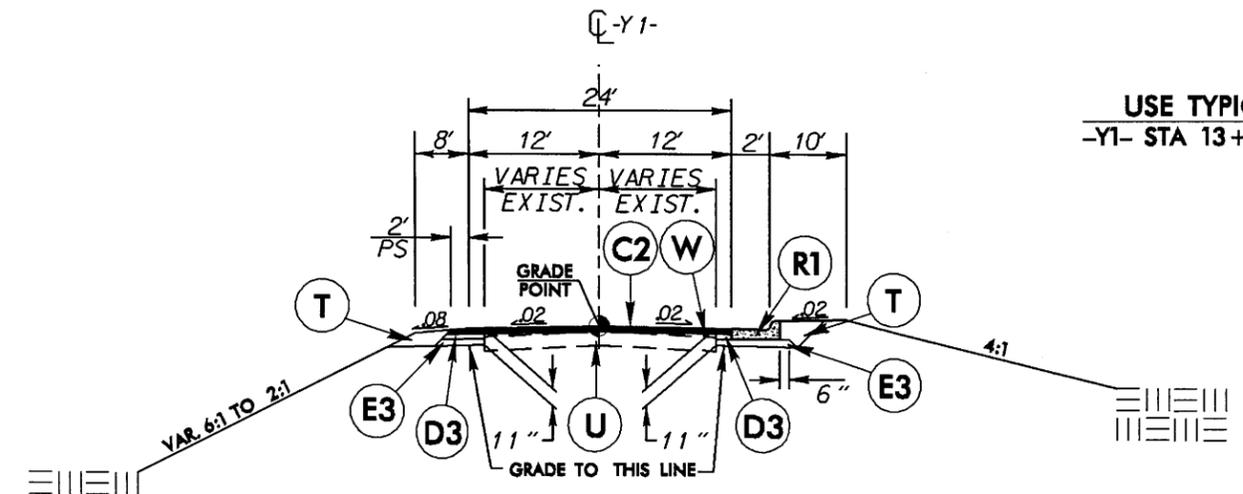
USE TYPICAL SECTION NO. 5  
-Y- STA 10+10.00 TO STA 12+85.50



USE TYPICAL SECTION NO. 6  
-Y1- STA 10+28.91 TO STA 13+00.00

PAVEMENT SCHEDULE	
C2	8", TYPE 89.5B
D3	4", TYPE 119.0B
E3	4", TYPE B26.0B
R1	2'-6" CONC. C&G
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VAR. DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE



USE TYPICAL SECTION NO. 7  
-Y1- STA 13+00.00 TO STA 15+00.00

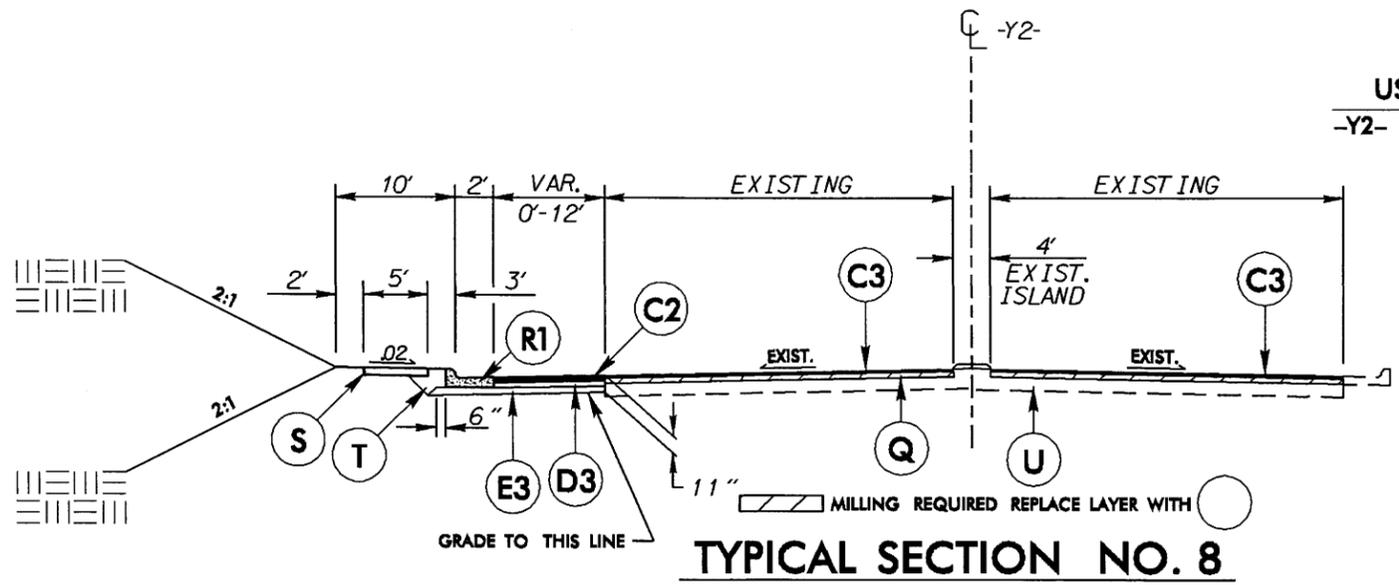
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 \*\*\*SHEET NUMBER 2-C\*\*\*

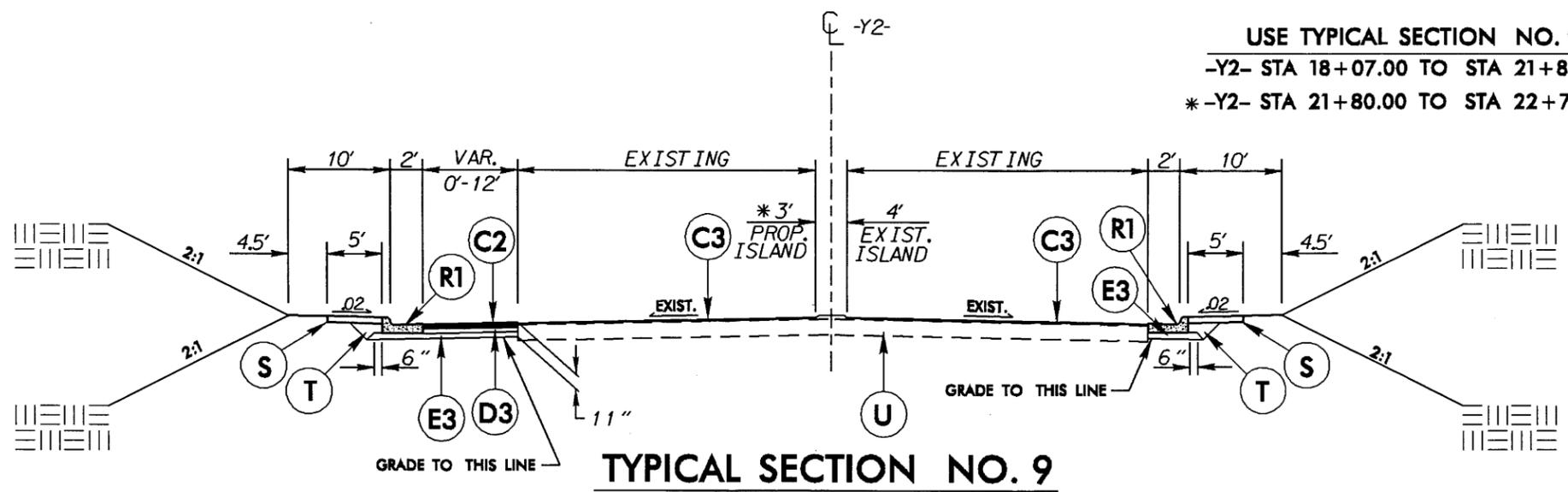
PROJECT REFERENCE NO. U-2626A	SHEET NO. 2-C
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PAVEMENT SCHEDULE	
C2	3", TYPE S9.5B
C3	1½", TYPE S9.5B
D3	4", TYPE I19.0B
E3	4", TYPE B26.0B
J	6", ABC
Q	MILLING
R1	2'-8" CONC. C&G
S	CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT

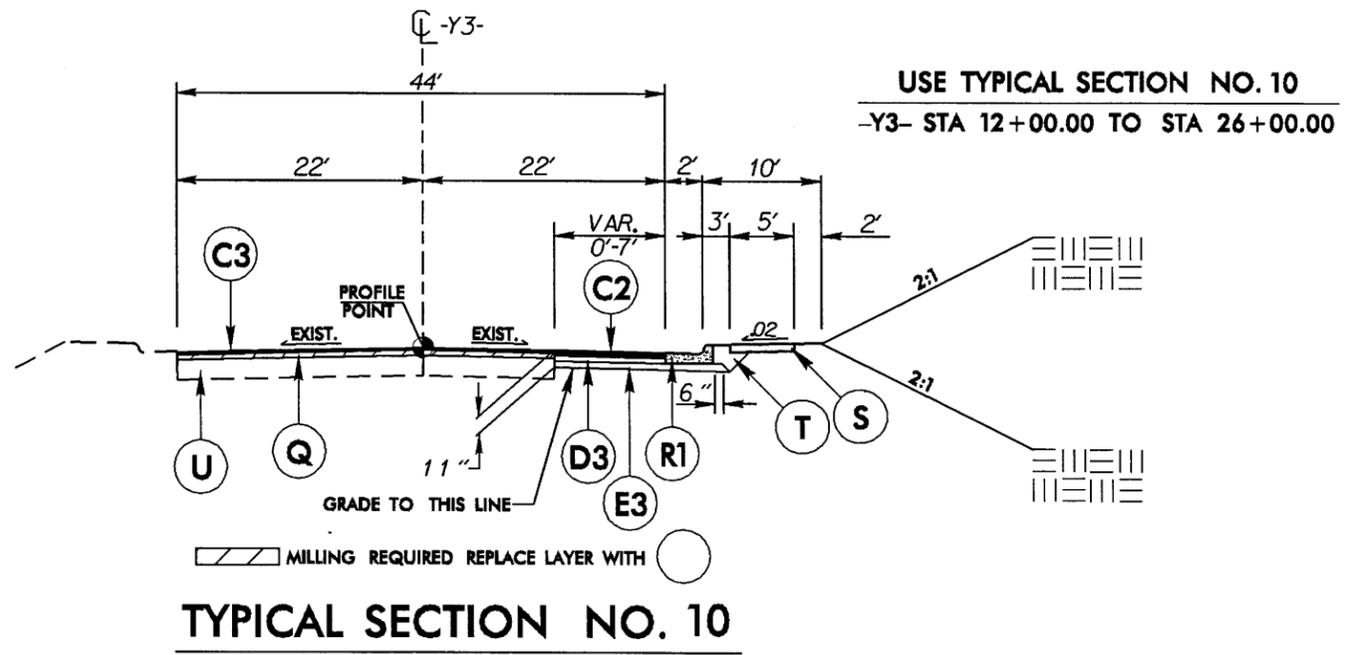
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE



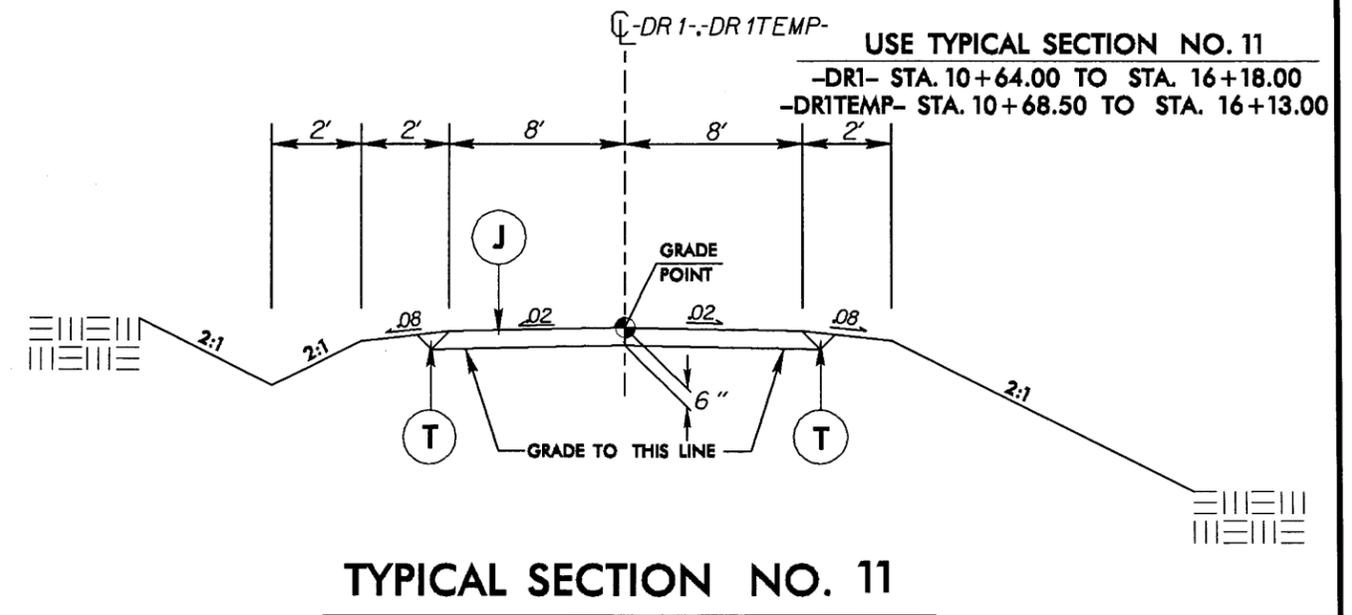
USE TYPICAL SECTION NO. 8  
 -Y2- STA 11+77.50 TO STA 18+07.00



USE TYPICAL SECTION NO. 9  
 -Y2- STA 18+07.00 TO STA 21+80.00  
 \* -Y2- STA 21+80.00 TO STA 22+70.00



USE TYPICAL SECTION NO. 10  
 -Y3- STA 12+00.00 TO STA 26+00.00

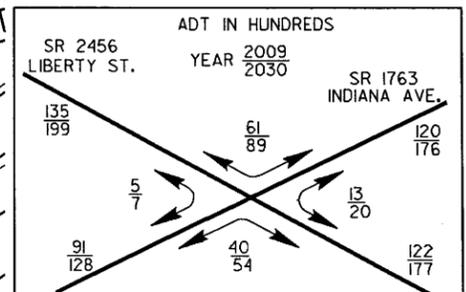
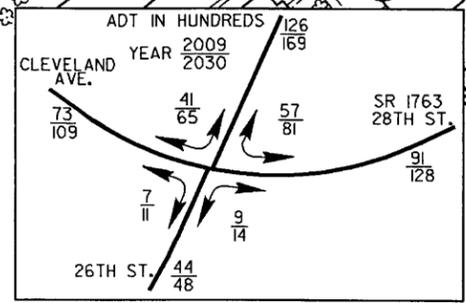
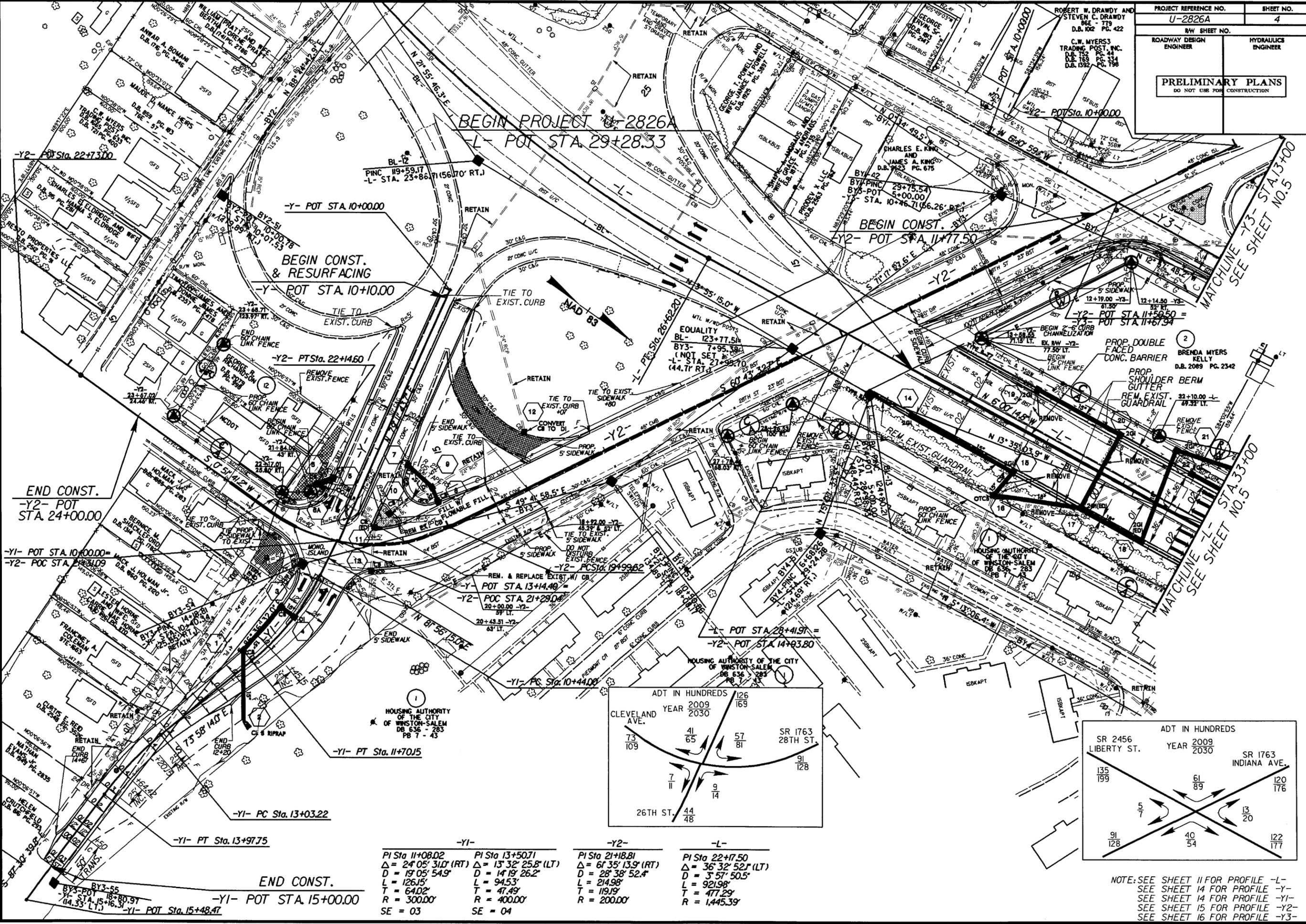


USE TYPICAL SECTION NO. 11  
 -DR1- STA. 10+64.00 TO STA. 16+18.00  
 -DR1TEMP- STA. 10+68.50 TO STA. 16+13.00

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R:\ASST\2826\2826.dwg



-Y1-	-Y2-	-L-
PI Sta 11+08.02	PI Sta 21+18.81	PI Sta 22+17.50
$\Delta = 24^{\circ} 05' 31.0''$ (RT)	$\Delta = 61^{\circ} 35' 13.9''$ (RT)	$\Delta = 36^{\circ} 32' 52.1''$ (LT)
D = 19' 05" 54.9"	D = 28' 38" 52.4"	D = 3' 57" 50.5"
L = 126.15'	L = 214.98'	L = 92.98'
T = 64.02'	T = 119.19'	T = 47.29'
R = 300.00'	R = 200.00'	R = 1,445.39'
SE = 03	SE = 04	

NOTE: SEE SHEET 11 FOR PROFILE -L-  
SEE SHEET 14 FOR PROFILE -Y-  
SEE SHEET 14 FOR PROFILE -Y1-  
SEE SHEET 15 FOR PROFILE -Y2-  
SEE SHEET 16 FOR PROFILE -Y3-

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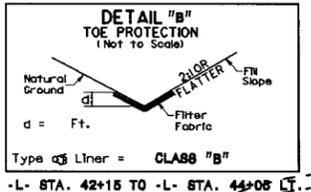
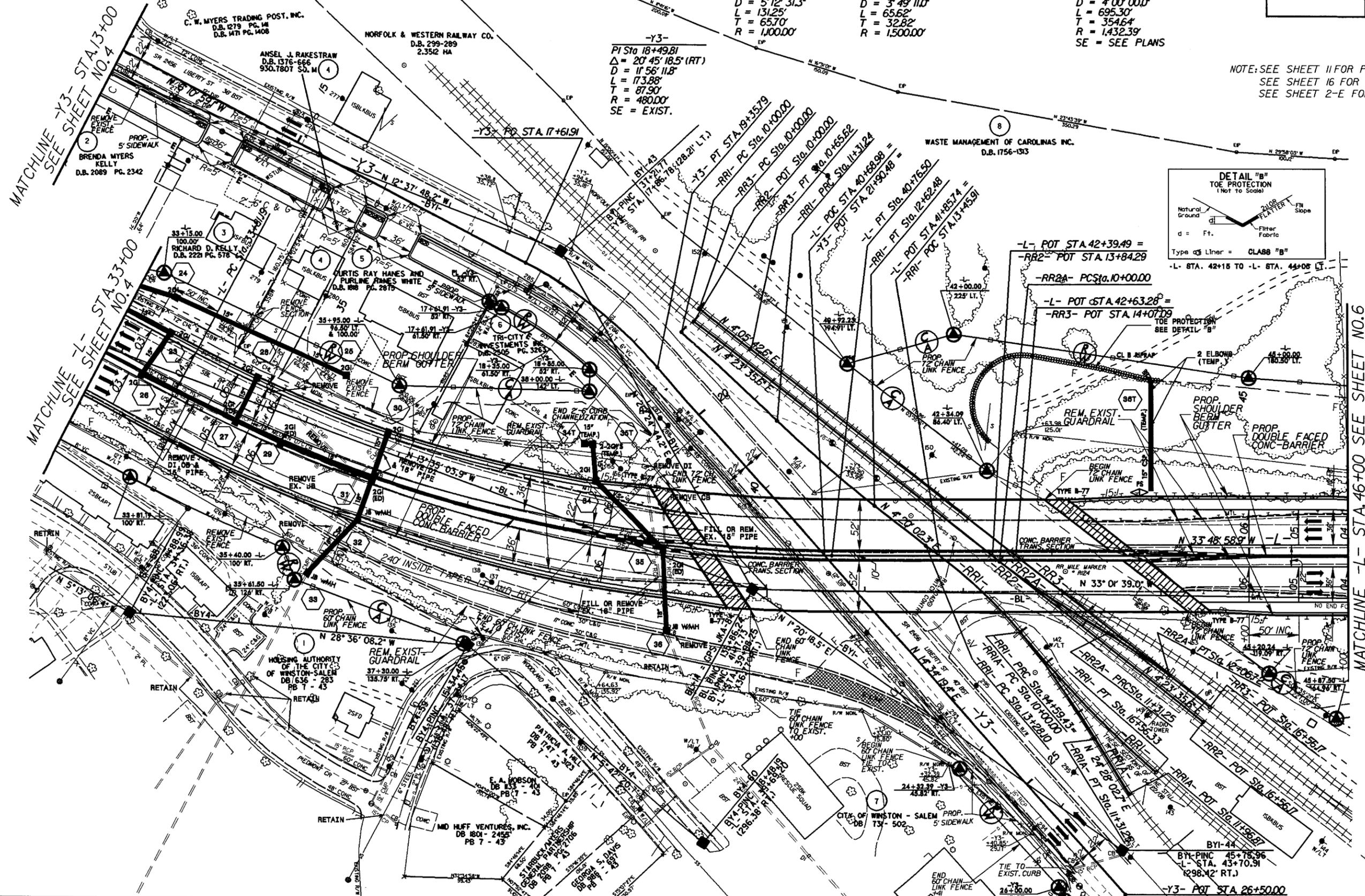
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b>	
DO NOT USE FOR CONSTRUCTION	

-RR1-				-RR2A-	
PI Sta 10+65.63 Δ = 2° 08' 54" (RT) D = 138' 13.3" L = 131.24' T = 65.63' R = 3,500.00'	PI Sta 11+96.91 Δ = 5° 34' 13.3" (LT) D = 414' 38.9" L = 131.25' T = 65.63' R = 1,350.00'	PI Sta 13+94.15 Δ = 15° 02' 59.2" (RT) D = 1127' 33.0" L = 131.33' T = 65.63' R = 500.00'	PI Sta 15+58.10 Δ = 9° 24' 03.4" (LT) D = 446' 28.7" L = 196.89' T = 98.67' R = 1,200.00'	PI Sta 10+65.70 Δ = 6° 32' 21.2" (LT) D = 458' 56.7" L = 131.25' T = 65.70' R = 1,500.00'	PI Sta 11+68.99 Δ = 2° 52' 57.5" (RT) D = 349' 11.0" L = 75.47' T = 37.74' R = 1,500.00'

-RR1A-		-RR3-		-L-	
PI Sta 10+65.70 Δ = 6° 50' 11.8" (RT) D = 512' 31.3" L = 131.25' T = 65.70' R = 1,000.00'	PI Sta 10+32.82 Δ = 2° 30' 23.7" (LT) D = 349' 11.0" L = 65.62' T = 32.82' R = 1,500.00'	PI Sta 37+35.84 Δ = 27° 48' 44.7" (LT) D = 4° 00' 00.0" L = 695.30' T = 354.64' R = 1,432.39'	SE = SEE PLANS		

-Y3-	
PI Sta 18+49.81 Δ = 20° 45' 18.5" (RT) D = 1156' 11.8" L = 173.88' T = 87.90' R = 480.00'	SE = EXIST.

NOTE: SEE SHEET 11 FOR PROFILE -L-  
SEE SHEET 16 FOR PROFILE -Y3-  
SEE SHEET 2-E FOR BRIDGE SKETCH



MATCHLINE -L- STA. 46+00 SEE SHEET NO. 6

MATCHLINE -Y3- STA. 13+00  
SEE SHEET NO. 4

MATCHLINE -L- STA. 33+00  
SEE SHEET NO. 4

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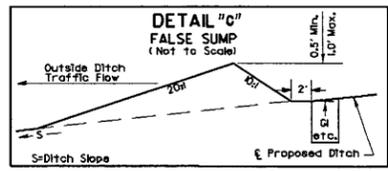
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			

NOTE: SEE SHEET 12 FOR PROFILE -L-  
SEE SHEET 17 FOR PROFILE -DRI-

-DRI-

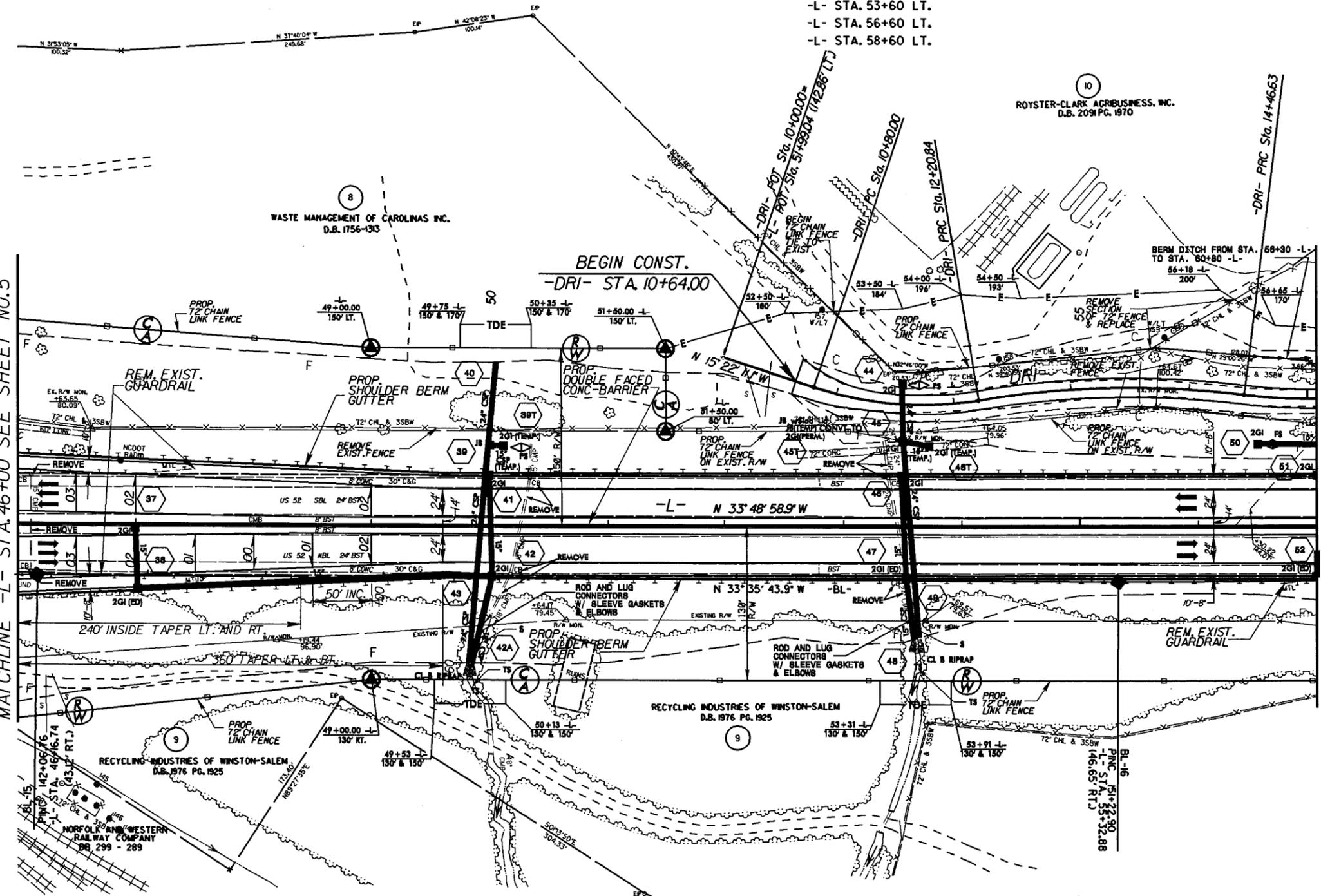
PI Sta 11+51.84 Δ = 27° 49' 32.8" (LT) D = 19' 45' 25.8" L = 140.84' T = 71.84' R = 290.00'	PI Sta 13+34.51 Δ = 16° 22' 34.0" (RT) D = 7' 15' 09.5" L = 225.80' T = 113.67' R = 790.00'	PI Sta 14+97.01 Δ = 12° 46' 27.6" (LT) D = 12' 43' 56.6" L = 100.33' T = 50.37' R = 450.00'
--	--	--



- L- STA. 43+90 LT.
- L- STA. 50+25 LT.
- L- STA. 53+60 LT.
- L- STA. 56+60 LT.
- L- STA. 58+60 LT.

MATCHLINE -L- STA. 46+00 SEE SHEET NO.5

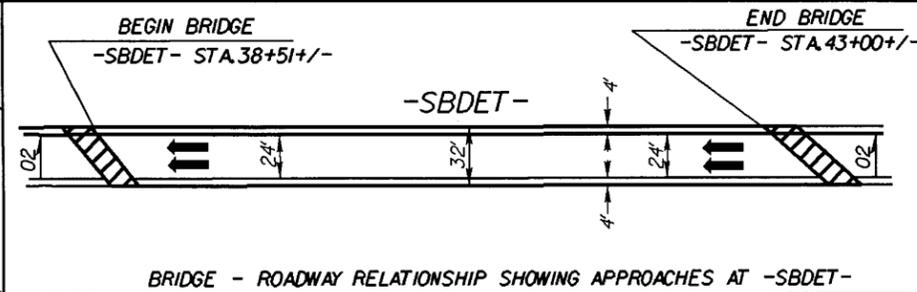
MATCHLINE -L- STA. 57+00 SEE SHEET NO.7



REVISIONS



PROJECT REFERENCE NO. U-2826A	SHEET NO. 8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



NOTE: SEE SHEET 13 FOR PROFILE -SBDET-  
SEE SHEET 15 FOR PROFILE -NBXDETI-

**TEMPORARY DETOUR SHEET ONLY**

MATCHLINE -SBDET- STA. 43+00 SEE SHEET NO. 9

**-SBDET-**

PI Sta 31+14.48 Δ = 10° 53' 56.9" (LT) D = 4° 46' 28.7" L = 228.27' T = 114.48' R = 1200.00'	PI Sta 33+58.01 Δ = 9° 34' 10.8" (RT) D = 3° 41' 47.4" L = 258.88' T = 129.74' R = 1550.00'	PI Sta 36+65.99 Δ = 26° 28' 58.2" (LT) D = 7° 32' 20.0" L = 351.28' T = 178.84' R = 760.00'
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SE = SEE PLANS SE = SEE PLANS SE = SEE PLANS

**-L-**

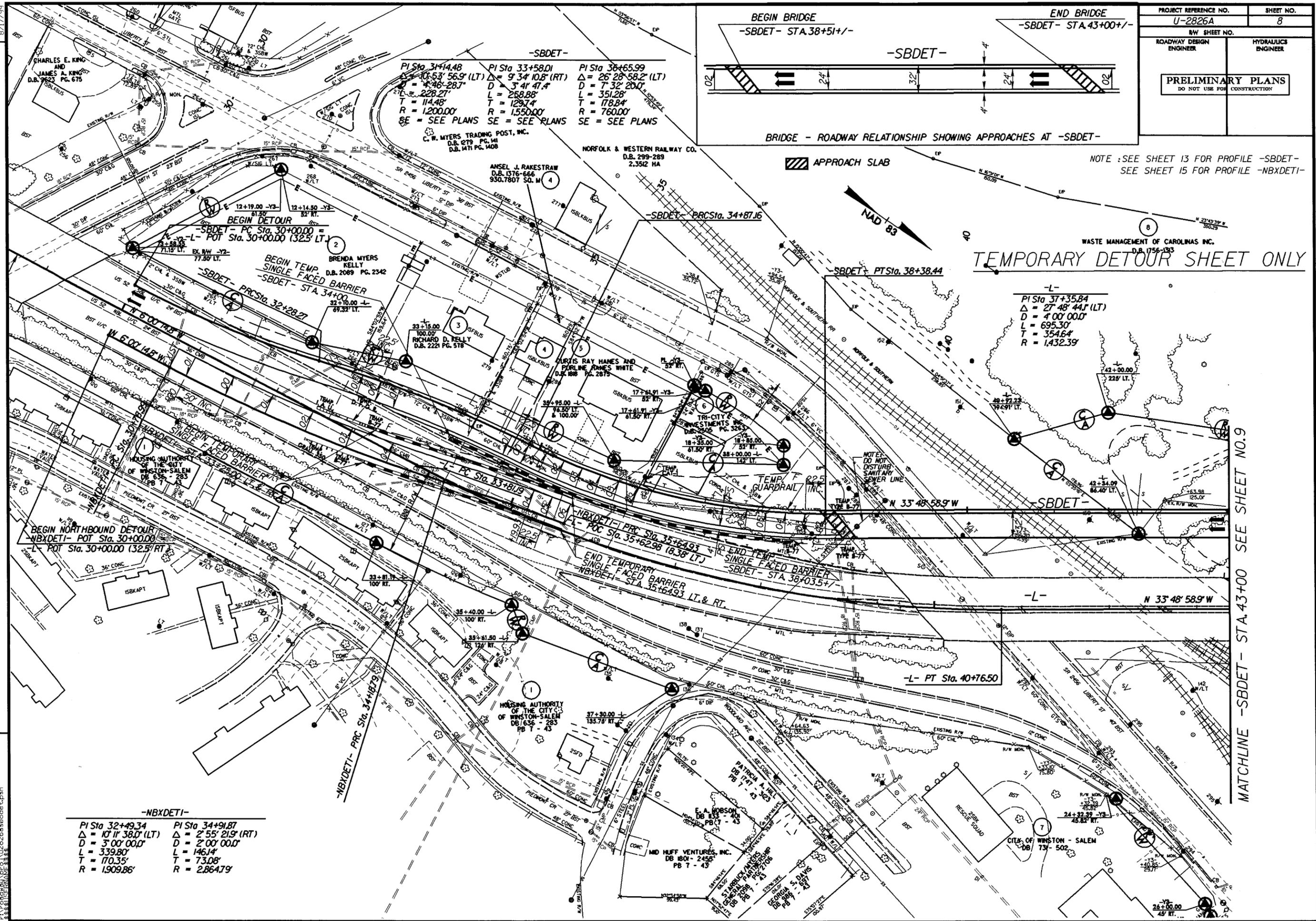
PI Sta 37+35.84 Δ = 27° 48' 44.1" (LT) D = 4° 00' 00.0" L = 695.30' T = 354.64' R = 1432.39'
---

**-NBXDETI-**

PI Sta 32+49.34 Δ = 10° 11' 38.0" (LT) D = 3° 00' 00.0" L = 339.80' T = 170.35' R = 1909.86'	PI Sta 34+91.87 Δ = 2° 55' 21.9" (RT) D = 2° 00' 00.0" L = 146.14' T = 73.08' R = 2.86479'
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PROJECT REFERENCE NO. U-2826A		SHEET NO. 9	
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ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			

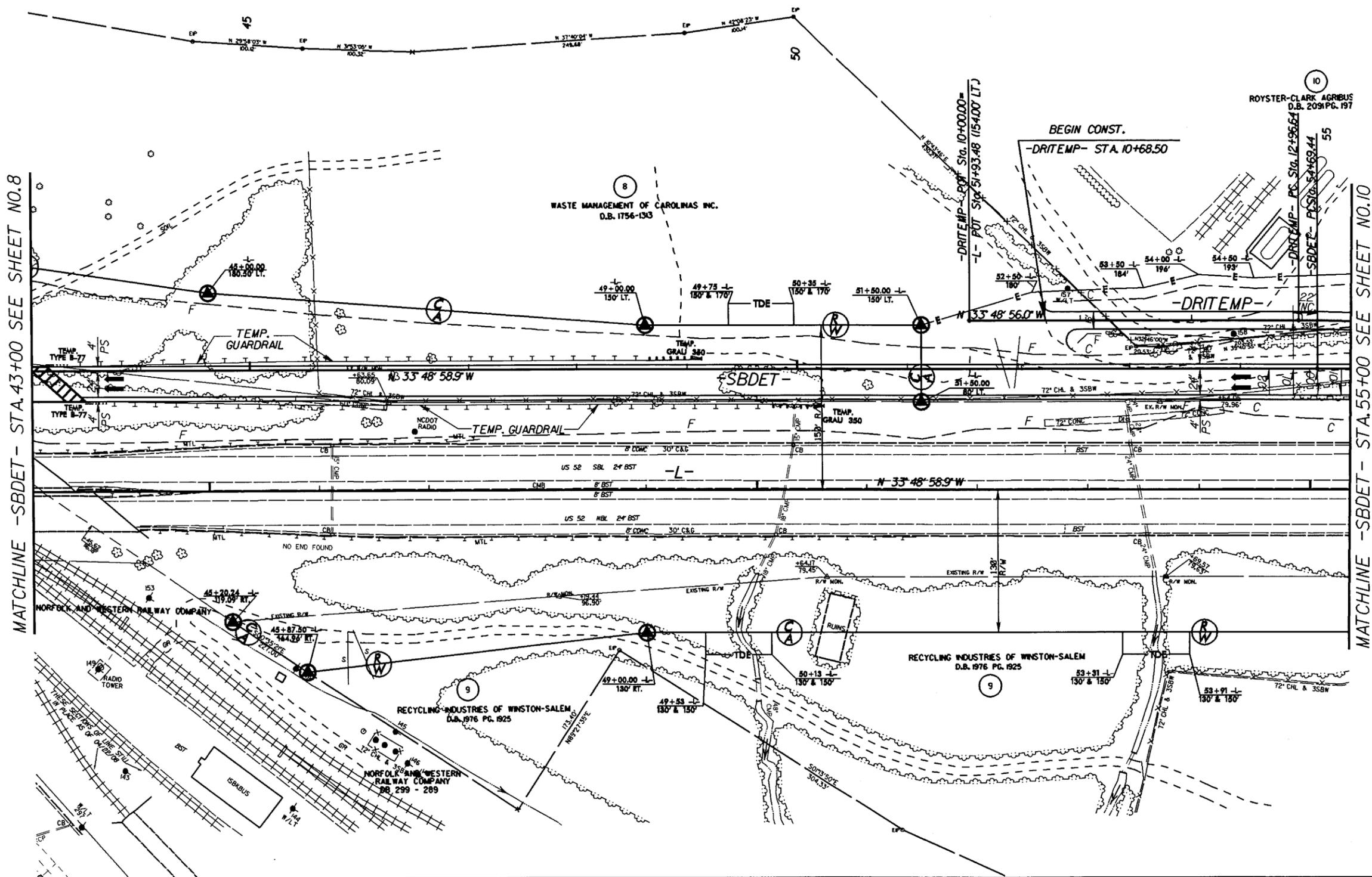
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 PI Sta 56+94.03  
 $\Delta = 8' 57" 55.4" (RT)$   
 $D = 2' 00" 00.0"$   
 $L = 448.27'$   
 $T = 224.59'$   
 $R = 2,864.79'$   
 SE = SEE PLANS

**-DRITEMP-**  
 PI Sta 13+63.79  
 $\Delta = 5' 07" 35.0" (RT)$   
 $D = 3' 49" 11.0"$   
 $L = 134.21'$   
 $T = 67.15'$   
 $R = 1,500.00'$



NOTE : SEE SHEET 13 FOR PROFILE -SBDET-  
 SEE SHEET 7 FOR PROFILE -DRITEMP-

**TEMPORARY DETOUR SHEET ONLY**



MATCHLINE -SBDET- STA. 43+00 SEE SHEET NO.8

MATCHLINE -SBDET- STA. 55+00 SEE SHEET NO.10

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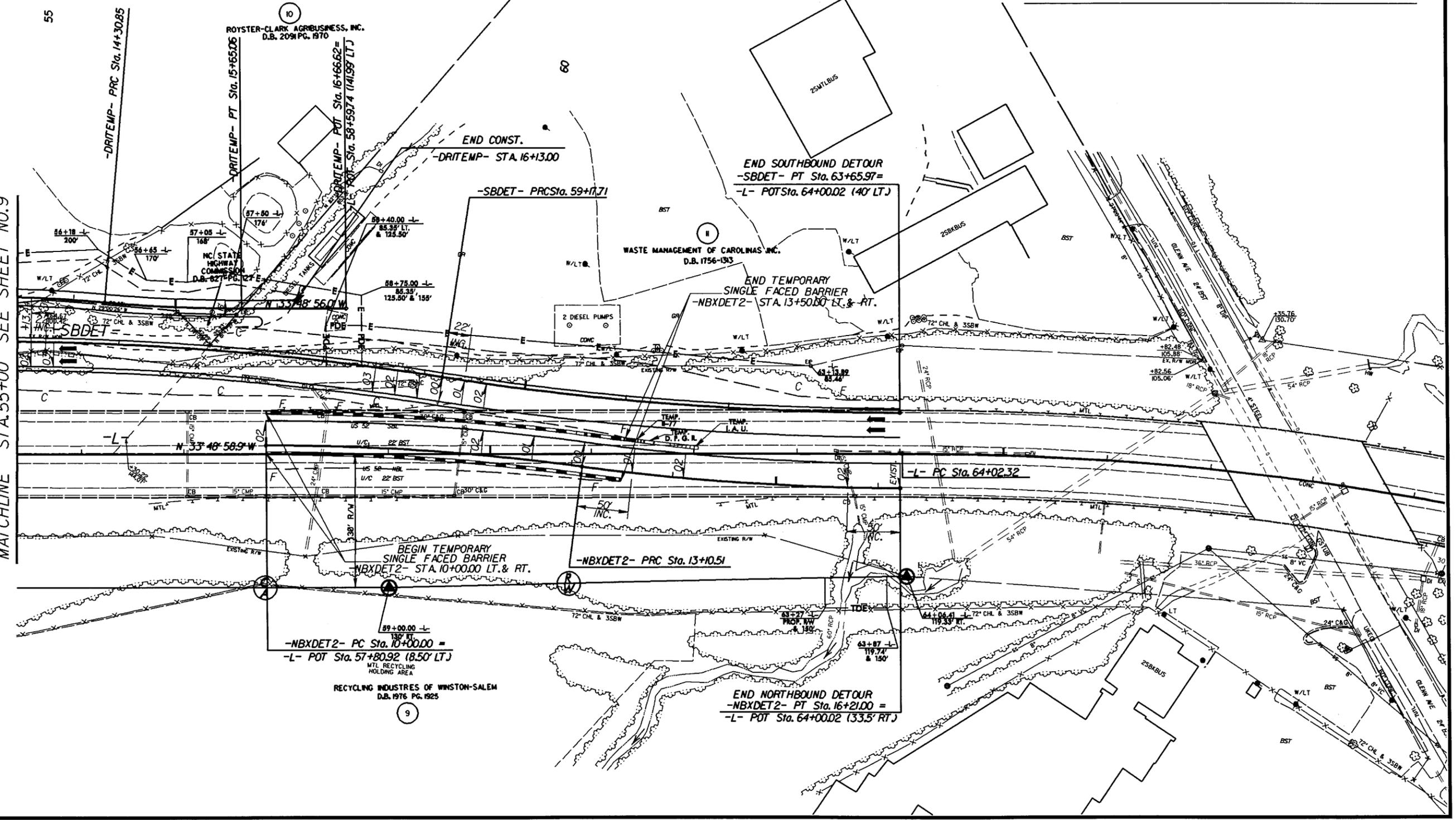


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D = 2' 00' 00.0"	D = 2' 00' 00.0"	D = 3' 49' 11.0"	D = 3' 49' 11.0"	D = 2' 30' 00.0"	D = 2' 30' 00.0"
L = 448.27'	L = 448.27'	L = 134.21'	L = 134.21'	L = 310.51'	L = 310.50'
T = 224.59'	T = 224.59'	T = 67.15'	T = 67.15'	T = 155.49'	T = 155.49'
R = 2,864.79'	R = 2,864.79'	R = 1,500.00'	R = 1,500.00'	R = 2,291.83'	R = 2,291.83'
SE = SEE PLANS	SE = SEE PLANS				

NOTE : SEE SHEET 14 FOR PROFILE -SBDET-  
SEE SHEET 15 FOR PROFILE -NBXDET2-  
SEE SHEET 17 FOR PROFILE -DRITEMP-

**TEMPORARY DETOUR SHEET ONLY**

MATCHLINE STA.55+00 SEE SHEET NO.9



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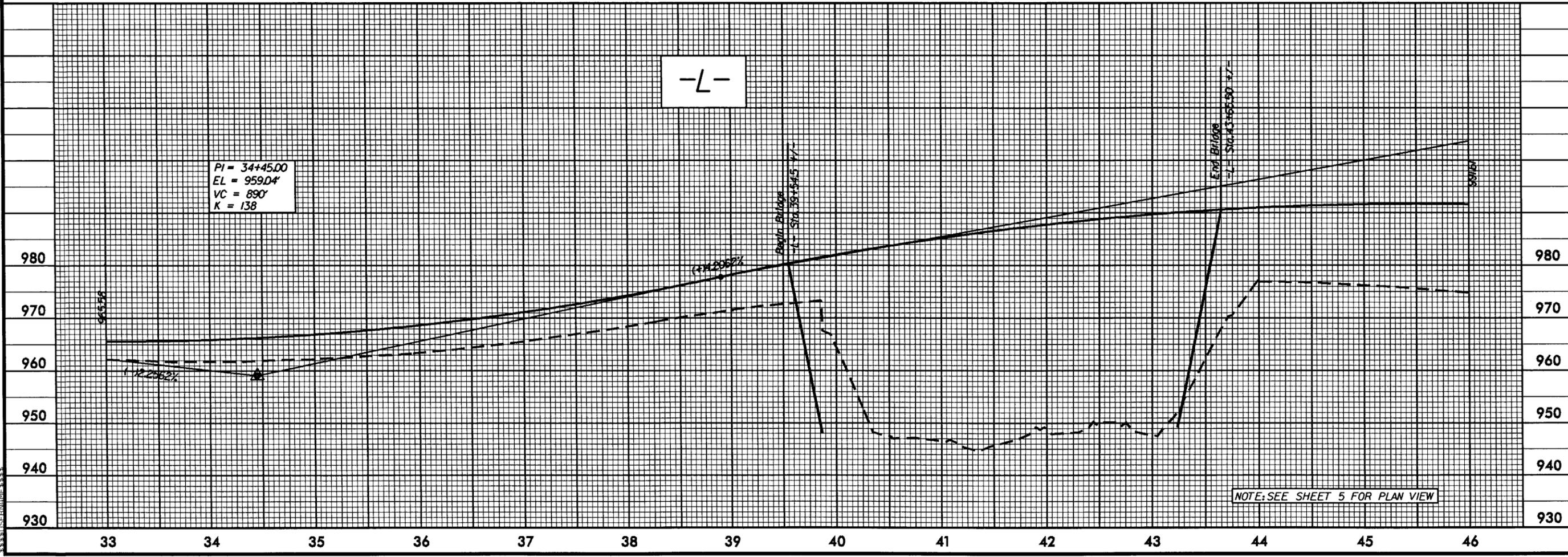
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-L-



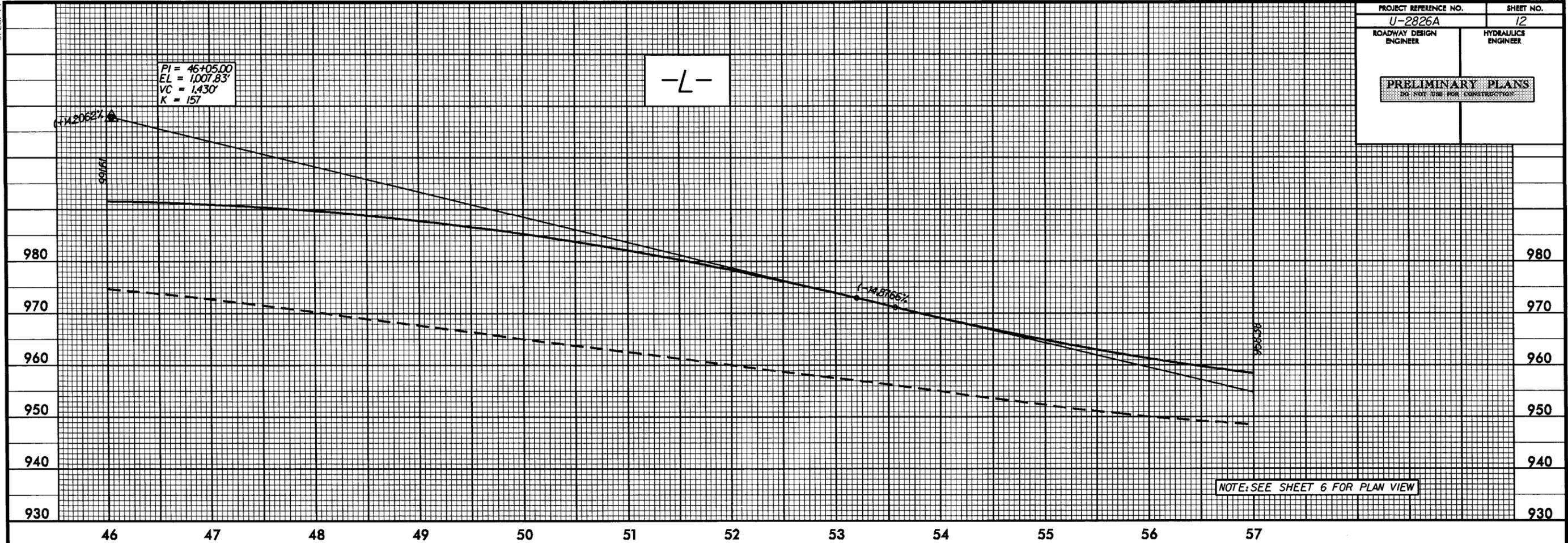
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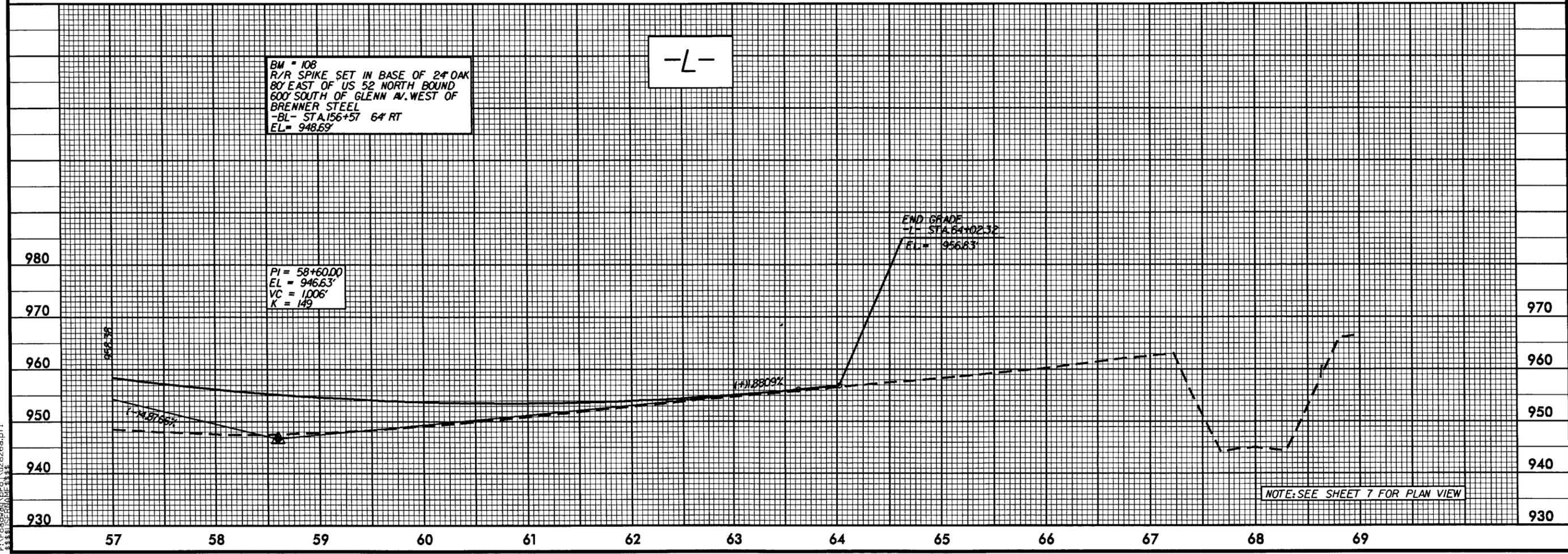
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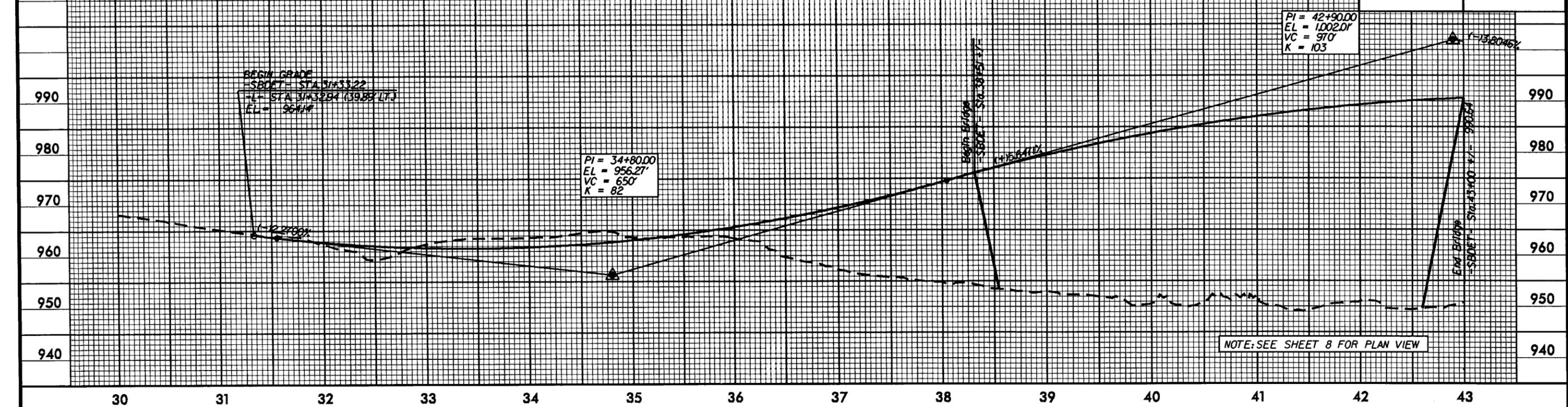


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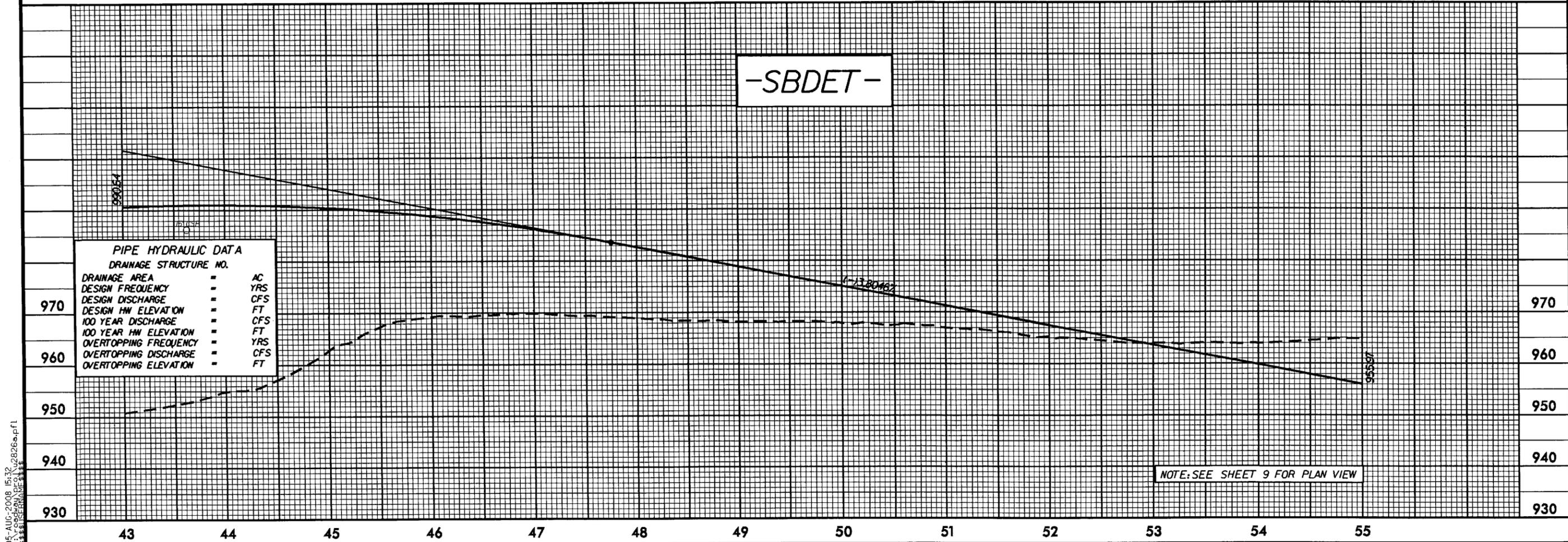


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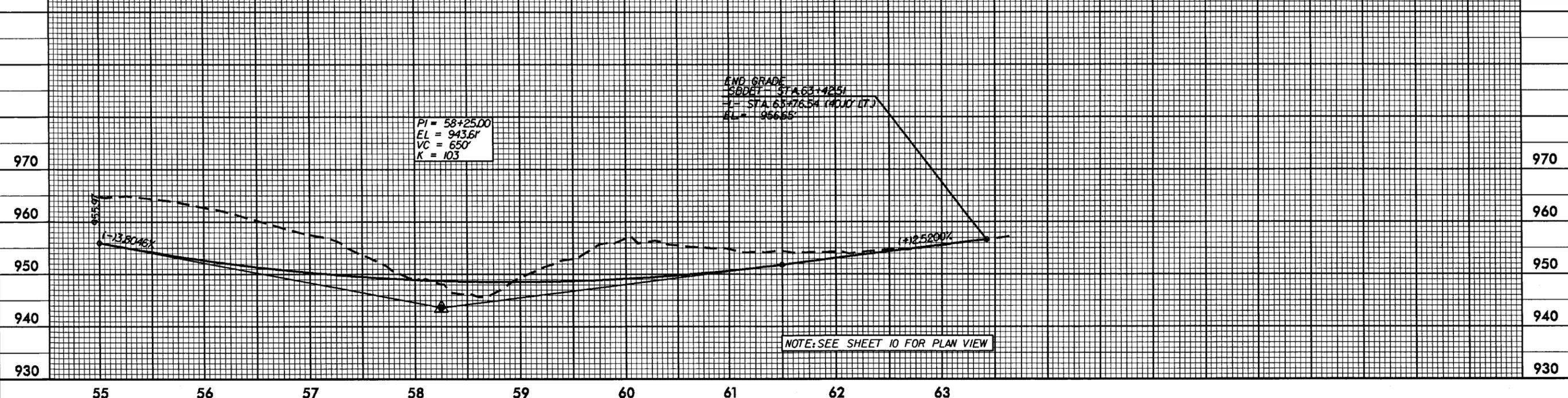
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DRAINAGE STRUCTURE NO.	
DRAINAGE AREA	AC
DESIGN FREQUENCY	YRS
DESIGN DISCHARGE	CFS
DESIGN HW ELEVATION	FT
100 YEAR DISCHARGE	CFS
100 YEAR HW ELEVATION	FT
OVERTOPPING FREQUENCY	YRS
OVERTOPPING DISCHARGE	CFS
OVERTOPPING ELEVATION	FT

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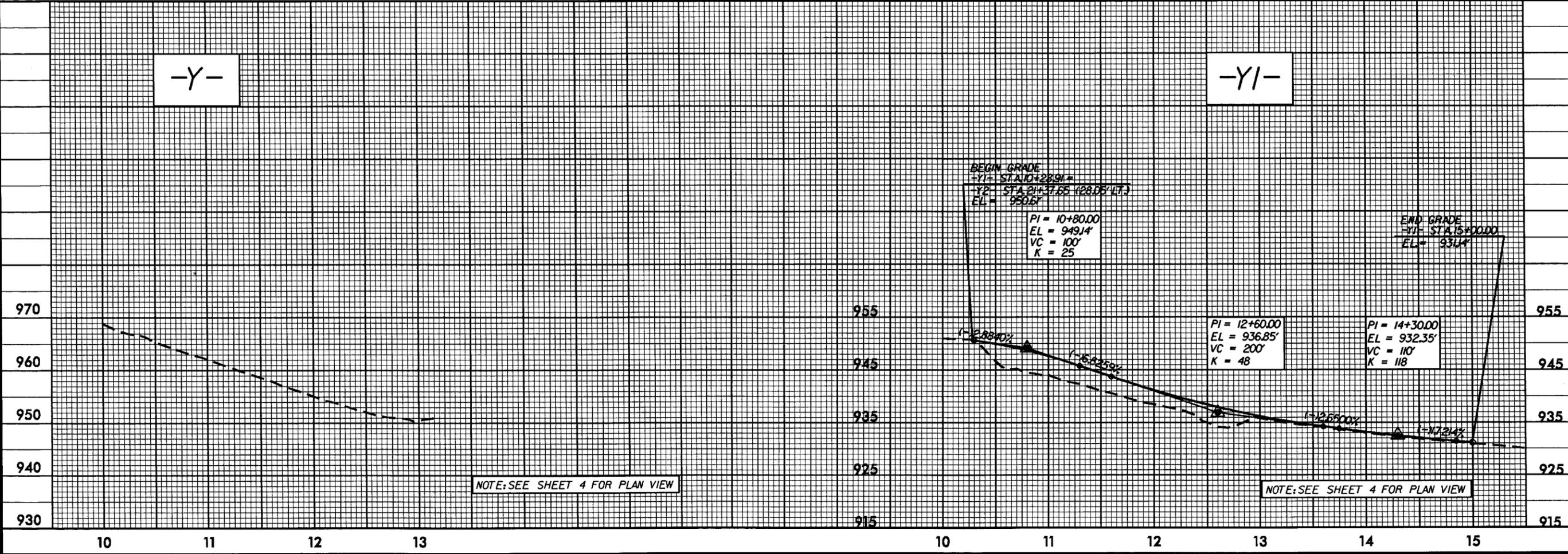
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PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	

-SBDET-



-Y-

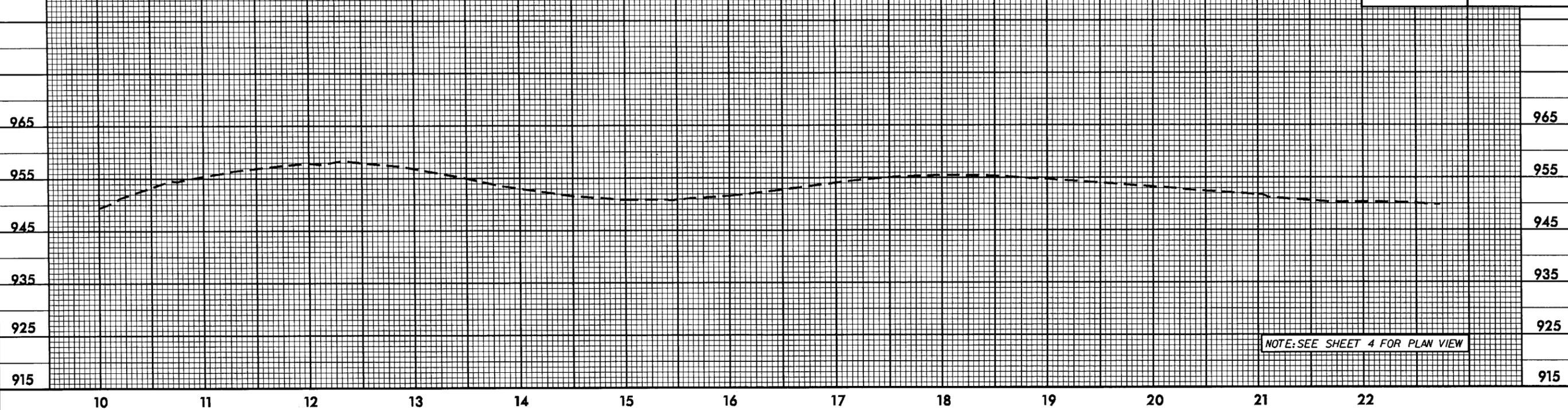
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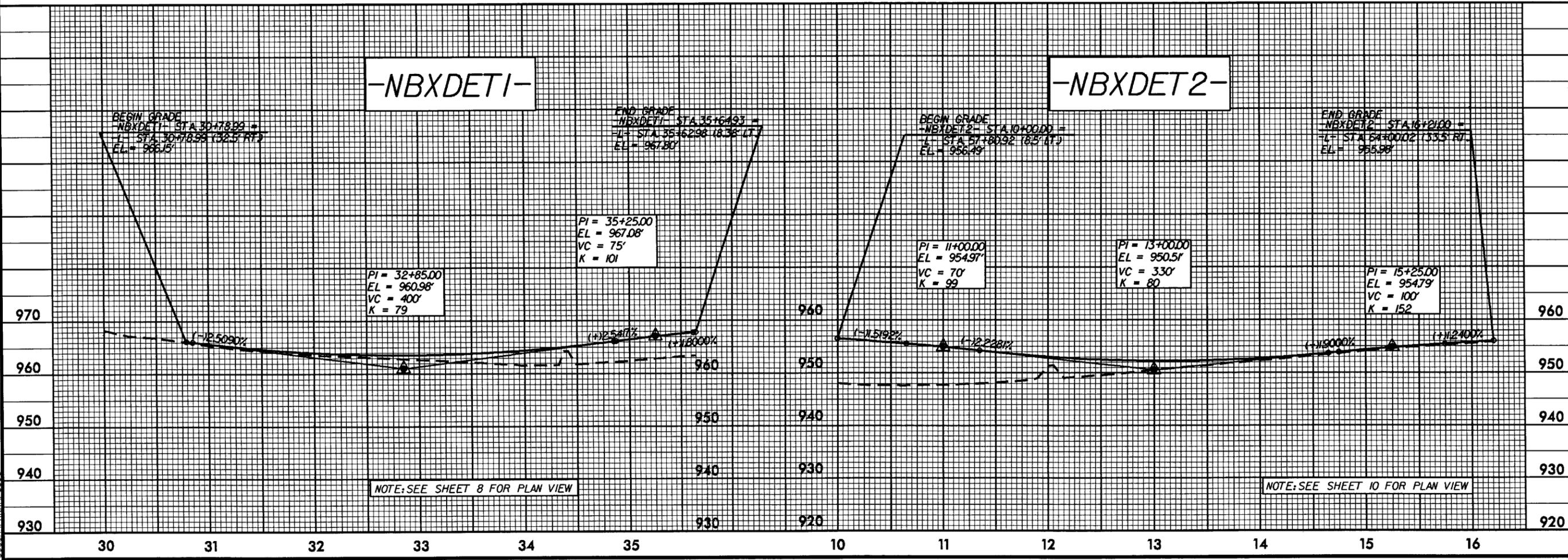
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-Y2-



-NBXDET1-

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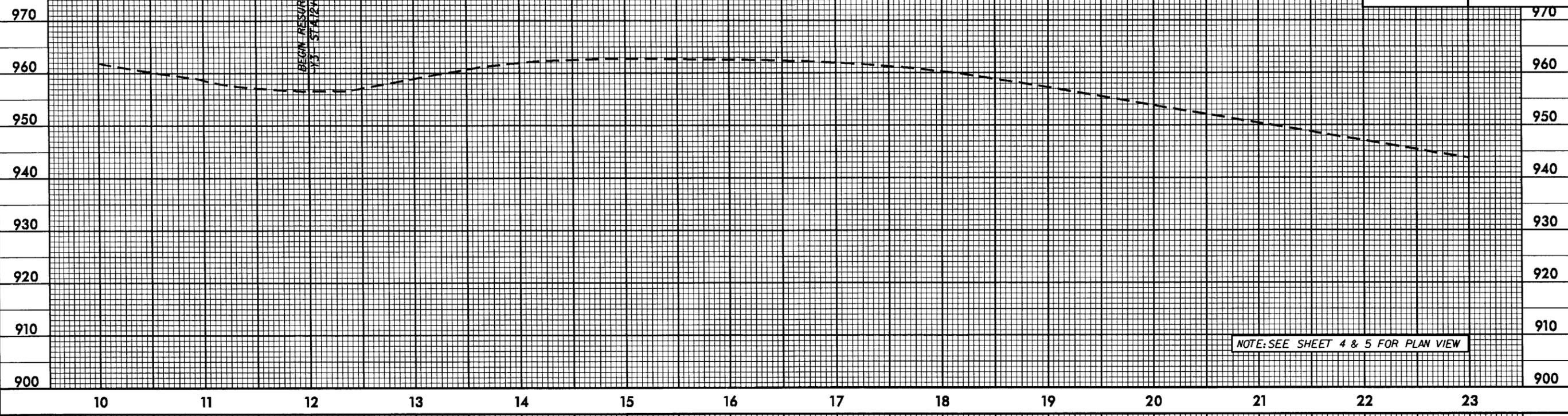


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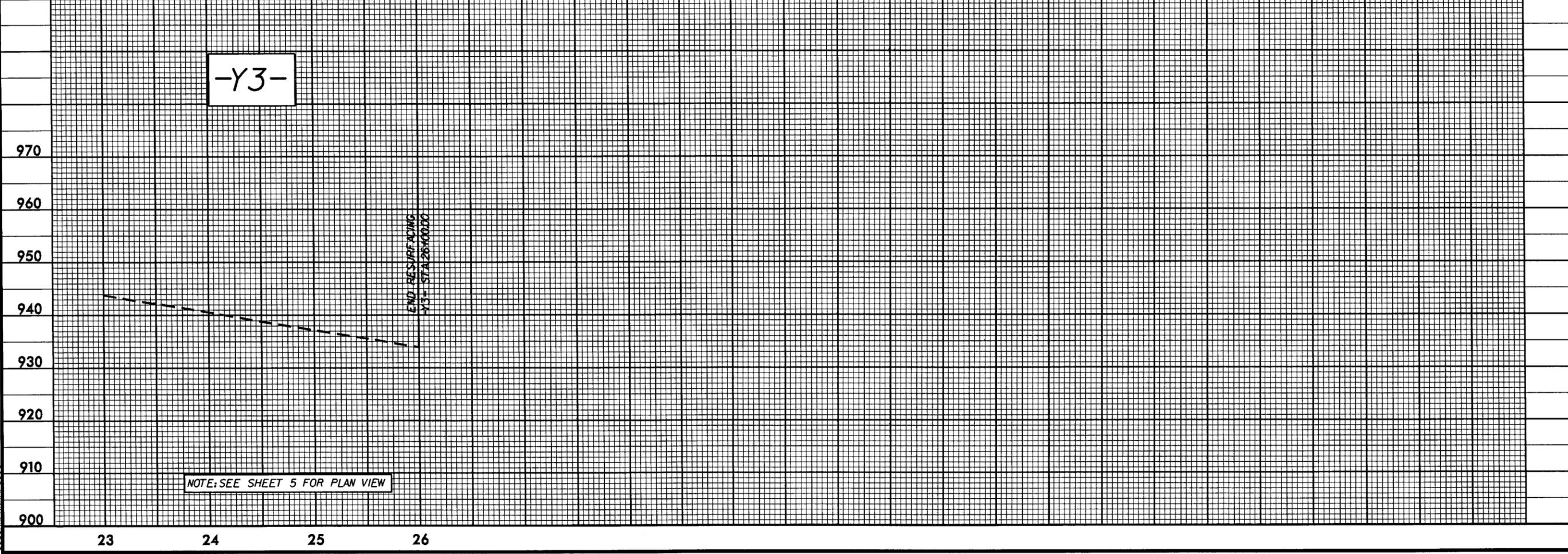
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-Y3-



NOTE: SEE SHEET 4 & 5 FOR PLAN VIEW

-Y3-



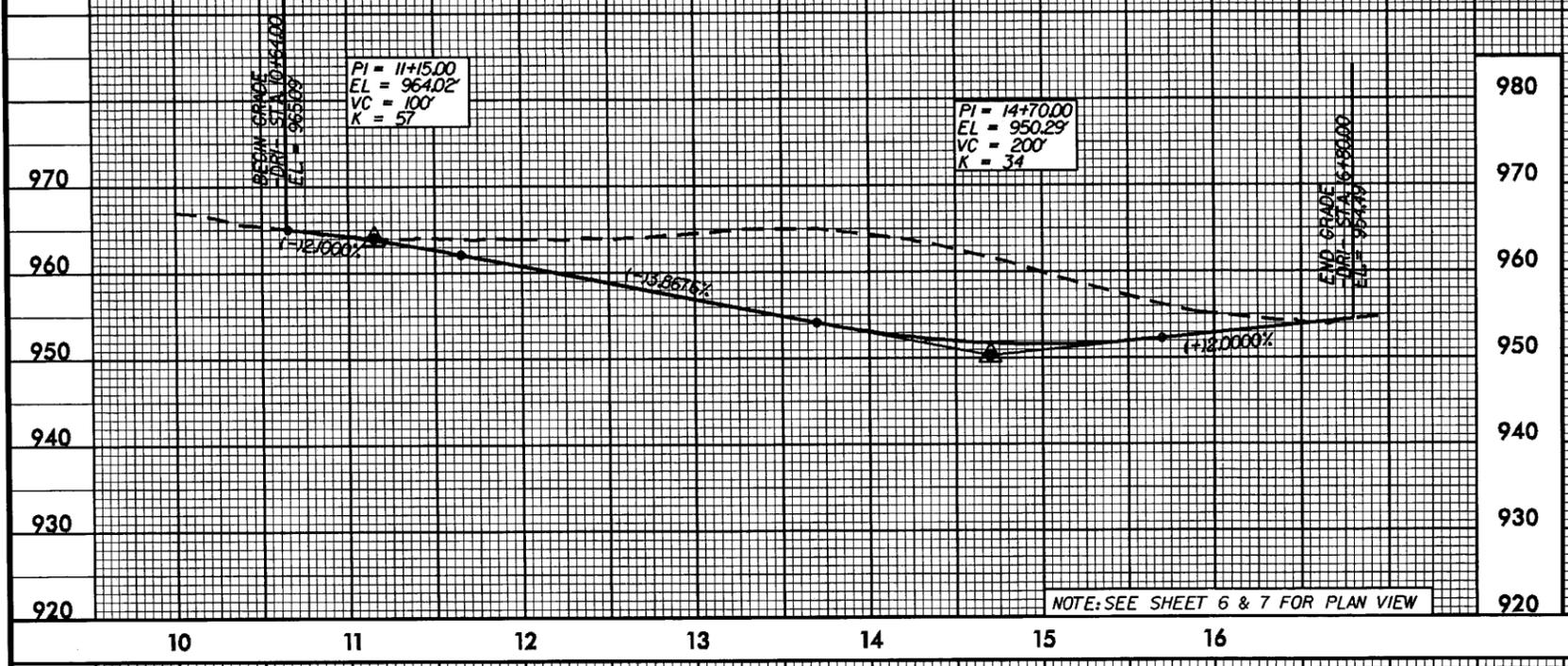
NOTE: SEE SHEET 5 FOR PLAN VIEW

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PROJECT REFERENCE NO. U-2826A	SHEET NO. 17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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# -DRI-



# -DRITEMP-



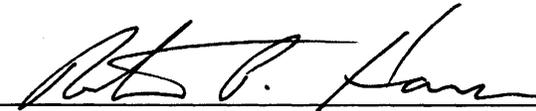
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Bridge Numbers 256 and 257 on US 52  
in Winston-Salem  
Forsyth County  
Federal-Aid Project NHF-52(14)  
State Project 8.1622802  
WBS Element 34871.1.2  
TIP Project U-2826A

**CATEGORICAL EXCLUSION**

U. S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
AND  
N. C. DEPARTMENT OF TRANSPORTATION

APPROVED:

3/31/04  
Date *for*   
Gregory J. Thorpe, Ph.D., Environmental Management Director  
Project Development and Environmental Analysis Branch

3/31/04  
Date *for*   
John F. Sullivan, III, P.E.  
Division Administrator, Federal Highway Administration (FHWA)

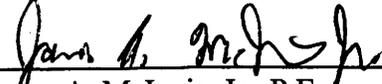
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in Winston-Salem  
Forsyth County  
Federal-Aid Project NHF-52(14)  
State Project 8.1622802  
WBS Element 34871.1.2  
TIP Project U-2826A

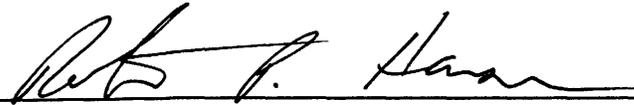
CATEGORICAL EXCLUSION

Documentation prepared in the Project Development and Environmental Analysis Branch  
by:

  
Alethia F. Raynor, P.E.  
Project Development Engineer



  
James A. McInnis, Jr., P.E.  
Project Development Unit Head

  
Robert P. Hanson, P.E.  
Assistant Branch Manager,  
Project Development and Environmental Analysis Branch

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## **PROJECT COMMITMENTS**

Bridge Numbers 256 and 257 on US 52  
in Winston-Salem  
Forsyth County  
Federal-Aid Project NHF-52(14)  
State Project 8.1622802  
WBS Element 34871.1.2  
TIP Project U-2826A

### **Division Nine**

During construction of the project, the driveway to the Norfolk Southern Railway Company rail yard office will be kept open at all times.

During construction of the project, the driveway to the Winston-Salem Rescue Squad, located on Liberty Street, will be kept open at all times. No equipment or materials will be parked or placed in the rescue squad driveway at any time.

Following construction of the project, the Division Traffic Operations staff will conduct a traffic signal study at the intersection of Liberty Street and 30<sup>th</sup> Street to determine the feasibility of a signal at this location. If warrants for a traffic signal are met, a signal will be installed.

### **Traffic Engineering and Safety Systems Branch, Signing Section**

The Signing Section of NCDOT will coordinate with the Smith Reynolds Airport Director and Division Nine regarding directional signing to be provided along northbound US 52 to direct motorists wishing to access northbound Liberty Street and the Smith Reynolds Airport.

### **Design Services Unit, Special Design Section / Traffic Engineering and Safety Systems Branch, Traffic Management Systems Section / Traffic Engineering and Safety Systems Branch, Signing Section**

A portion of US 52 within the project limits is within the approach path of a runway of Smith Reynolds Airport. Any signs or fixtures higher than 15 feet or any lighted fixtures placed within this area could potentially conflict with the runway glide path. The above sections of NCDOT will coordinate with the Project Development and Environmental Analysis Branch staff and the Airport regarding any type of raised structure that may be constructed on US 52 between the 28<sup>th</sup> Street/Indiana Avenue entrance ramp and 500 feet north of Bridge Numbers 256 and 257.

**Roadway Design Unit / Geotechnical Unit**

The proposed project will require property from several sites containing potentially hazardous materials. A detailed investigation will be performed for all of the properties prior to right of way acquisition in order to determine the extent of any contamination.

**Project Development and Environmental Analysis Branch / Roadway Design Unit / Programming and TIP Branch**

Existing sidewalks along SR 2456 (Liberty Street) will be replaced as a part of the proposed project. The City of Winston Salem has requested new sidewalk along the east side of Liberty Street between 28<sup>th</sup> Street and 30<sup>th</sup> Street. The City has not yet committed to participate in the cost of the new sidewalk. NCDOT's Pedestrian Policy Guidelines require municipalities to commit to participate in the cost of pedestrian facilities and maintenance and liability responsibilities. The Project Development and Environmental Analysis Branch will continue to coordinate with the City of Winston Salem regarding their commitment to pedestrian facilities along the project.

**Project Development and Environmental Analysis Branch**

Federal Aviation Administration (FAA) Form 7460 will be completed and submitted to the Southern Region office of the FAA prior to construction of the project.

**Project Development and Environmental Analysis Branch / Traffic Engineering and Safety Systems Branch**

Intersections within the project will be evaluated for the feasibility of crosswalks and pedestrian signal heads. The Project Development and Environmental Analysis Branch will coordinate this effort.

## I. DESCRIPTION OF PROPOSED ACTION

### A. Project Purpose

The purpose of the proposed project is to replace two deficient bridges, which carry US 52 over SR 2456 (Liberty Street) and railroad tracks of the Norfolk Southern Railway Company. The replacement of these structures will result in safer and more efficient traffic operations.

### B. General Description

The subject project involves the removal and replacement of Bridge Numbers 256 and 257 on US 52 in Winston-Salem. These bridges carry US 52 over SR 2456 (Liberty Street) and railroad tracks of the Norfolk Southern Railway Company. A temporary detour structure will be required to maintain traffic along US 52 during construction of the new bridges. In addition to the proposed bridge replacements, the project will also involve the permanent closure of the exit ramp from northbound US 52 onto Liberty Street, as well as improvements to the surrounding streets. Several Intelligent Transportation System (ITS) items, such as traffic cameras and a variable message sign, will also be installed along US 52 within the existing right of way as a part of the project. The project area is shown on Figure 1.

TIP Project U-2826A is included in the approved 2004-2010 North Carolina Transportation Improvement Program (TIP). Right of way acquisition is scheduled for fiscal year 2004 and construction is scheduled for fiscal year 2006.

### C. Cost Estimates

The cost estimate included in the TIP for the project is \$12,800,000. Of this total, \$800,000 is allocated for right of way acquisition and \$12,000,000 for construction. Current cost estimates are as follows:

Construction	\$13,000,000
<u>Right of Way Acquisition</u>	<u>\$ 601,500</u>
TOTAL	\$13,601,500

## **II. NEED FOR PROJECT**

### **A. Description of Existing Facility**

#### **1. Functional Classification**

US 52 is classified as an Urban Principal Arterial in the North Carolina functional classification system. Liberty Street is classified as an Urban Collector.

#### **2. Roadway**

US 52 is a primary north-south route through central Forsyth county. The existing typical section is a four-lane divided highway with two 12-foot travel lanes in each direction separated by a 16-foot median. The outside paved shoulders are approximately 10 feet. The posted speed limit is 55 mph.

A number of interchanges, many of which do not provide for all movements, are located along US 52 through Winston-Salem. Two partial interchanges exist within the project limits. At the two bridges to be replaced by this project, a single ramp provides access from northbound US 52 onto northbound Liberty Street. Approximately 1,800 feet south of the bridges, a partial interchange provides access from US 52 to several surrounding streets. A single ramp and loop allow northbound US 52 traffic to access Cleveland Avenue and 25<sup>th</sup> Street, respectively. A ramp and loop also provide access from 28<sup>th</sup> Street/Indiana Avenue and Cleveland Avenue to northbound US 52. A single ramp provides access from southbound US 52 onto Liberty Street. No access is provided onto southbound US 52 at this location (the ramp onto southbound US 52 was closed and removed under a previous TIP project).

Liberty Street passes beneath the subject bridges. Between 25<sup>th</sup> and 28<sup>th</sup> Streets, Liberty Street is a four-lane curb and gutter facility with two travel lanes in each direction. North of 28<sup>th</sup> Street, the typical section changes to one northbound lane and two southbound lanes. Beneath the bridges, the roadway width is approximately 41 feet. At the ramp merge, Liberty Street gains an additional northbound lane. Thirtieth Street intersects Liberty Street approximately 150 feet north of the exit ramp. The posted speed limit along this portion of Liberty Street is 45 mph.

East of its intersection with Liberty Street, 28<sup>th</sup> Street/Indiana Avenue crosses beneath US 52. On the east side of US 52, 28<sup>th</sup> Street makes a sharp turn to the south and becomes Cleveland Avenue. The entrance and exit ramps connecting this area to northbound US 52 are located along this section of Cleveland Avenue. Cleveland Avenue is a two-lane facility.

### **3. Existing Structures**

Bridge Number 256 carries two lanes of northbound US 52 traffic over Liberty Street and the Norfolk Southern Railroad. This bridge was constructed in 1964, and is 423 feet long. It has a deck width of 33.5 feet, and a clear roadway width of 28 feet. The superstructure of the five span bridge is composed of a reinforced concrete deck and steel I-beam girders. The bents are either concrete posts on spread footings or concrete piles. The bridge currently has a sufficiency rating of 45.5 (out of 100 possible rating points).

Bridge Number 257 carries two lanes of southbound US 52 traffic. This bridge was also constructed in 1964, and is 387 feet long. Bridge Number 257 has a deck width of 33.5 feet, and a clear roadway width of 28 feet. This five span bridge has a sufficiency rating of 44.9. The bridge's deck is composed of reinforced concrete on steel I-beams. The substructure of this bridge is the same as Bridge Number 256.

### **4. Right of Way and Access Control**

Existing right of way along US 52 within the project limits ranges between 160 and 250 feet. Access along US 52 is fully controlled.

Approximately 60 feet of right of way exists along Liberty Street within the project area. There is no control of access along this roadway.

### **5. Intersections**

As discussed in Section II-A-2, a partial interchange on US 52 provides access to 25<sup>th</sup> Street, 28<sup>th</sup> Street/Indiana Avenue and Cleveland Avenue from US 52 northbound and Liberty Street from US 52 southbound. The exit and entrance ramps for northbound US 52 are located on Cleveland Avenue. Twenty-sixth Street also intersects Cleveland Avenue, but is offset from the ramp terminals. This intersection is not signalized.

Both 28<sup>th</sup> Street and 30<sup>th</sup> Street have intersections with Liberty Street in the project area. Of these two, only the intersection of 28<sup>th</sup> Street and Liberty Street is signalized.

### **6. Railroad Crossings**

Bridge Numbers 256 and 257 carry US 52 over the Norfolk Southern Railroad. A single mainline track and several sidetracks exist under the bridge. Between two and eight through freight trains, and approximately three switching trains pass under the bridges per day.

## **7. Bicycle Accommodations/Sidewalks**

No sidewalks or bicycle accommodations exist along US 52.

No exclusive bicycle lanes or bicycle accommodations exist along the studied portion of Liberty Street. A sidewalk, approximately four feet wide, runs along the east side of Liberty Street under the bridges. The sidewalk ends in the area of the Liberty Street exit ramp from northbound US 52.

## **8. Utilities**

Sanitary sewer lines, water lines and telephone lines are located along the east side of Liberty Street in the project area. Piedmont Natural Gas lines are located along the west side of Liberty Street. Fiber optic lines are located further away from Liberty Street, on Norfolk Southern's property. Telephone and power poles are located along both sides of the street.

Water and sewer lines are located along 26<sup>th</sup> Street. Gas lines are located on the north side of the street. Water, sewer, gas and telephone lines are located on the east side of US 52, along the Piedmont Park property.

## **9. School Bus Data**

Hanes-Lowrance school is located on Indiana Avenue, just west of Liberty Street. Within the project area, bus usage along US 52, Liberty Street and Cleveland Avenue is approximately 80 buses per day.

## **10. Airports**

Smith Reynolds Airport is located on the east side of Liberty Street, just north of the project area. This airport primarily serves general aviation. The airport has two runways. Bridge Numbers 256 and 257 are located approximately 2,400 feet southwest of runway 4, and are within the approach path for the runway. Approximately 110 aircraft are based at the airport. Smith Reynolds is the home of PACE Airlines, a charter airline.

## **11. Traffic Volumes**

Anticipated traffic volumes for the project area were estimated for the years 2006 and 2025 considering both the existing ramp configuration and the proposed permanent closure of the Liberty Street exit ramp. Traffic volumes based on the existing ramp configuration for the years 2006 and 2025 are shown on Figures 4A and 4B. Traffic

volumes for the area based on the proposed permanent closure of the Liberty Street exit ramp are shown on Figures 4C and 4D for the same two years.

If no changes were made to the present ramp configuration, volumes along US 52 in the project area would range between 47,000 and 68,400 vehicles per day (vpd) for the year 2025. Approximately 68,400 vpd would use US 52 in the area of the bridge replacement. Along Liberty Street, north of Cleveland Avenue/Indiana Avenue, volumes are expected to range between 13,600 and 17,100 vpd.

With the removal of the Liberty Street exit ramp, volumes along US 52 are anticipated to range between 47,000 and 70,500 vpd for the year 2025. Approximately 70,500 vpd are anticipated to use US 52 in the area of the bridges. Along Liberty Street, volumes are expected to range between 14,800 and 19,900 vpd.

Comparing these two scenarios (no-build and recommended build), traffic volumes increase at the 25<sup>th</sup> Street/28<sup>th</sup> Street ramp area and at the Akron Drive exit. Some increase in volumes also appears along Liberty Street and Akron Drive; however, outside the project area anticipated traffic volumes vary only slightly. North of Akron Drive, volumes along US 52 do not change.

## 12. Accident Record

Accident studies were conducted along existing facilities within the project area for the time period between May 2000 and April 2003. Accident studies were conducted along US 52 between the Liberty Street entrance ramp near New Hope Lane (formerly 18<sup>th</sup> Street) and Akron Drive. Accident studies were also conducted along Liberty Street from 25<sup>th</sup> Street to Fairchild Road and along Cleveland Avenue from 18<sup>th</sup> Street to Indiana Avenue. Table 1 below presents the results of these studies.

**Table 1  
Crash Data along Existing Facilities**

Roadway	5/00-4/03 Number of Crashes	5/00-4/03 Number of Fatal Crashes	Total Crash Rate# for Studied Section	1999-2001 Statewide Crash Rate#
US 52	255	0	271.23	179.23*
Liberty Street	80	0	681.52	482.86**
Cleveland Avenue	70	0	1013.43	N/A

#Crash rates per 100 million vehicle miles

\*Statewide crash rate for urban four-lane divided US routes (with full control of access)

\*\*Statewide crash rate for urban four-lane undivided secondary routes

Cleveland Avenue is not a state-maintained facility; therefore, comparative statewide crash rates are not available.

The crashes along US 52 resulted in over one million dollars of property damage. The largest number of crashes along the studied portion of US 52 were rear-end type collisions due to slowing or stopping.

### **13. Other Highway Projects in the Area**

TIP Project U-2826B is a \$15 million project to improve safety and relieve traffic congestion on US 52 between the I-40 Bypass and the proposed Western Loop Interchange in Winston-Salem. The subject project (U-2826A) is located within the limits of project U-2826B.

The exact scope of Project U-2826B has not been determined, but a study to determine the most cost-effective locations for safety improvements is underway. The project may include the permanent closure of some on and off ramps to US 52, the use of highway shoulders as travel lanes, and the installation of cameras and other devices to provide motorists with information about traffic congestion and crashes. A decision on the scope of proposed improvements is anticipated in the Spring of 2004. Right of way acquisition is scheduled to begin in fiscal year 2005 and construction is scheduled in fiscal year 2007.

TIP Project B-4746 proposes to replace Bridge Number 229 on SR 2264 (Akron Drive) over railroad tracks owned by the Norfolk Southern Railway Company. Right of way acquisition is scheduled to begin in fiscal year 2008 and construction is scheduled to begin in fiscal year 2010.

### **B. Deficiencies of Existing Facility**

Bridge Number 256 has a sufficiency rating of 45.5, and is considered both structurally deficient and functionally obsolete. Bridge Number 257 has a sufficiency rating of 44.9 and is also considered structurally deficient and functionally obsolete. According to federal guidelines, these bridges warrant replacement.

As mentioned in Section II-A-2, a number of ramps and interchanges are located along US 52 in the project area. Just south of the two bridges to be replaced by this project, a single exit ramp provides access from northbound US 52 onto northbound Liberty Street. Currently, the weaving distance on US 52 between the 28<sup>th</sup> Street/Indiana Avenue entrance ramp onto northbound US 52 and the Liberty Street exit ramp is approximately 610 feet. The minimum recommended weaving distance along an urban freeway is 1,600 feet. In 2025, this weaving segment is anticipated to operate at level of service (LOS) E.

The vertical alignment along US 52 does not meet a 60 MPH design speed. As part of the bridge replacement project, the vertical alignment on US 52 in the project area will be adjusted to meet a 60 MPH design speed. In order to meet this standard on US 52

and meet other design standards for ramps, the location of the Liberty Street exit ramp (on US 52) would need to shift south of its present location. This lessens the weaving distance on US 52 between the 28<sup>th</sup> Street/Indiana Avenue entrance ramp and the Liberty Street exit ramp. Therefore, making these improvements along US 52 and retaining both the entrance and exit ramps in this area are not feasible.

### **C. Benefits of Proposed Project**

The proposed project will replace two obsolete bridges with wider structures which can accommodate possible future widening. The project will also improve safety and traffic operations along US 52 in the vicinity of the bridges by eliminating an existing weave section between two ramps. By removing the Liberty Street exit ramp, a longer acceleration lane on US 52 for the 28<sup>th</sup> Street/Indiana Avenue entrance ramp can be accommodated. In 2025 with the proposed improvements, this on-ramp is anticipated to operate at level of service C.

## **III. PROPOSED IMPROVEMENTS**

### **A. Proposed Structures**

Bridge numbers 256 and 257 will be replaced at their existing location with new dual structures (Figure 2). Each of the new structures will have a clear roadway width of approximately 52 feet. This width will accommodate three 12-foot lanes (two travel lanes and acceleration or deceleration lanes for interchange), 6-foot inside and 10-foot outside shoulders (Figure 5). The structure carrying northbound traffic will be approximately 450 feet in length. The second structure, which will carry southbound traffic, will be approximately 400 feet in length.

### **B. Roadway**

On US 52, the existing four-lane divided typical section will be maintained. There will be approximately 900 feet of new approach work to the south and approximately 2,000 feet of new approach work to the north of the two bridges. This approach work includes some modifications to the vertical grade on US 52 in order to meet a 60 MPH design speed.

In addition to the proposed bridge replacements, the project will also involve the permanent closure of the exit ramp from northbound US 52 to Liberty Street. In addition, a second northbound lane will be added to Liberty Street between 28<sup>th</sup> Street and the existing four-lane section on Liberty Street in order to accommodate airport and neighborhood traffic. Improvements will be made at some intersections within the project limits. More details regarding locations and recommendations are provided in Section III-E.

### **C. Right of Way and Access Control**

A variable amount of right of way will be required for the project. Along the east side of Liberty Street, up to approximately 25 feet of additional right of way may be acquired for the proposed improvements. New right of way acquisition will also be required along US 52. South of the bridges, additional right of way will be required along the west side of US 52. North of the bridges, additional right of way will be required along both sides of US 52. Temporary construction easements will be required along much of the project, as well.

The existing full control of access along US 52 will be maintained. No changes to the access control along Liberty Street are recommended.

### **D. Design Speed/Design Exceptions**

A 60 MPH design speed is proposed for portions of the project on US 52. No design exceptions are anticipated for this project.

### **E. Intersections**

As part of the proposed project, improvements will be made to the existing 25<sup>th</sup> Street/28<sup>th</sup> Street interchange. The loop providing direct access from 28<sup>th</sup> Street onto northbound US 52 will be removed. This movement will continue to be accommodated; however, traffic will use the ramp from Cleveland Avenue onto northbound US 52. As part of the improvements, 26<sup>th</sup> Street will be realigned to intersect Cleveland Avenue across from the US 52 ramps. It is likely this new intersection will be signalized. A traffic signal study will be conducted at the intersection of Liberty Street and 30<sup>th</sup> Street following construction of the project in order to determine the feasibility of a signal at that location.

### **F. Signing**

Directional signing will be provided along northbound US 52 to direct motorists wishing to access northbound Liberty Street and the Smith Reynolds Airport.

### **G. Intelligent Transportation System (ITS) Items**

As part of the proposed project, several Intelligent Transportation System (ITS) items will be installed and connected to the existing system along US 52. Six video cameras will be mounted on poles within the existing right of way in order to provide coverage of US 52 in the vicinity of the project. In addition, one dynamic message sign

will also be installed along northbound US 52, south of the project area. Fiber optic cable and other hardware required for communication and image transmission will also be installed.

#### **H. Bicycle Accommodations/Sidewalks**

Existing sidewalks removed in order to construct this project will be replaced by NCDOT at no cost to the City of Winston Salem. The City has requested new sidewalk along the east side of Liberty Street between 28<sup>th</sup> Street and 30<sup>th</sup> Street. The City has not yet committed to participate in the cost of the new sidewalk. NCDOT's Pedestrian Policy Guidelines requires municipalities to commit to participate in the cost of pedestrian facilities and maintenance and liability responsibilities. The Project Development and Environmental Analysis Branch will continue to coordinate with the City of Winston Salem regarding their commitment to pedestrian facilities along the project.

#### **I. Degree of Utility Conflict**

Based on the location of utilities in the project area, it is anticipated power poles along Liberty Street will need to be relocated. Due to the realignment of 26<sup>th</sup> Street, conflicts with the gas line in the area may occur, as well.

#### **J. Maintenance of Traffic**

Two lanes of traffic will be maintained in both directions on US 52 during construction of the project. A temporary detour, including a temporary detour bridge, will be constructed on the west side of US 52 in order to maintain traffic during construction of the new bridges (Figure 2). The detour will be removed following construction. Temporary lane closures may be required at times along US 52 or on some of the surrounding streets, but these closures will not be permitted during peak hours.

### **IV. ALTERNATIVES TO THE PROPOSED ACTION**

#### **A. Bridge Typical Section Alternatives**

The subject project proposes to replace Bridge Nos. 256 and 257 with new structures that have a clear roadway width of approximately 52 feet. Structures with a clear roadway width of approximately 40 feet were also considered. This width would accommodate two 12-foot travel lanes and 4-foot inside and 12-foot outside shoulders. This width would also allow three 11-foot travel lanes to be configured; but would only be acceptable for use on a part-time basis. It was determined the bridges need to have

sufficient width to accommodate three twelve-foot travel lanes, with shoulders. This provides the most flexibility in accommodating future typical sections along US 52.

Rehabilitating Bridge Numbers 256 and 257 was not considered a viable alternative due to their poor condition.

## **B. Detour and Ramp Closure Alternatives**

### **Traffic Maintenance Alternatives**

The following traffic maintenance alternatives were considered for the project: off-site detour; phased construction (no detour); realignment of US 52; and temporary detour structure.

An off-site detour was not considered feasible due to the volume of traffic on US 52. Phasing construction without a detour was also not a feasible alternative. This type of traffic maintenance would require reducing traffic to one lane in each direction, which is not feasible considering the large volumes of traffic on US 52. Constructing one of the structures on new alignment was not found to be a feasible alternative. Criteria for the recommended design speed cannot be met on new alignment without impacting the structures on US 52 located to the north or the south of the subject bridges. Therefore, building one of the permanent structures on new alignment was eliminated from consideration.

A temporary detour (including temporary structure) will be required to maintain traffic along US 52 during construction of the new bridges. The temporary detour will not meet a 60 MPH design speed; however, this is acceptable for temporary use. Two alternatives were considered for the proposed detour, an east-side detour and a west-side detour.

### **Ramp Closure Alternatives**

Two ramp closure alternatives were considered for the project. These alternatives were developed after it was determined the bridge replacement project would lessen the weaving distance between the 28<sup>th</sup> Street/Indiana Avenue entrance ramp onto northbound US 52 and the Liberty Street exit ramp. Because of the close space between these two ramps, it was determined either the 28<sup>th</sup> Street/Indiana Avenue entrance ramp or the Liberty Street exit ramp should be permanently closed in order to eliminate the weaving problem at this location.

With the Liberty Street ramp closure alternative, improvements will be made to the existing 25<sup>th</sup> Street/28<sup>th</sup> Street interchange and 26<sup>th</sup> Street will be realigned to intersect with 28<sup>th</sup> Street across from the ramps. In addition, a second northbound lane will be added to Liberty Street between 28<sup>th</sup> Street and the existing four-lane section in order to help accommodate airport and neighborhood traffic.

With the 28<sup>th</sup> Street/Indiana Avenue entrance ramp closure alternative, appropriate signing will be installed to direct traffic to use the existing on-ramps onto northbound US 52 from other locations.

### **Project Alternative Comparison**

Based on the detour and ramp closure alternatives described above, the following project alternatives were studied:

- Alternative 1 – East-side temporary detour, Liberty Street exit ramp closure
- Alternative 2 – East-side temporary detour, 28<sup>th</sup> Street/Indiana Avenue entrance ramp closure
- Alternative 3 – West-side temporary detour, Liberty Street exit ramp closure
- Alternative 4 – West-side temporary detour, 28<sup>th</sup> Street/Indiana Avenue entrance ramp closure

Alternatives 1 and 2 are shown on Figure 3A. Alternatives 3 and 4 are shown on Figure 3B.

### **Liberty Street Issues**

Retaining the Liberty Street exit ramp provides a more direct connection to Liberty Street than using the 25<sup>th</sup> Street/28<sup>th</sup> Street exit and the connecting streets. However, retaining the Liberty Street exit requires the removal of the US 52 northbound entrance ramp from 28<sup>th</sup> Street/Indiana Avenue. Traffic would then be directed to use the entrance ramps located at New Hope Lane (formerly 18<sup>th</sup> Street) or Akron Drive. This could result in additional traffic traveling in the surrounding residential neighborhoods. In addition, retaining the Liberty Street exit ramp provides two off-ramps in the same area while removing the only US 52 entrance ramp that services the immediate area. A retaining wall would be constructed adjacent to the exit ramp, in order to limit encroachment on the Piedmont Park public housing complex. This results in additional construction cost associated with Alternatives 2 and 4.

Permanently removing the Liberty Street exit ramp results in a slightly more circuitous route for northbound Liberty Street traffic. However, removal of this ramp helps to reduce safety conflicts at the ramp terminal and 30<sup>th</sup> Street. As mentioned in Section II-A-2, 30<sup>th</sup> Street intersects Liberty Street approximately 150 feet north of the exit ramp. The present configuration results in a short distance for weaving movements. In this area, seven crashes occurred in the three-year time period between May 2000 and April 2003. Therefore, removing the Liberty Street exit helps to eliminate safety conflicts.

## Temporary Detour Issues

Constructing the temporary detour on the east-side would require the construction of a retaining wall adjacent to Piedmont Park to limit encroachment on the property. This results in additional construction cost associated with Alternatives 1 and 2. Constructing the temporary detour on the east-side would also result in greater impacts to two streams. This detour would also require cutting trees, which currently screen a recycling industry from US 52. The west-side detour requires temporary easement acquisition from some of the businesses that line Liberty Street. The railroad favors the west-side detour, since it appears to be the least disruptive to their property and operations.

## Alternatives Summary

One business will be relocated as a result of the proposed project, regardless of the alternative chosen. This is a result of the new approach work associated with the bridge replacements, which does not change with the different alternatives. Impacts to terrestrial communities also remain the same with each alternative. Alternatives 2 and 4 do have less of an impact on streams in the project area when compared to Alternative 3 (recommended alternative). This is due mainly to the impacts to a stream associated with the realignment of 26<sup>th</sup> Street. With this realignment, the street moves east and closer to the stream. Therefore, total avoidance of impacts to the stream is not possible. Alternative 3 is the least expensive when compared to the other “build” alternatives. Table 2 compares the four alternatives, measuring approximate impacts within the proposed right of way:

**Table 2**  
**Alternative Comparison**

Description	Alternative 1	Alternative 2	Alternative 3 Recommended	Alternative 4
Residential Relocates	0	0	0	0
Business Relocates	1	1	1	1
Stream Impacts	350 feet	150 feet	230 feet	30 feet
Construction Cost	\$14,900,000	\$13,800,000	\$13,000,000	\$13,200,000
Right of Way Cost	\$621,500	\$579,500	\$601,500	\$563,500
Total Cost	\$15,521,500	\$14,379,500	\$13,601,500	\$13,763,500

### C. “No-Build” Alternative

The “no-build” alternative would not incur construction costs and would avoid impacts to the natural environment, homes and businesses. However, the “no-build” alternative is not practical, eventually requiring the bridges to be closed to traffic, increasing travel time and inconvenience for roadway users. As a result, this alternative was eliminated from consideration.

## **V. PROBABLE ENVIRONMENTAL EFFECTS OF PROPOSED ACTION**

### **A. Natural Resources**

#### **1. Biotic Resources**

Biotic resources include aquatic and terrestrial ecosystems. Descriptions of the terrestrial systems are presented in the context of plant community classifications (Schafale and Weakley 1990). Dominant plants and animals likely to occur in each community are described and discussed.

##### **a. Terrestrial Communities**

Three biotic communities, maintained roadside, piedmont mixed hardwood forest, and piedmont bottomland forest, exist within the project study area and may be impacted by the subject project. Each of these communities is described below.

##### **Maintained Roadside Community**

The maintained roadside community consists of the highly maintained shoulders and some less intensively managed areas that grade into the surrounding natural communities. Significant soil disturbance and compaction, along with frequent mowing or herbicide application, keep this community in an early successional state.

Dominant plants in the heavily maintained portions of the roadside community include fescue and plantain. In the areas that receive less maintenance, more diverse communities develop. This community is populated by Japanese honeysuckle, foxtail grass, common ragweed, and kudzu. Trees present in this community include willow oak, red cedar, red maple, Chinese privet, and American elm.

##### **Piedmont Mixed Hardwood Forest Community**

Dominant plants in the Piedmont mixed hardwood forest community include sourwood, red maple, blackberry, red mulberry, tulip poplar, greenbrier, black cherry, and Japanese honeysuckle. One small area within this community is largely dominated by short leaf pine.

##### **Piedmont Bottomland Forest Community**

A small Piedmont bottomland forest community exists on the northern end of the project near an unnamed tributary (UT4) to Brushy Fork. This community is a wetland. Species observed in this community include tulip poplar, red maple, netted chainfern, silky dogwood, greenbrier, and Chinese privet.

## **Wildlife**

Wildlife found in these communities is limited and consists primarily of wide-ranging, adaptable species, which are well suited to coexistence with human development. Mammals common to disturbed edge areas include eastern cottontail rabbit, beaver, Virginia opossum, raccoon, white-tailed deer, and gray squirrel. The most common reptiles found in such habitats are eastern box turtle and predators such as black racer and eastern garter snake. These species are likely to be found searching for small mammals such as the southeastern shrew, white footed mouse, and hispid cotton rat.

Birds likely to frequent such habitats include common crow, Carolina chickadee, domestic pigeon, Carolina wren, American robin, mourning dove, and European starling.

### **b. Aquatic Communities**

Two aquatic community types, piedmont perennial streams and piedmont intermittent streams, are located in the project study area. Physical characteristics of the surface waters and condition of the water influence the faunal composition of the aquatic communities. Perennial streams support an assemblage of fauna that require a constant source of flowing water. Intermittent streams support fauna that inhabits streams that do not flow constantly, but may have areas of standing water.

Amphibians and reptiles commonly observed in and adjacent to small sized perennial streams in urban areas may include northern water snake, northern cricket frog and green frog. Brushy Fork is too small to be of fishing significance. Brushy Fork has no habitat for game fish.

Construction of the proposed project will have various impacts on the biotic resources described. Any construction related activities in or near these resources have the potential to impact biological functions.

## **Terrestrial Impacts**

Project construction will result in clearing and degradation of portions of these communities. Estimated impacts are derived based on the total project length. The entire right-of-way for each alternative minus the existing road surface was used for this calculation. The entire right-of-way will probably not be impacted; therefore, actual impacts to the communities may be less.

**Table 3**  
**Estimated impacts to terrestrial communities**

<b>Community type</b>	<b>Alternative 1 acres</b>	<b>Alternative 2 acres</b>	<b>Alternative 3* acres</b>	<b>Alternative 4 acres</b>
Maintained Roadside	15.15	15.15	16.87	16.87
Piedmont Mixed Hardwood Forest	5.74	5.74	4.02	4.02
Piedmont Bottomland Forest	<0.1	<0.1	<0.1	<0.1
<b>Total</b>	<b>20.99</b>	<b>20.99</b>	<b>20.99</b>	<b>20.99</b>

\*Recommended

Flora and fauna occurring in these communities are generally common throughout North Carolina because of their adaptability to wide ranging environmental factors. Moreover, a roadside shoulder community will be re-established after construction. Animals temporarily displaced by construction activities should repopulate areas suitable for the species following project completion. As a result, it is unlikely that existing species will be displaced significantly from the project study area following construction. However, to minimize the temporary effects of project construction, all cleared areas along the roadways will be revegetated with native or non-invasive species promptly after project completion to minimize erosion and the loss of wildlife habitat.

### **Aquatic Impacts**

Aquatic communities are sensitive to any changes in the environment. Any action that affects water quality can have an adverse impact on aquatic organisms. Although most of the disturbance caused by project construction will be temporary, some impacts will be long term or irreversible. Installation or modification of instream structures can permanently affect many physical stream parameters.

## **2. Water Resources**

### **a. Physical Characteristics and Water Quality**

Four unnamed tributaries (UT) to Brushy Fork exist within the study area for the proposed project. Waters in the project vicinity are part of the Yadkin-Pee Dee River Basin. Three of the four tributaries (UT1, UT2, and UT3) are classified as intermittent streams. UT4 to Brushy Fork is a perennial stream. UT1 is located just east of 26<sup>th</sup> Street and appears to run parallel to the street. UT2, UT3, and UT4 are all located on the east side of US 52, north of the Norfolk Southern rail yard. Figure 6 shows the location of each surface water. Descriptions of the tributaries are provided in the following table.

**Table 4**  
**Water Resources in Project Area**

<b>Name</b>	<b>Classification</b>	<b>Avg. depth</b>	<b>Avg. width</b>	<b>Substrate</b>	<b>Flow</b>
UT1	Intermittent	0.0 in	1.0 ft	silt	none
UT2	Intermittent	0.0 in	1.0 ft	silt	none
UT3	Intermittent	0.0 in	2.0 ft	silt	none
UT4	Perennial	2.0 in	4.0 ft	sand, silt	slow

Streams have been assigned a best usage classification by the Division of Water Quality (DWQ). The classification of Brushy Fork [DWQ Index No. 12-94-12-6, (3/1/77)] and its unnamed tributaries is C. Class C freshwaters are protected for secondary recreation, fishing, aquatic life propagation and survival, and wildlife.

No waters classified as High Quality Waters (HQW), Outstanding Resource Waters (ORW), or Water Supplies (WS-I or WS-II) occur within one mile of the project study area.

### **Water Quality**

The DWQ has initiated a whole basin approach to water quality management for the 17 river basins within the state. Prior to the implementation of the basinwide approach to water quality management, the Benthic Macroinvertebrate Ambient Network assessed water quality by sampling for benthic macroinvertebrate organisms at fixed monitoring sites throughout the state. There are no biological monitoring sites located within the project vicinity.

Point source refers to discharges that enter surface water through a pipe, ditch, or other defined points of discharge. Point source dischargers located throughout North Carolina are permitted through the National Pollutant Discharge Elimination System (NPDES) program. There are no permitted dischargers located within one mile upstream of the project study area.

Non-point source refers to runoff that enters surface waters through storm water flow or a non-defined point of discharge. In the project area, land development, construction, roads, and parking lots may serve as sources for various forms of nonpoint source pollutants.

#### **b. Summary of Anticipated Effects**

Impacts to four unnamed tributaries to Brushy Fork may occur as a result of project construction. As stated in the previous section, UT4 is the only perennial stream within the project area. It is unlikely that UT4 will be directly impacted by project construction.

Project construction may result in the following impacts to surface waters:

- Increased silt loading and sedimentation from erosion of disturbed soils.
- Changes in light incidence, water clarity, and water temperature due to increased sediment load and riparian vegetation removal.
- Alteration of stream discharge due to silt loading and changes in surface or ground water drainage patterns.
- Increased potential for release of toxic compounds such as fuel and oil from construction equipment and other vehicles.

Precautions will be taken to minimize impacts to water resources in the study area. NCDOT's Best Management Practices (BMP) for the Protection of Surface Waters will be strictly enforced throughout the construction stage of the project.

### **3. Waters of the U.S.**

Surface waters and jurisdictional wetlands fall under the broad category of "waters of the United States," as defined under 33 CFR 328.3(a). Any action that proposes to place fill material into these areas falls under the jurisdiction of the U.S. Army Corps of Engineers (COE) under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344).

#### **a. Surface Waters/Wetlands**

As discussed in Section V-A-2-a, four surface waters exist within the project area and are considered jurisdictional.

As mentioned in Section V-A-1-a, a bottomland forest wetland exists within the project area. The soil in this community has a hue of 7.5 YR, a value of 3, and a chroma of 1. Hydrologic indicators included saturation and inundation in some portions of the wetland.

#### **b. Summary of Anticipated Impacts**

Estimated impacts to four unnamed tributaries to Brushy Fork may occur as a result of project construction. Impacts to a small bottomland hardwood wetland may also occur as a result of project construction. Impacts to the wetland, based on project length, are estimated to be less than 0.1 acre for each alternate. Estimated impacts to surface waters are based on feet of stream within the proposed right of way. Estimated impacts for each alternate are provided in Table 5.

**Table 5  
Estimated Impacts to Surface Waters<sup>#</sup>**

<b>Surface Water</b>	<b>Alternative 1 feet</b>	<b>Alternative 2 feet</b>	<b>Alternative 3* feet</b>	<b>Alternative 4 feet</b>
UT1	200	0	200	0
UT2	75	75	15	15
UT3	75	75	15	15
UT4	0	0	0	0
<b>Total</b>	<b>350</b>	<b>150</b>	<b>230</b>	<b>30</b>

<sup>#</sup>Impacts to the wetland located in the project area are estimated to be less than 0.1 acre for each alternative.

\*Recommended

**c. Anticipated Permit Requirements**

A Nationwide Permit 23 CFR 330 Appendix A (B) (23) is likely to be applicable for the crossings of the unnamed tributaries to Brushy Fork. A North Carolina Division of Water Quality General Certification (Water Quality Certification No. 3107) will likely be required for the project.

**d. Avoidance, Minimization, and Mitigation**

The COE has adopted through the Council on Environmental Quality (CEQ) a wetland mitigation policy which embraces the concept of "no net loss of wetlands" and sequencing. The purpose of this policy is to restore and maintain the chemical, biological and physical integrity of Waters of the United States, specifically wetlands. Mitigation of wetland impacts has been defined by the CEQ to include: avoiding impacts (to wetlands), minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts (40 CFR 1508.20). Each of these three aspects (avoidance, minimization, and compensatory mitigation) must be considered sequentially.

**Avoidance**

The proposed project involves the replacement of two existing bridges along a freeway. Total avoidance of impacts to water resources in the project area is not feasible. Impacts to UT1 are a result of the realignment of 26<sup>th</sup> Street to intersect Cleveland Avenue across from the US 52 ramps. With this realignment, the street moves east and closer to the stream. Total avoidance of impacts to UT1 is not possible. Impacts to the other tributaries will likely result from pipe installation and/or the lengthening of existing pipes.

## Minimization

As mentioned in Section V-A-2-a, UT2, UT3 UT4 and the wetland are located to the east of US 52. The recommended alternative will construct the temporary detour on the west side of US 52. This helps to minimize impacts to these tributaries. In the areas of these water resources, the steepest side slopes practicable will be used in order to further minimize impacts. Implementation of NCDOT's Best Management Practices (BMPs) will also help reduce project impacts on the water resources.

## Mitigation

Compensatory mitigation is not normally considered until anticipated impacts to Waters of the United States have been avoided and minimized to the maximum extent practicable.

Estimated impacts to jurisdictional wetlands are anticipated to be less than 0.1 acre. Compensatory mitigation will not likely be required for these impacts. However, final permit/mitigation decisions rest with the COE and DWQ. Written approval of the final mitigation plan is required from the DWQ prior to the issuance of a 401 Certification.

### 4. Rare and Protected Species

#### a. Federally-Protected Species

Plants and animals with federal classifications of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of January 29, 2003, there are three federally-protected species listed for Forsyth County (Table 6).

**Table 6  
Federally Protected Species for Forsyth County**

SCIENTIFIC NAME	COMMON NAME	STATUS	HABITAT?	BIOLOGICAL CONCLUSION
<i>Clemmys muhlenbergii</i>	Bog turtle	T S/A	N/A	N/A
<i>Picoides borealis</i>	Red-cockaded woodpecker	E	No	No Effect
<i>Cardamine micranthera</i>	Small-anthered bittercress	E	No	No Effect

E –Endangered, a species that is likely to become extinct throughout all or a significant portion of its range.  
T S/A -a species that is Threatened due to similarity of appearance with other rare species that are listed for protection.

\*- Historic record- obscure and incidental record.

The bog turtle is listed as Threatened due to similarity of appearance to other rare species that are listed for protection. These species are not biologically endangered or threatened and are not subject to Section 7 of the Endangered Species Act. Therefore, a survey is not required.

No habitat for either the small-anthered bittercress or red-cockaded woodpecker were found during field surveys conducted for the project on November 13, 2001. Due to the amount of time that has passed since the field surveys, the biological conclusions for these species were reviewed in December 2003 and were found to still be valid. In addition, a review of the North Carolina Natural Heritage Program (NCNHP) database on December 3, 2003 indicated no known occurrence of either species within one mile of the project area. The project will have "No Effect" on either of these federally-protected species.

#### **b. Federal Species of Concern**

Brook floater (*Alasmidonta varicosa*) is listed as a Federal Species of Concern (FSC) for Forsyth County. Federal Species of Concern are not afforded federal protection under the Endangered Species Act and are not subject to any of its provisions, including Section 7, until they are formally proposed or listed as Threatened or Endangered. Organisms which are listed as Endangered, Threatened, or Special Concern by the North Carolina Natural Heritage Program (NHP) list of Rare Plant and Animal Species are afforded state protection under the NC State Endangered Species Act and the NC Plant Protection and Conservation Act of 1979. The Brook floater is listed as Endangered in the NC NHP database (database update May 2003).

### **B. Cultural Resources**

The proposed project is subject to Section 106 of the National Historic Preservation Act of 1966, as amended. Correspondence from the State Historic Preservation Office (HPO), dated August 10, 2000 (see Appendix A), stated that they are aware of "no properties of architectural, historic, or archaeological significance which would be affected by the project." No archaeology survey was conducted in connection with this project.

A survey of historic architectural resources was performed for the area of potential effect (APE) for the project, including locations where ITS items may be installed. No properties were found to be less than fifty years of age and meeting eligibility Criterion G for listing in the National Register. Seven properties over fifty years of age were identified within the APE and were reviewed by HPO, NCDOT and the Federal Highway Administration (FHWA). It was determined these properties are not eligible for the National Register of Historic Places. A copy of the concurrence form is included in Appendix A. The project will not affect any properties listed on or eligible for the National Register of Historic Places.

### **C. Section 4(f) Resources**

Section 4(f) of the U.S. Department of Transportation Act of 1966 specifies that publicly owned land from a public park, recreation area, wildlife and waterfowl refuge, or land of a historic site of national, state, or local significance may be used for federal projects only if there is no feasible and prudent alternative to the use of the land and the project includes all possible planning to minimize harm to 4(f) lands resulting from such use.

No resources protected by Section 4(f) of the USDOT Act of 1966, as amended, were identified within the project area.

### **D. Community/Social Effects**

#### **1. Neighborhoods/Communities**

Residential development in the project area is predominantly located east of US 52. Piedmont Park is a public housing community in the project area that was built in the 1950s. It is located north of 26<sup>th</sup> Street, south of 29<sup>th</sup> Street and east of US 52. Piedmont Park has approximately 240 residential housing units, a community building and a daycare facility. The community is accessed from either 29<sup>th</sup> Street or 26<sup>th</sup> Street.

The Northeast Winston neighborhood is located south of 26<sup>th</sup> Street and east of US 52. Most of the homes in the area were constructed prior to World War II. The area from 21<sup>st</sup> Street to 26<sup>th</sup> Street, US 52 to Bowen Park was certified as the Northeast Winston #3 Urban Redevelopment Area in October 1999. A small portion of this area, from US 52 to Cleveland Avenue, was certified as "blighted". Currently, there is not a redevelopment plan for this area.

A separate portion of the neighborhood, Northeast Winston #2, is currently part of a redevelopment project by the City. This area is located south of Northeast Winston #3, between US 52 and Cleveland Avenue, and 21<sup>st</sup> Street and Bethlehem (formerly 19<sup>th</sup> Street). Some structures in the area have been acquired and cleared; new streets and homes will be constructed.

#### **2. Relocation of Homes and Businesses**

The proposed project will require the relocation of one business. The relocation program for the project will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), and/or the North Carolina Relocation Assistance Act (GS-133-5 through 133-18). The NCDOT relocation program is designed to provide assistance to displaced persons in relocating to a replacement site in which to live or do business. Appendix B

contains additional information regarding NCDOT relocation programs and includes copies of the relocation reports prepared for the project.

### **3. Minority/Low-income Populations**

Executive Order 12898 requires that each federal agency, to the greatest extent allowed by law, administer and implement its programs, policies, and activities that affect human health or the environment so as to identify and avoid “disproportionately high and adverse” effects on minority and low-income populations.

A citizens informational workshop was held on April 30, 2001. The workshop was advertised in local newspapers and newsletters were mailed to property owners along the project. Information about the workshop was provided to staff of the Piedmont Park community center. Transportation to the workshop was also made available on a request basis. In addition to the workshop, numerous meetings were held with City staff and officials to discuss the proposed project. The major concerns expressed included maintaining access from Liberty Street to Piedmont Park and minimizing impacts to the neighborhood.

With the proposed project, access from Liberty Street onto 30<sup>th</sup> Street will continue to be provided. The recommended alternative (Alternative 3) also minimizes impacts to the Piedmont Park property. Retaining the Liberty Street exit ramp (Alternatives 2 and 4) would require construction of a permanent retaining wall along the edge of the highway and Piedmont Park property. The recommended alternative does not require this construction.

The proposed project will require the relocation of one business. This business is not minority-owned. Based on project studies, this project is being implemented in accordance with Executive Order 12898.

## **E. Land Use**

### **1. Existing Land Use and Zoning**

The project area is highly urbanized, surrounded by a mix of developments. In the project area, residential development is primarily located on the east side of US 52. Generally, the area located south of East 31<sup>st</sup> Street and east of US 52 is zoned residential but varies in density level.

A number of businesses, including convenience stores and an automobile parts store, are located along Liberty Street in the project area. The area immediately surrounding Liberty Street, south of Cleveland Avenue/Indiana Avenue, is zoned general business. A Norfolk Southern Railroad switching yard is also located on the west side of

Liberty Street, north of US 52. Smith Reynolds Airport is located on the east side of Liberty Street, north of 30<sup>th</sup> Street. The area encompassing both the rail yard and the airport is zoned general industrial. The location of the rescue squad, near the intersection of 30<sup>th</sup> Street and Liberty Street, is zoned institutional public.

## **2. Future Land Use**

The current comprehensive plan, the Legacy Development Guide, is a general long-range guide for growth and development in Forsyth County and its eight municipalities. The Legacy guide was adopted in 2001. Neither Forsyth County nor the City of Winston-Salem has any other official land use plans or maps.

The project area is shown within the Municipal Services Area on the Legacy's Growth Management Plan Map. More specifically, the land use area is classified as the Urban Neighborhood Growth Management Area. As outlined in the Legacy, the goals for this area include encouraging quality infill development, neighborhood and community services, historic preservation and rehabilitation and reuse of existing structures.

In addition to the Legacy plan, the US 52 Corridor Land Use and Transportation Plan makes recommendations for land use in the project area. The plan focuses on the portion of US 52 from I-40 to the proposed location of the Northern Beltway near Rural Hall Road. In the area of the bridge replacement, the Plan recommends shifting the US 52 alignment to the west of its current location and relocating Liberty Street to the east of US 52. Some of the land use types recommended are different than present zoning. In the area of 26<sup>th</sup> Street and Cleveland Avenue, mixed-use neighborhood land use is recommended. The area north of 29<sup>th</sup> Street, presently zoned residential, is recommended to change to industrial land use in order to accommodate the proposed Airport Business Park.

An Airport Business Park is proposed for the area south of Smith Reynolds Airport, north of 26<sup>th</sup> Street and east of Liberty Street. The site is approximately 65 acres. The master plan for the proposed Business Park depicts 12 buildings on the site that could provide a total of 320,000 square feet of office, research, warehouse or commercial space. Some changes in zoning may be required to accommodate the different uses proposed for the site. The plan also shows 26<sup>th</sup> Street serving as a collector street through the property. Site acquisition for the Business Park is currently underway. (Infrastructure development will take place once a developer has been selected.)

The Liberty Street Master Plan was adopted by the Board of Aldermen for the City of Winston Salem in July 1997. This plan includes recommendations for the Liberty Street Corridor in six vision areas: transportation, economic development, land use and zoning, safety, design and appearance, and sense of community. The subject project is considered to be located in the North and North Central segments of Liberty Street. The recommended land use for these areas closely corresponds with existing uses. Commercial and industrial uses are recommended in the vicinity of the airport. Local

service businesses, such as hardware stores and automotive repair stores would continue in the areas south of 29<sup>th</sup> Street. Other improvements recommended for these areas include sidewalks and pedestrian facilities, and vegetative screens and landscaping that would screen parking and storage areas and contribute to unifying the entire Liberty Street Corridor.

#### **F. Smith Reynolds Airport**

As mentioned in Section II-A-10, the proposed project is located within the approach path for runway 4 of the Smith Reynolds Airport. As part of the proposed project, US 52 will be raised in the vicinity of the new bridges in order to meet a 60 MPH design speed and vertical clearance requirements over the railroad. It is anticipated the required FAA clearance will be met based on the approach slope (20:1) currently used for the runway. However, the airport's master plan recommends permitting the use of a flatter approach slope (34:1) in the future. Based on the current design, there are proposed roadway elevations within the project that will not meet the clearance requirements if the approach slope was lowered. Lowering the proposed roadway is not feasible due to vertical clearance requirements over the railroad and the proposed design speed for the project.

Construction within the approach path of the runway requires additional coordination and approval from the FAA. The Project Development and Environmental Analysis Branch (NCDOT) will ensure proper coordination takes place.

#### **G. Prime and Important Farmland**

The Farmland Protection Policy Act of 1981 requires all federal agencies or their representatives to consider the impact of land acquisition and construction projects on prime and important farmland soils. Land which has been previously developed or planned for development by the local governing body is exempt from the requirements of the Act.

North Carolina Executive Order Number 96 requires all state agencies to consider the impact of land acquisition and construction projects on prime farmland soils, as designated by the US Natural Resources Conservation Service (NRCS). Land which is planned or zoned for urban development is not subject to the same level of preservation afforded other rural, agricultural areas.

Zoning in the project area includes residential, business and industrial. In addition, none of the soil types classified as prime farmland soils exist in the project area.

## **H. Flood Hazard Evaluation**

The City of Winston-Salem and Forsyth County are participants in the National Flood Insurance Regular Program. There are no major stream crossings within the project limits; therefore, it is anticipated the proposed project will not adversely affect floodplains in the project area.

## **I. Traffic Noise Analysis**

The subject project does not propose additional through lanes on US 52 or any change in speed limit. Therefore, the project will not increase traffic volumes and the project's change in noise levels will not be significant. However, due to the recommended closure of the Liberty Street exit ramp, traffic patterns in the surrounding street network will change. The proposed realignment of 26<sup>th</sup> Street with Cleveland Avenue moves the roadway away from the closer residences. With the shift and with traffic speeds low in this type of urban setting, noise levels are not expected to significantly increase.

"No-build" traffic volumes for the year 2025 were compared with projected volumes for the same year based on the closure of the Liberty Street exit ramp (recommended improvements). Along Liberty Street, north of 28<sup>th</sup> Street/Indiana Avenue, the volumes increased approximately 8.8 percent. On Akron Drive, just east of the US 52 northbound exit ramp, traffic volumes are projected to increase approximately 8.3 percent. If traffic were to double on the existing street network, noise levels would only increase approximately 3 dBA. When real-life noises are heard, it is barely possible to detect noise level changes of 2 to 3 dBA. Therefore, noise levels are not expected to significantly increase along Liberty Street or Akron Drive as a result of the proposed ramp closure. It is anticipated the project's impact on the noise environment in the project area will not be significant.

## **J. Air Quality Analysis**

The project is located within Forsyth County, which is within the Greensboro-Winston-Salem-High Point nonattainment area for ozone (O<sub>3</sub>) and the Winston-Salem nonattainment area for carbon monoxide (CO) as defined by the EPA. The 1990 Clean Air Act Amendments (CAAA) designated these areas as "moderate" nonattainment areas for O<sub>3</sub> and CO. However, due to improved monitoring data, these areas were redesignated as "maintenance" for O<sub>3</sub> on November 7, 1993 and for CO on November 8, 1994. Section 176(c) of the CAAA requires that transportation plans, programs and projects conform to the intent of the state air quality implementation plan (SIP). The Winston-Salem/Forsyth County Urban Area 2025 Long-Range Transportation Plan (LRTP) and the 2002-2008 Metropolitan Transportation Improvement Program (MTIP) have been determined to conform to the intent of the SIP. The USDOT air quality

conformity approval of the LRTP and the MTIP was May 28, 2002. The current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93. There have been no significant changes in the project's design concept or scope, as used in the conformity analyses.

The Liberty Street and Indiana Avenue intersection was selected to analyze air quality impacts of the proposed project. The "worst-case" predicted 1-hour CO concentrations for the evaluation build years of 2005, 2010 and 2025 are 6.1, 6.1 and 6.5 ppm, respectively. Comparison to the National Ambient Air Quality Standards (NAAQS) indicates no violation of these standards. Hence, the project's impact on air quality will not be significant.

If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina SIP for air quality in compliance with 15 NCAC 2D.0520.

**K. Hazardous Materials**

A database search was conducted to identify potential sites containing hazardous material within the project area. The search did not reveal any regulated landfills or CERCLA sites in the area of proposed improvements.

The Resource Conservation and Recovery Act (RCRA) database identified several sites within the project area that generate hazardous waste as defined by the Act. Information about these sites is listed in the following table:

**Table 7  
RCRA Sites**

<b>Site</b>	<b>Address</b>
Army Reserve AMSA 120 G	3301-1 N. Glenn Avenue
Trader Publishing Winston PLT	3001 N. Liberty Street
Winston Body Repairs, Inc.	2610 N. Liberty Street

A search for underground storage tanks (USTs) was also included in the database review. The following table lists both regulated USTs in the project area, as well as, reported leaking UST incidents tracked by the North Carolina Department of Environment and Natural Resources.

**Table 8**  
**UST sites**

<b>Site</b>	<b>Address</b>
Brenner Iron & Metal – Waste Management*	3301 Glenn Avenue
Norfolk and Western Railway Company*	3000 Liberty Street
Davco Corporation*	3001 Liberty Street
King Property, James and Bessie*	2713 Liberty Street
Waste Management of the Piedmont	3303 N. Glenn Avenue
Waste Management	3301 Glenn Avenue
Suburban Propane	Just north of the intersection of Liberty Street and 30 <sup>th</sup> Street
Liberty North Fire Station	2995 N. Liberty Street
RJR Flight Operations	2901 N. Liberty Street
Flynn Amoco Service (now Dick Kelly's Trucks)	2821 N. Liberty Street
Kristy's Food Mart	2609 N. Liberty Street
Brenner Iron & Metal Company	3415 Glenn Avenue

\*Reported leaking UST incidents at site

The Hazardous Substance Disposal (HSDS) list contains locations of uncontrolled and unregulated hazardous waste sites. The database search listed one site, IMC, within the project area.

In addition to this database search, the NCDOT Geotechnical Unit performed a field reconnaissance survey for the project area. Two other sites were identified as possible UST sites.

The first site is a vacant lot located in the northeast corner of the intersection of 25<sup>th</sup> Street and Liberty Street. Existing concrete pads may have been former pump islands. The property does not appear to be under remediation. A sign on the property indicates that a gas station is planned for the location.

Liberty Street Sports Bar is located on the east side of Liberty Street, just north of Dick Kelly's Trucks. The history of the business is unknown, but the building resembles a gas station. The property does not appear to be under remediation at this time.

The proposed project will acquire right of way along the east side of Liberty Street, north of Indiana Avenue and along both sides of US 52. A detailed investigation will be performed prior to right of way acquisition.

### **L. Geodetic Survey Markers**

If it is determined the project will impact any geodetic survey markers in the area, the NC Geodetic Survey will be contacted prior to construction in order to allow resetting of monuments.

### **M. Indirect/Cumulative Effects**

Permanently removing the Liberty Street exit ramp results in a slightly more circuitous route for northbound Liberty Street traffic. However, with the close proximity of the 25<sup>th</sup> Street/28<sup>th</sup> Street exit ramp to the area, it is unlikely that trips into and out of the surrounding neighborhoods will be significantly impacted.

It is anticipated the removal of the exit ramp will result in increased traffic volumes in the 25<sup>th</sup> Street/28<sup>th</sup> Street ramp area and at the Akron Drive exit. On US 52, volumes increased north of the (removed) Liberty Street exit. However, north of the Akron Drive exit, volumes along US 52 remained essentially the same with and without the Liberty Street exit. Comparing the “no-build” and the recommended “build” alternative, it appears that traffic volumes are shifting to other exit ramps in the area, but are not changing significantly along US 52.

Based on the urban landscape in the project area, it is unlikely that the proposed project will result in changes in existing land use.

## **VI. COMMENTS AND COORDINATION**

### **A. Citizens Informational Workshop**

A citizens informational workshop for the project was held on April 30, 2001. The workshop was advertised in local newspapers and newsletters were mailed to property owners along the project. Transportation to the workshop was made available on a request basis. Aerial photographs showing the two temporary detour alternatives and the two ramp closure alternatives (see Section IV-B) were displayed at the meeting. Informational handouts were made available to workshop participants.

Twenty-three persons registered at the meeting. Two written comments were received; both recommended closing the Liberty Street/Airport exit ramp.

Three joint workshops were held for this project and Projects U-2826B and U-2925 on October 20 and 21, 2003. A total of approximately 60 persons attended these three meetings. A few attendees expressed concern about the closing of the Liberty Street exit ramp and its impact on trucking industries located along north Liberty Street. A few people expressed their support for closing the exit ramp.

## **B. Public Hearing**

A public hearing will be held following approval of this document. The public hearing will allow the public to view more detailed information than previously available at the citizens informational workshop and will provide a forum for public comments.

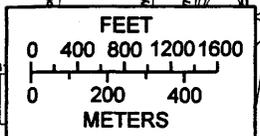
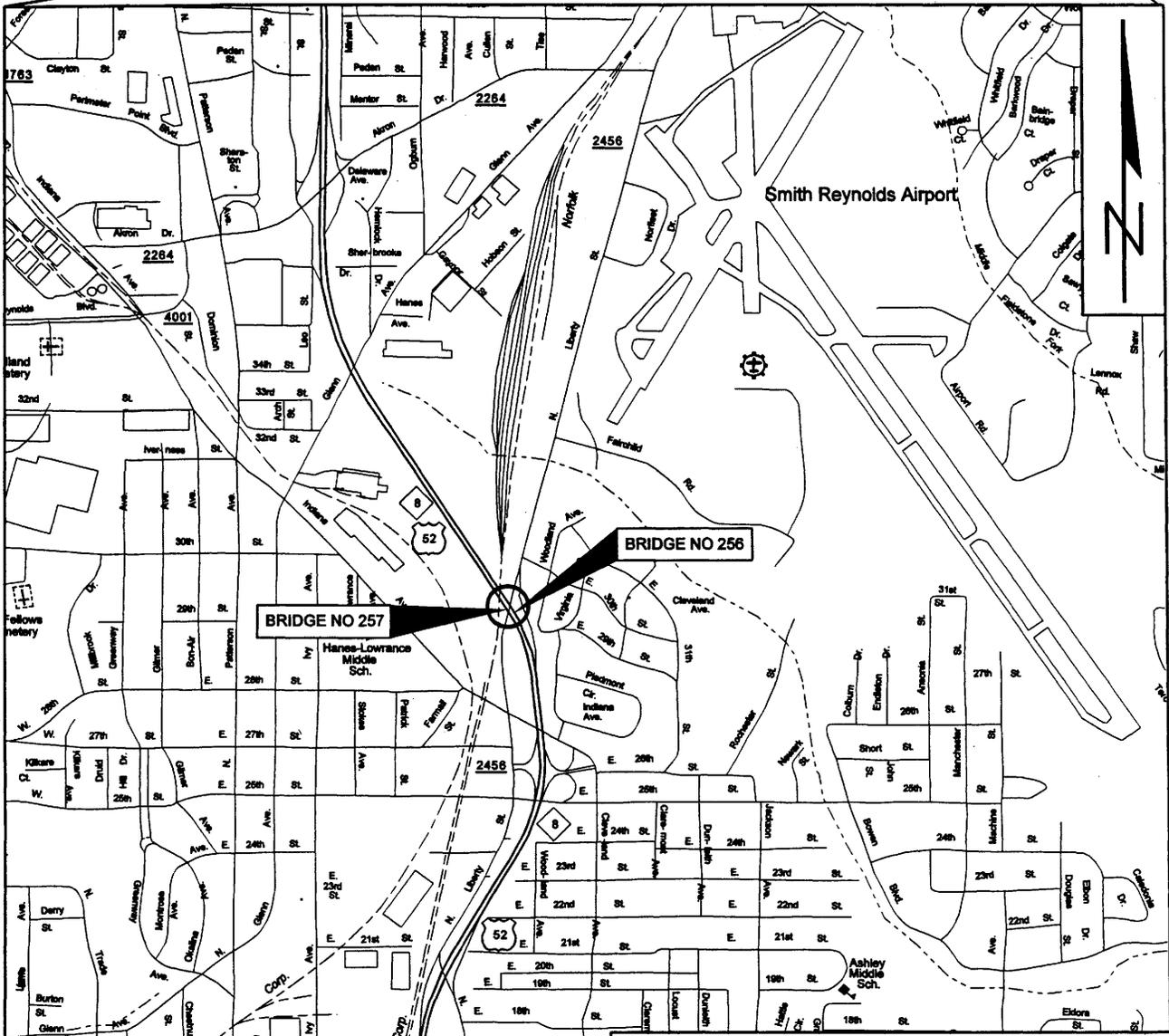
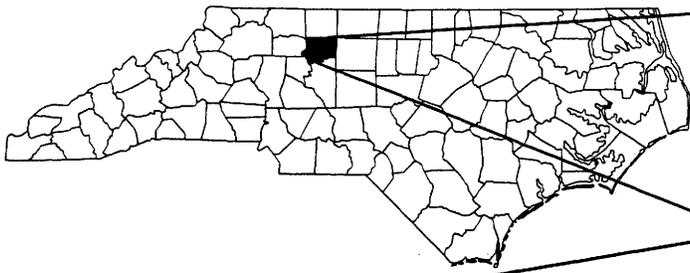
## **C. Agency Coordination**

Comments regarding the proposed project were requested from various federal, state and local agencies. Copies of the comments received are included in Appendix A. An asterisk indicates comments were received from that agency.

U.S. Department of the Army – Corps of Engineers  
U.S. Department of the Interior – Fish and Wildlife Service  
\*N.C. Department of Cultural Resources  
N.C. Department of Environment and Natural Resources, Division of Parks and Recreation  
\*N.C. Department of Environment and Natural Resources, Division of Water Quality  
N.C. Department of Public Instruction – School Planning  
\*N.C. Wildlife Resources Commission  
Forsyth County  
\*City of Winston-Salem  
\*Norfolk Southern Railroad Corporation

## **VII. BASIS FOR CATEGORICAL EXCLUSION**

Based on the studies performed for the proposed project, it is concluded the project will not result in significant social, economic, or environmental impacts, and the categorical exclusion classification, as defined in 40 CFR 1508.4 and 23 CFR 771.117, is appropriate.



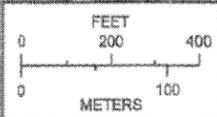
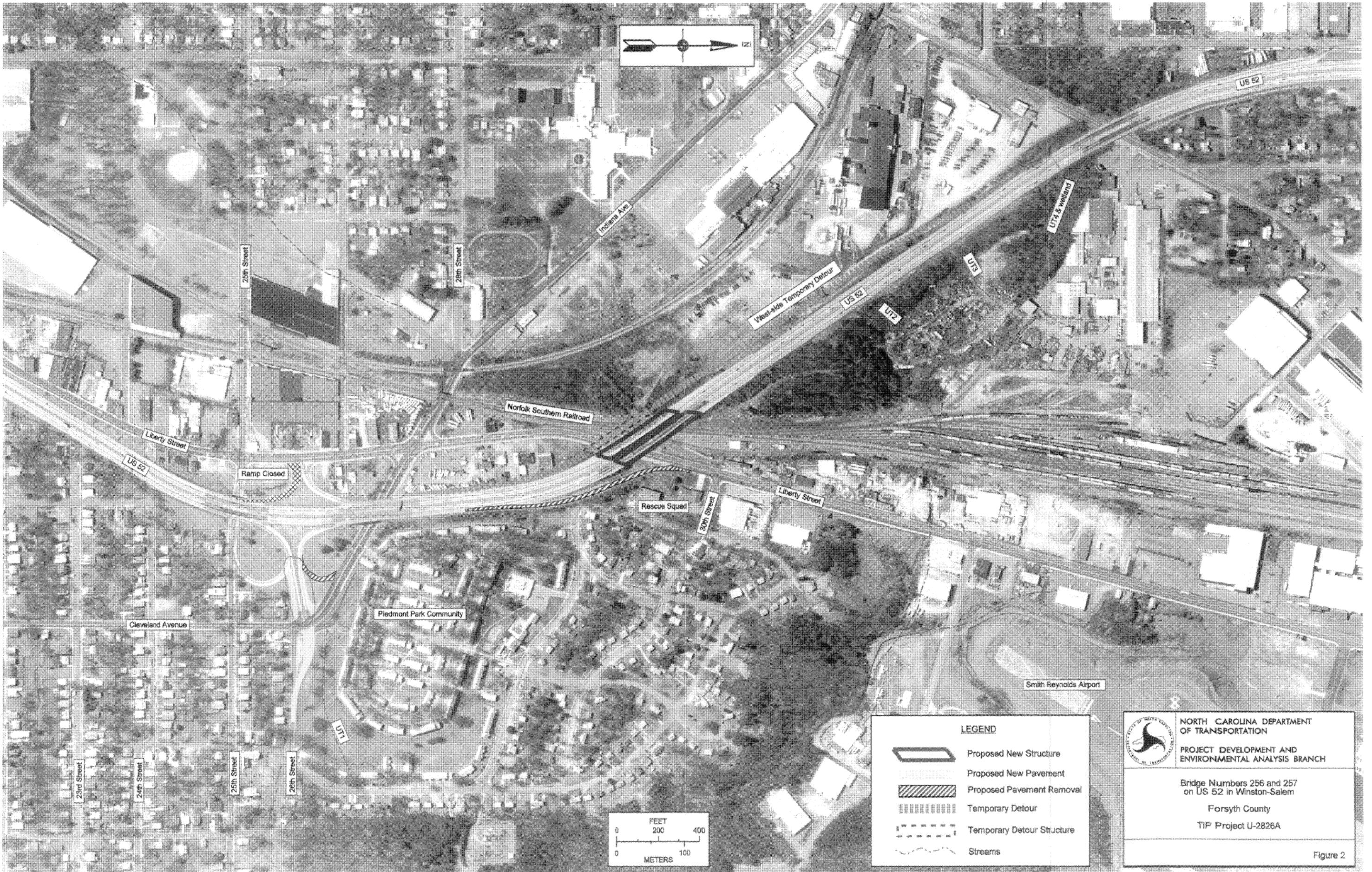
**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH**

**Bridge Numbers 256 and 257 on US 52 in Winston-Salem**

**Forsyth County**

**TIP Project U-2826A**

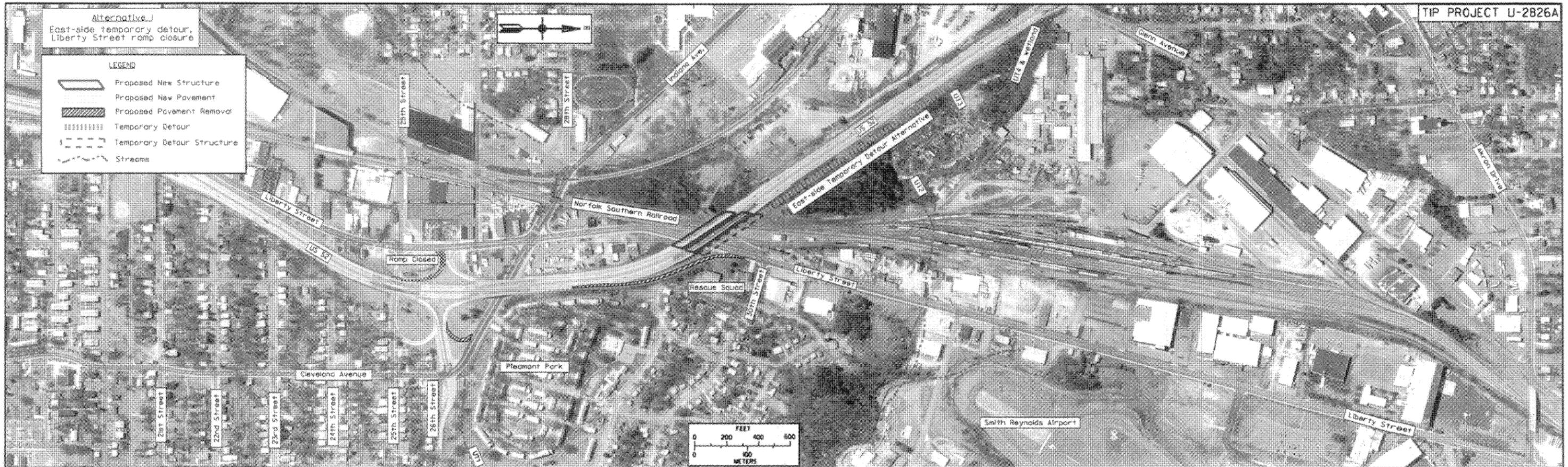
**Figure 1**



LEGEND	
	Proposed New Structure
	Proposed New Pavement
	Proposed Pavement Removal
	Temporary Detour
	Temporary Detour Structure
	Streams

	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH
	Bridge Numbers 256 and 257 on US 52 in Winston-Salem Forsyth County TIP Project U-2826A

Figure 2



STUDIED ALTERNATIVES

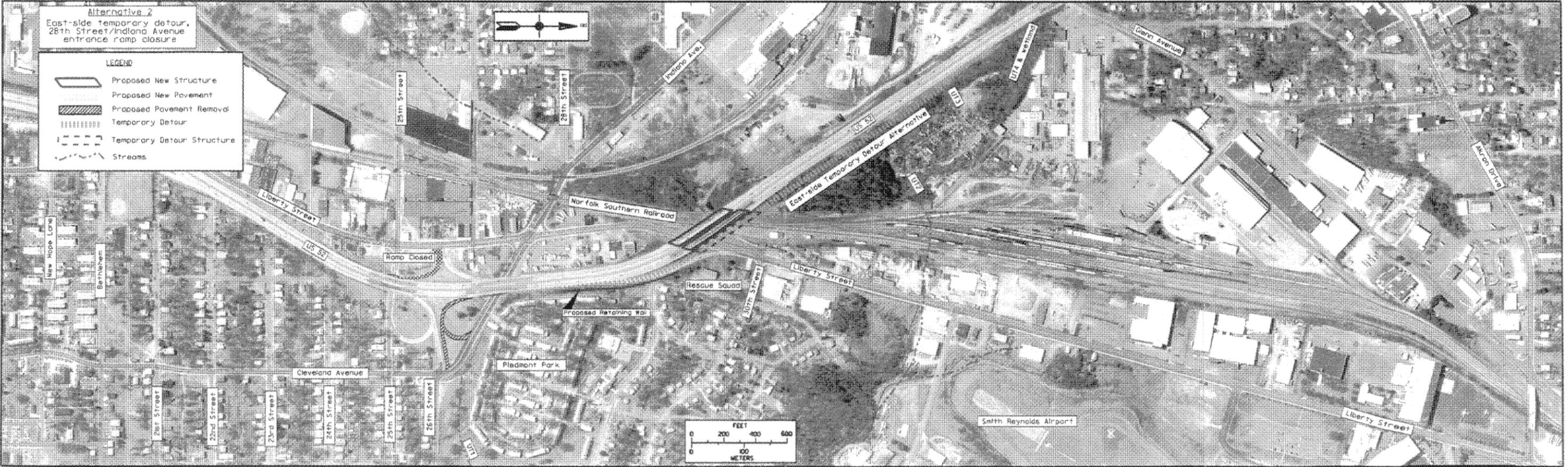
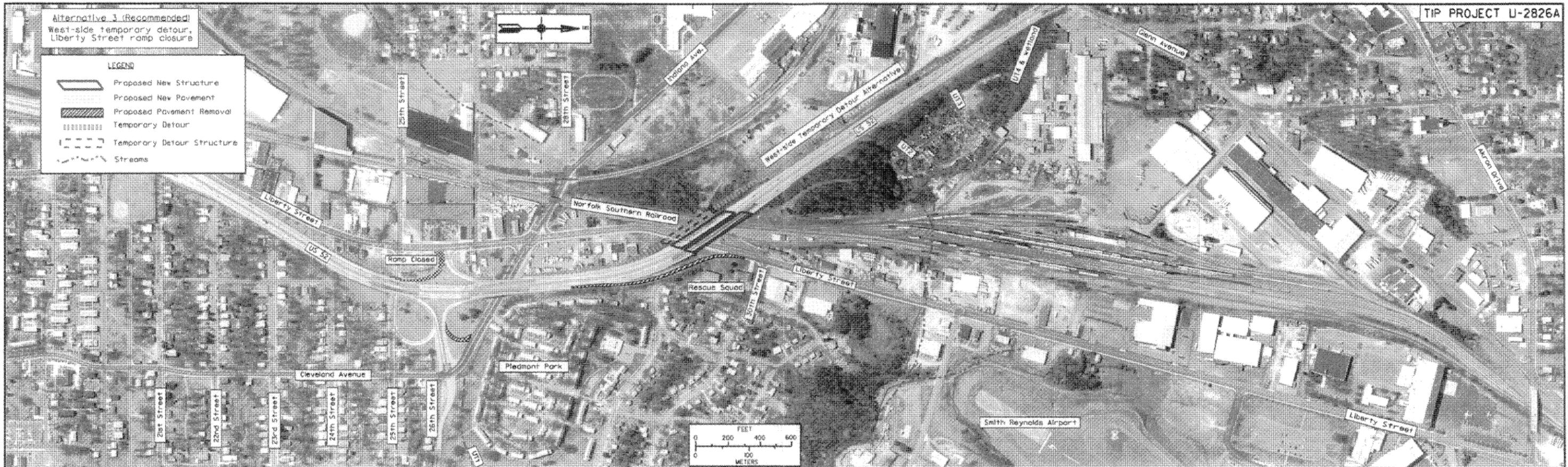


FIGURE 3A



STUDIED ALTERNATIVES

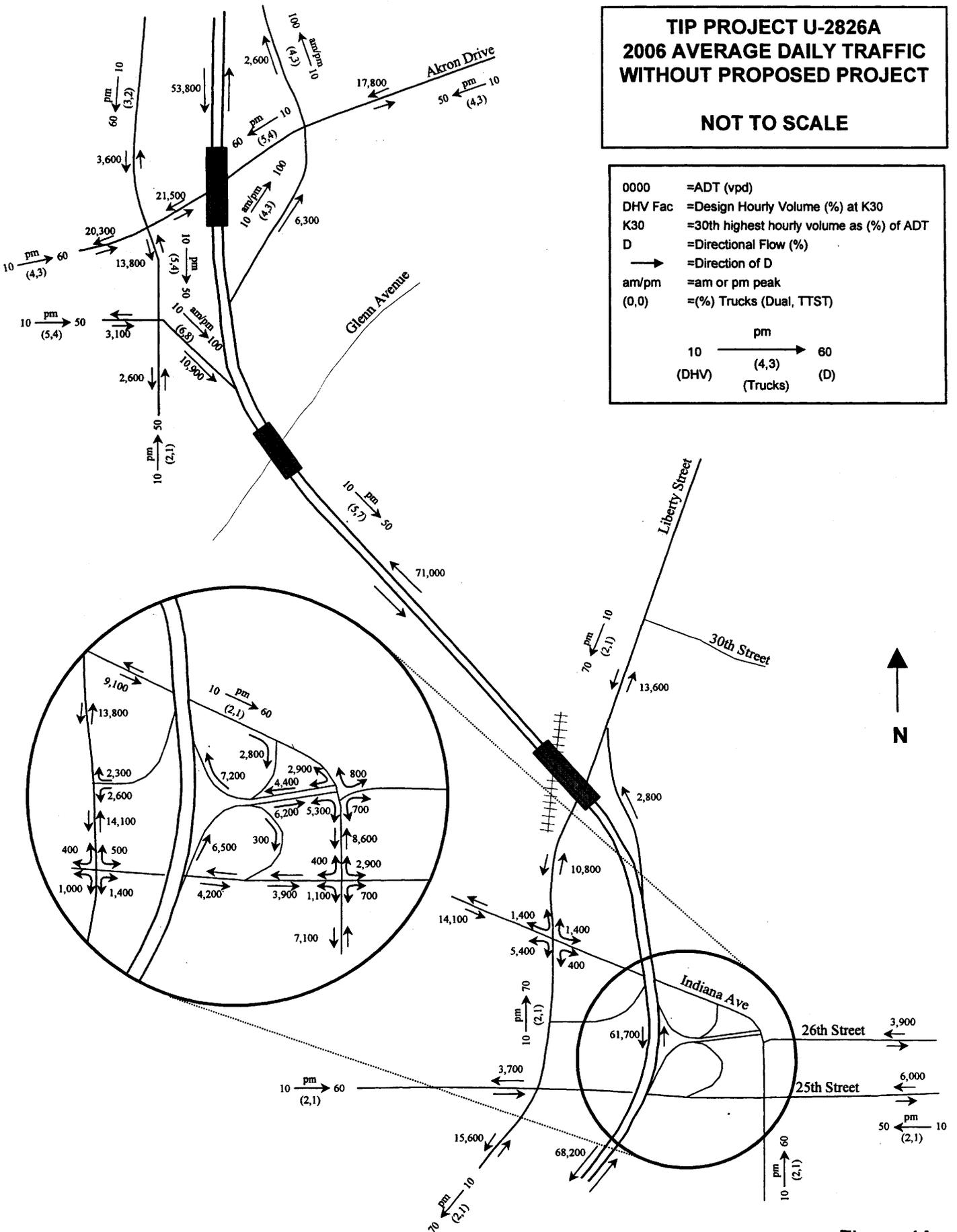


FIGURE 3B

**TIP PROJECT U-2826A  
2006 AVERAGE DAILY TRAFFIC  
WITHOUT PROPOSED PROJECT**

**NOT TO SCALE**

- 0000 =ADT (vpd)
  - DHV Fac =Design Hourly Volume (%) at K30
  - K30 =30th highest hourly volume as (%) of ADT
  - D =Directional Flow (%)
  - =Direction of D
  - am/pm =am or pm peak
  - (0,0) =(%) Trucks (Dual, TTST)
- |       |          |     |
|-------|----------|-----|
| 10    | pm       | 60  |
| (DHV) | (4,3)    | (D) |
|       | (Trucks) |     |

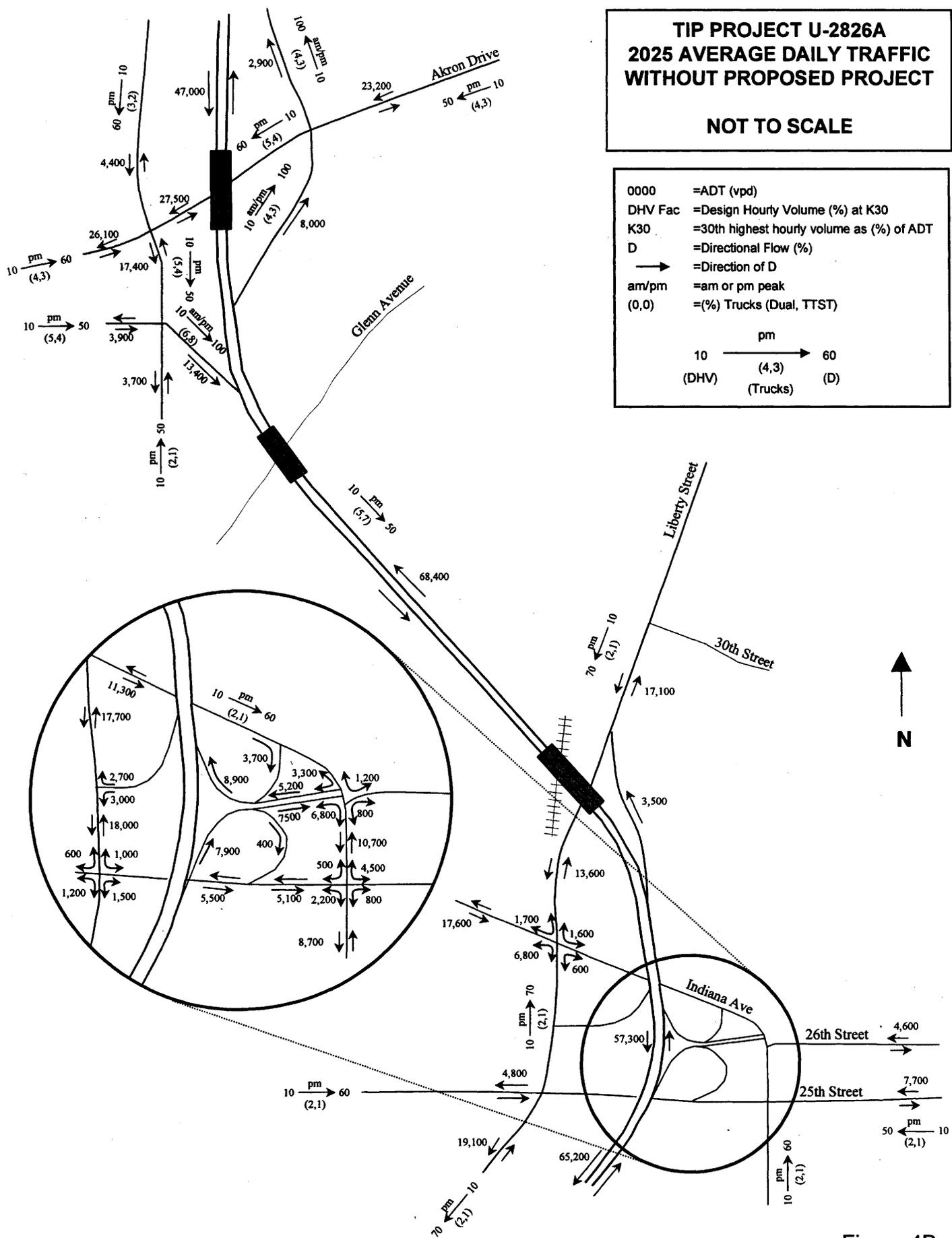


**Figure 4A**

**TIP PROJECT U-2826A  
2025 AVERAGE DAILY TRAFFIC  
WITHOUT PROPOSED PROJECT**

**NOT TO SCALE**

- 0000 =ADT (vpd)
  - DHV Fac =Design Hourly Volume (%) at K30
  - K30 =30th highest hourly volume as (%) of ADT
  - D =Directional Flow (%)
  - =Direction of D
  - am/pm =am or pm peak
  - (0,0) =(%) Trucks (Dual, TTST)
- 
- |       |          |     |
|-------|----------|-----|
|       | pm       |     |
| 10    | →        | 60  |
| (DHV) | (4,3)    | (D) |
|       | (Trucks) |     |

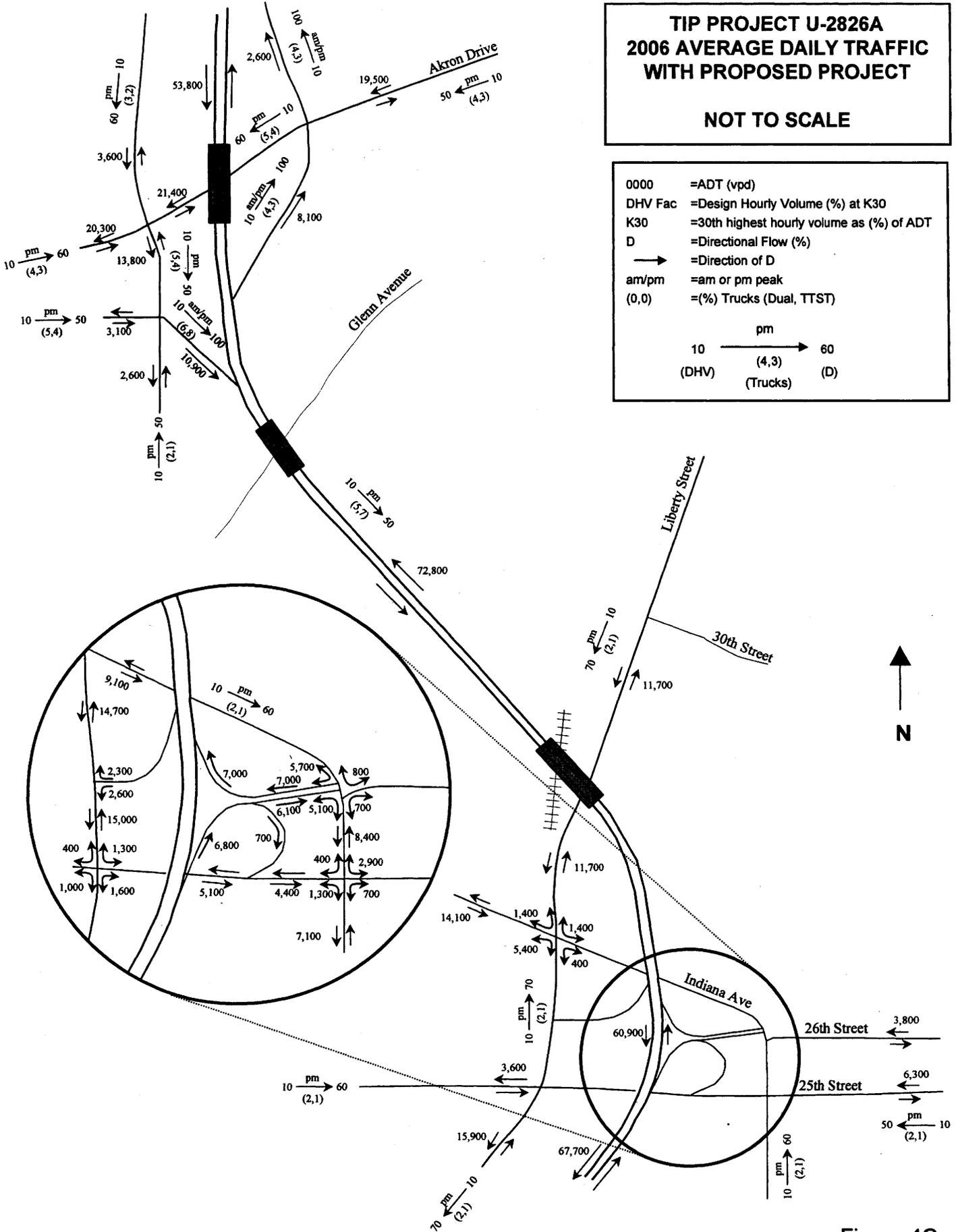
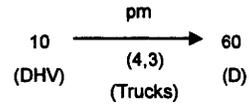


**Figure 4B**

**TIP PROJECT U-2826A  
2006 AVERAGE DAILY TRAFFIC  
WITH PROPOSED PROJECT**

**NOT TO SCALE**

- 0000 =ADT (vpd)
- DHV Fac =Design Hourly Volume (%) at K30
- K30 =30th highest hourly volume as (%) of ADT
- D =Directional Flow (%)
- =Direction of D
- am/pm =am or pm peak
- (0,0) =(%) Trucks (Dual, TTST)

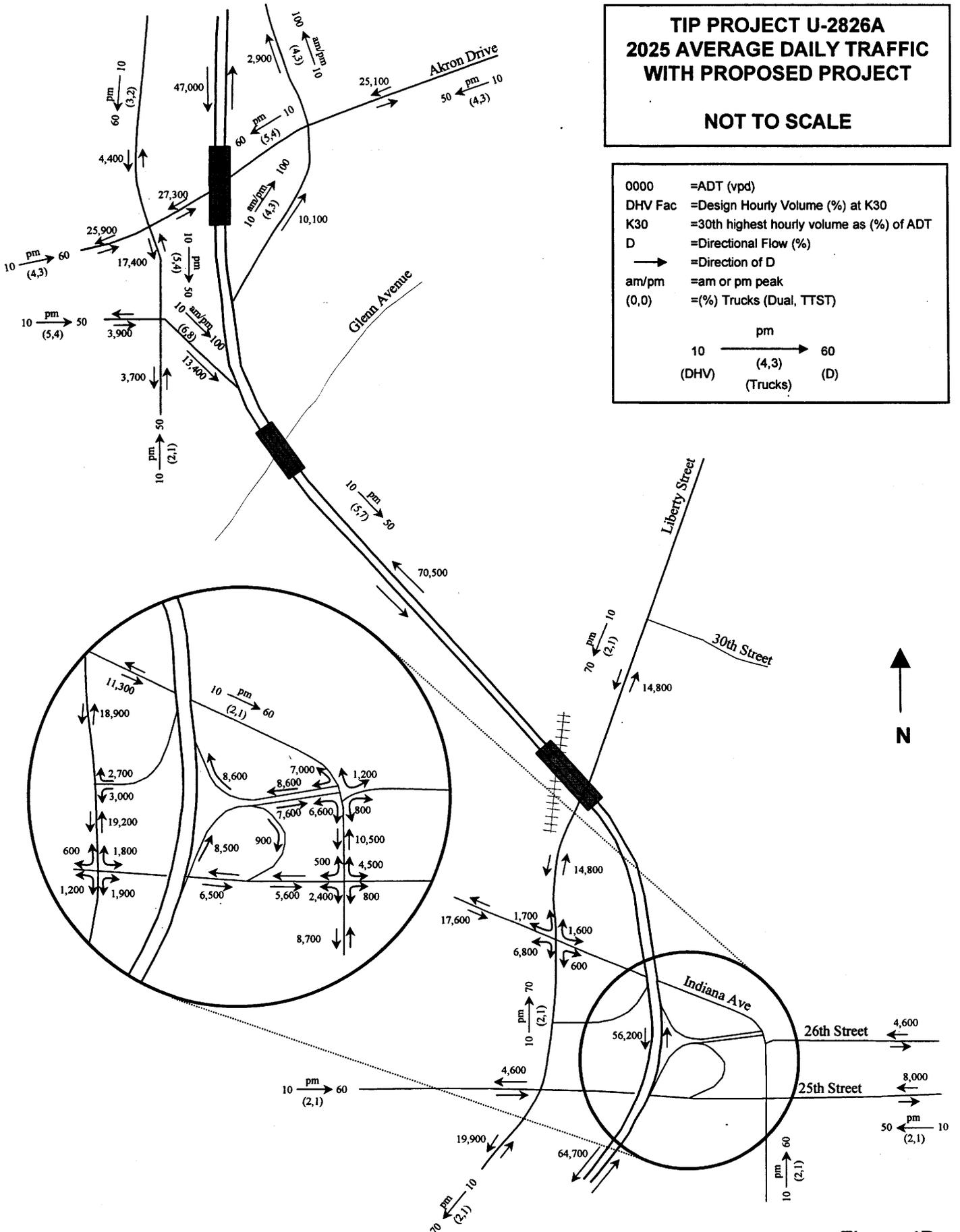


**Figure 4C**

**TIP PROJECT U-2826A  
2025 AVERAGE DAILY TRAFFIC  
WITH PROPOSED PROJECT**

**NOT TO SCALE**

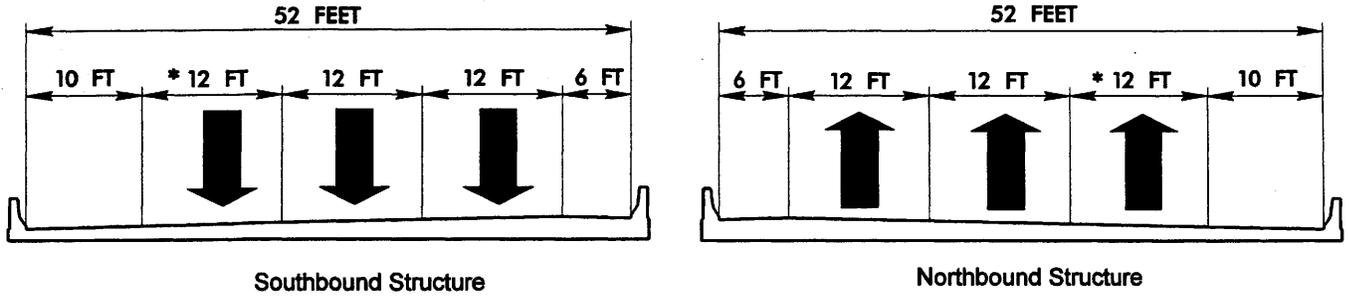
0000	=ADT (vpd)
DHV Fac	=Design Hourly Volume (%) at K30
K30	=30th highest hourly volume as (%) of ADT
D	=Directional Flow (%)
→	=Direction of D
am/pm	=am or pm peak
(0,0)	=(%) Trucks (Dual, TTST)
10 → 60	pm (4,3) (D)
(DHV)	(Trucks)



**Figure 4D**

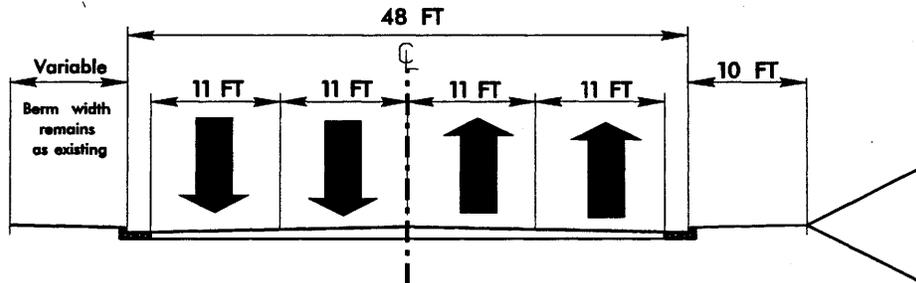
# TIP Project U-2826A

## Proposed Typical Section for Bridge Replacement on US 52

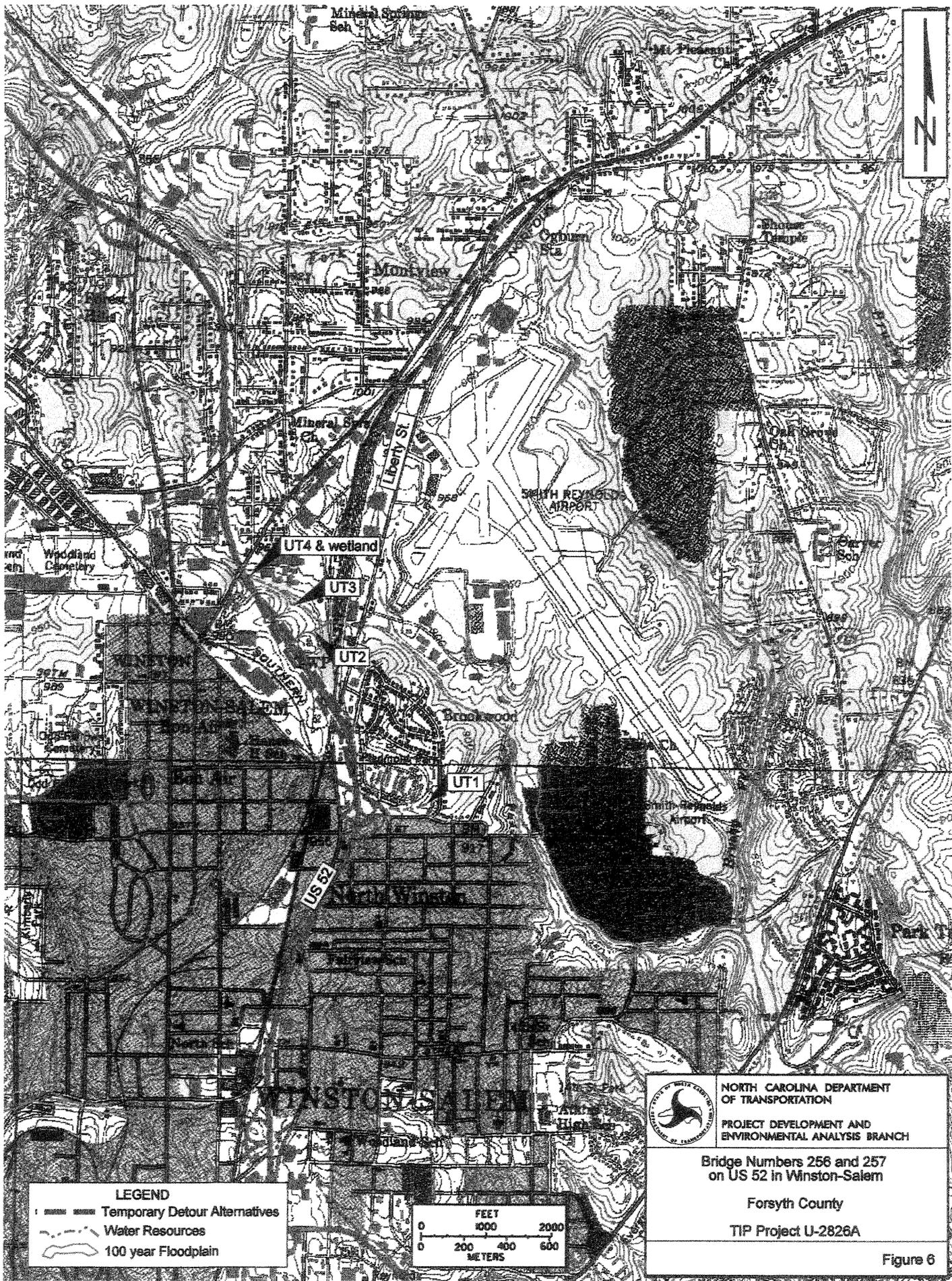


\* Acceleration or deceleration lane for interchange located south of the bridges

## Proposed Typical Section for Liberty Street



	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
	PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH
Bridge Numbers 256 and 257 on US 52 in Winston-Salem	
Forsyth County	
TIP Project U-2826A	
Proposed Typical Section	Figure 5



**LEGEND**

- Temporary Detour Alternatives
- Water Resources
- 100 year Floodplain



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

Bridge Numbers 256 and 257 on US 52 in Winston-Salem

Forsyth County

TIP Project U-2826A

Figure 6

## **APPENDIX A**

### **COMMENTS RECEIVED**

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## North Carolina Department of Cultural Resources

State Historic Preservation Office

David L. S. Brook, Administrator

James B. Hunt Jr., Governor  
Betty Ray McCain, Secretary

Division of Archives and History  
Jeffrey J. Crow, Director

June 28, 2000

### MEMORANDUM

TO: Alethia Raynor  
Project Development & Environmental Analysis  
NCDOT

FROM: David Brook *David Brook*  
Deputy State Historic Preservation Officer

RE: US 52-Replace Bridge Nos. 256 and 257 in Winston Salem, Forsyth County,  
Tip No U-2826A

Thank you for your memorandum of May 15 2000, concerning the above project.

We have conducted a review of the project and are aware of no properties of architectural, historic, or archaeological significance which would be affected by the project. Therefore, we have no comment on the project as currently proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

DB:scb

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-4763 • 733-8653
ARCHAEOLOGY	421 N. Blount St., Raleigh NC	4619 Mail Service Center, Raleigh NC 27699-4619	(919) 733-7342 • 715-2671
RESTORATION	515 N. Blount St., Raleigh NC	4613 Mail Service Center, Raleigh NC 27699-4613	(919) 733-6547 • 715-4801

Raynor



## North Carolina Department of Cultural Resources

State Historic Preservation Office

David L. S. Brook, Administrator

James B. Hunt Jr., Governor  
Betty Ray McCain, Secretary

Division of Archives and History  
Jeffrey J. Crow, Director

August 10, 2000

### MEMORANDUM

To: William D. Gilmore, P.E., Manager  
Project Development and Environmental Analysis Branch

From: David Brook *David Brook*  
Deputy State Historic Preservation Officer

Re: US 52, Replace Bridge Numbers 256 and 257 in Winston-Salem, Forsyth  
County, Federal Aid Project No. NHF-52 (14), State Project No. 8.1622802,  
TIP Project No. U-2826A, ER 00-7611

Thank you for your letter of May 25, 2000, concerning the above project.

We have conducted a review of the project and are aware of no properties of architectural, historic, or archaeological significance which would be affected by the project. Therefore, we have no comment on the project as currently proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, Environmental Review Coordinator, at 919/733-4763.

DB:kgc

	Location	Mailing-Address	Telephone/Fax
ADMINISTRATION	507 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-4763 • 733-8653
ARCHAEOLOGY	421 N. Blount St., Raleigh NC	4619 Mail Service Center, Raleigh NC 27699-4619	(919) 733-7342 • 715-2671
RESTORATION	515 N. Blount St., Raleigh NC	4613 Mail Service Center, Raleigh NC 27699-4613	(919) 733-6547 • 715-4801

Federal Aid #

TIP # U-2826A County: FORSYTH

CONCURRENCE FORM FOR PROPERTIES NOT ELIGIBLE FOR THE NATIONAL REGISTER OF HISTORIC PLACES

Project Description:

On 3/1/01, representatives of the

- North Carolina Department of Transportation (NCDOT)
- Federal Highway Administration (FHWA)
- North Carolina State Historic Preservation Office (SHPO)
- Other

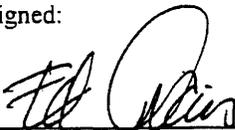
reviewed the subject project at

- Scoping meeting
- Historic architectural resources photograph review session/consultation
- Other

All parties present agreed

- there are no properties over fifty years old within the project's area of potential effects.
- there are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- there are properties over fifty years old within the project's Area of Potential Effects (APE), but based on the historical information available and the photographs of each property, the property identified as (List Attached) is considered not eligible for the National Register and no further evaluation of it is necessary.
- there are no National Register-listed properties within the project's area of potential effects.
  
- all properties greater than 50 years of age located in the APE have been considered at this consultation, and based upon the above concurrence, all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

Signed:

  
\_\_\_\_\_  
Representative, NCDOT 3/1/2001  
Date

  
\_\_\_\_\_  
FHWA, for the Division Administrator, or other Federal Agency 3/1/2001  
Date

  
\_\_\_\_\_  
Representative, SHPO 3/1/01  
Date

  
\_\_\_\_\_  
State Historic Preservation Officer 3/9/01  
Date

**CONCURRENCE FORM FOR PROPERTIES NOT ELIGIBLE FOR THE NATIONAL REGISTER OF HISTORIC PLACES**

*Project Description:* Replacement of Brides 256 and 257 on US 52 in Winston-Salem. Expansion of study area

On October 18, 2001, representatives of the

- North Carolina Department of Transportation (NCDOT)
- Federal Highway Administration (FHWA)
- North Carolina State Historic Preservation Office (HPO)
- Other

Reviewed the subject project at

- Scoping meeting
- Historic architectural resources photograph review session/consultation
- Other

All parties present agreed

- There are no properties over fifty years old within the project's area of potential effects.
- There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are properties over fifty years old within the project's Area of Potential Effects (APE), but based on the historical information available and the photographs of each property, the property identified as (List Attached) is considered not eligible for the National Register and no further evaluation of it is necessary. *A, A1, B, C, D, E, F*
- There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- All properties greater than 50 years of age located in the APE have been considered at this consultation, and based upon the above concurrence, all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.
- There are no historic properties affected by this project. (*Attach any notes or documents as needed*)

Signed:

*[Signature]* \_\_\_\_\_ 10-18-01  
 Representative, NCDOT Date

*[Signature]* \_\_\_\_\_ 10/18/01  
 FHWA, for the Division Administrator, or other Federal Agency Date

*[Signature]* \_\_\_\_\_ 10-18-01  
 Representative, HPO Date

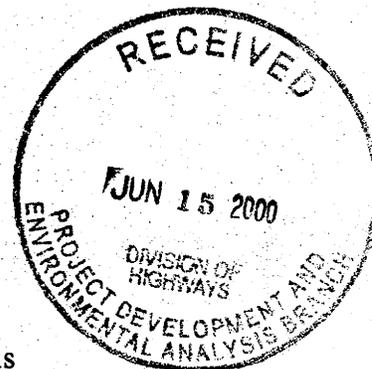
*[Signature]* \_\_\_\_\_ 10-18-01  
 State Historic Preservation Officer Date

State of North Carolina  
Department of Environment  
and Natural Resources  
Division of Water Quality



James B. Hunt, Jr., Governor  
Bill Holman, Secretary  
Kerr T. Stevens, Director

June 8, 2000



**MEMORANDUM**

**TO:** William D. Gilmore, P.E., Manager, NCDOT  
Project Development & Environmental Analysis

**THROUGH:** John R. Dorney *J. Dorney*

**FROM:** Cynthia F. Van Der Wiele, NC Division of Water Quality

**SUBJECT:** Scoping comments on the proposed improvements to US 52—Replace Bridge Nos. 256 and 257 in Winston-Salem, Forsyth County, State Project No. 8.1622802, TIP U-2826A.

In reply to your correspondence dated May 25, 2000 in which you requested comments for the referenced project, preliminary analysis of the project reveals no potential for direct impacts to perennial streams or jurisdictional wetlands in the project area. Peters Creek is noted to be adjacent to the project site and has a water quality classification of C. However, in the event that the project scope is amended, the Division of Water Quality requests that NCDOT send notification of any proposed impacts to wetlands and streams with corresponding mapping.

The NCDWQ appreciates the opportunity to provide comments on your project. If you have any questions, please call me at 733.5715.

CVDW/cvdw

pc: Eric Alsmeyer, Corps of Engineers  
Mark Cantrell, USFWS  
David Cox, NCWRC  
File Copy  
Central Files

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☒ North Carolina Wildlife Resources Commission ☒

512 N. Salisbury Street, Raleigh, North Carolina 27604-1188, 919-733-3391  
Charles R. Fullwood, Executive Director

MEMORANDUM

TO: William D. Gilmore, PE, Manager  
NCDOT Project Development and Environmental Analysis Branch

DATE: October 10, 1999

FROM: Ron Linville   
North Carolina Wildlife Resources Commission

SUBJECT: Review of Scoping Sheets for Bridge Replacements Nos. 256 and 257 in  
Winston-Salem, US 52, TIP U-2826A

DATE: October 10, 1999

This correspondence responds to a request by your office for our review and comments on the scoping sheets for the subject project.

Biological staff of the North Carolina Wildlife Resources Commission have given a cursory review to the scoping sheets for the subject project and have not identified any special concerns regarding this project. It is recommended that a site evaluation determine if there are any culverted streams and drainages associated with the existing bridge. If possible, when the new structure is built, storm water runoff from the bridge should not be released directly into streams or surface waters as highway runoff will carry petroleum products, debris, and other pollutants. NCDOT Best Management Practices (BMPs) should be utilized for storm water controls during and after construction for detention and filtration as much as practicable in order to minimize pollutant loads to surface waters and in order to reduce or minimize stream bank destabilization to downstream riparian areas.

As these bridges are in a very urban setting, some of the review issues listed below may not be entirely appropriate. However, the listed items may be useful in your planning processes. In order for biological staff of the North Carolina Wildlife Resources Commission to provide a meaningful review, the environmental document prepared for projects such as this should include the following minimal information:

- 1) Description of fishery and wildlife resources within the project area, including a listing of federally or state designated threatened, endangered, or special concern animal and plant species. Contact is the Mr. Steven Hall of the North Carolina Natural Heritage Program (919/733-7701).

- 2) Description of waters and/or wetlands affected by the project.
- 3) Project map identifying wetland areas. Identification of wetlands may be accomplished through coordination with the U.S. Army Corps of Engineers. If the Corps is not consulted, the person delineating any wetlands should be identified and criteria listed.
- 4) Description of project activities that will occur within wetlands, such as fill or channel alteration. Acreage of wetlands impacted by alternative project designs should be listed. Project sponsors should indicate whether the Corps has been contacted to determine the need for a 404 Permit under the Clean Water Act. Contact is Mr. Steve Lund at 704/271-4857.
- 5) Description of project site and non-wetland vegetative communities.
- 6) The extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat.
- 7) Any measures proposed to avoid or reduce impacts of the project or to mitigate for unavoidable habitat losses.
- 8) A list of document preparers that shows each individual's professional background and qualifications.

If necessary, a formal scoping response outlining our informational needs for preparation of the environmental document will be provided upon request through the State Clearinghouse. I hope this helps with your planning process. Thank you for the opportunity to provide a preliminary comment on this upcoming project. If you have any questions regarding these comments, please contact me at 336-769-9453.

**Subject: U-2826A Norfolk Southern Preferred Alternate**

**Date:** Wed, 25 Sep 2002 15:57:40 -0400

**From:** "Laura E. Sutton PE" <lsutton@dot.state.nc.us>

**Organization:** North Carolina Department of Transportation

**To:** "Alethia F. Raynor" <afraynor@dot.state.nc.us>

**CC:** Allen Raynor <araynor@dot.state.nc.us>

Ms. Raynor:

The find the response from Norfolk Southern concerning their preferred alternate for the temporary bridge alignment. If you have any questions, please contact me at 250-4060.

Laura Sutton

**Subject:** RE: Winston-Salem - Replacement of Bridge Nos. 256 and 257 on US 52 over Norfolk Southern Railroad MP R-124.0 State project 8.1622802 (U- 2826A)

**Date:** Wed, 25 Sep 2002 09:29:33 -0400

**From:** "Decker, Phil, N." <Phil.Decker@nscorp.com>

**To:** "Allen Raynor" <araynor@dot.state.nc.us>

**CC:** Dave Wyatt <tdwyatt@nscorp.com>,

"R. M. Girolami PE" <rgirolami@dot.state.nc.us>,

"Laura E. Sutton PE" <lsutton@dot.state.nc.us>,

John Frye <jfrye@dot.state.nc.us>,

"Grigsby, Kevin L." <Kevin.Grigsby@nscorp.com> Allen-Dave Wyatt and I visited the site a while back.

As you may know, the "1SBKMTLBUS" shown on the plan just east of the US-52 structures is our yard office. Continuous access to this office is a must. The area between the office and the bridges is used as parking, with access from Liberty St. We are inclined to favor the plan with the proposed detour structure constructed west of the existing bridges, since this plan appears to be the least disruptive to our property and operations. The driveway into the office must remain or be otherwise provided for. As for whether the the ramp from US-52 to Liberty St. should remain open, I have no feeling for how useful its existence is to our personnel. It appears to enter Liberty St. too far east to provide convenient access to our facility. You do have the fire station right there and I'm sure they've become accustomed to it being there.-Phil Decker

**From:** Allen Raynor [<mailto:araynor@dot.state.nc.us>]

**Sent:** Friday, September 13, 2002 8:27 AM

**To:** Phil Decker

**Cc:** Dave Wyatt; R. M. Girolami PE; Laura E. Sutton PE; John Frye

**Subject:** Winston-Salem - Replacement of Bridge Nos. 256 and 257 on US 52 over Norfolk Southern Railroad MP R-124.0 State project 8.1622802 (U-2826A)

Phil,

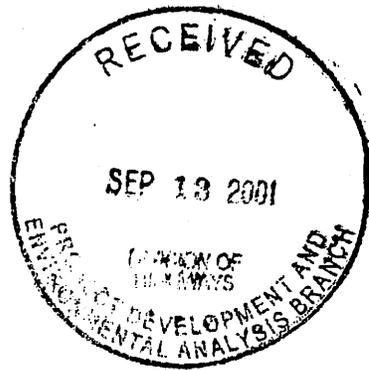
Reference is made to Mr. Tim Rountree's letter of August 28, 2001. We are in the planning stage for this project and request that Norfolk Southern provide us with input as to the temporary bridge alignment alternate that would least impact Norfolk Southern rail operations. The above referenced letter was sent with four plan sheets showing different alignment alternates. I would be happy to arrange an on-site meeting if you feel it would be appropriate. Please notify me if you need additional copies of the plan sheets. Please note that the referenced letter authorizes the Norfolk Southern Corporation to incur costs to be reimbursed by the Department. We will send our standard letter agreement in the near future. We look forward to your comments.

Sincerely,

R. A. (Allen) Raynor, Jr., PE

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Raymer



Development  
Department

City of Winston-Salem  
P.O. Box 2511  
Winston-Salem, NC 27102  
Tel 336.727-8040  
Fax 336.748-3060

September 10, 2001

Mr. William Gilmore, PE, Manager  
North Carolina Department of Transportation  
Project Development and Environmental Analysis Branch  
1548 Mail Service Center  
Raleigh, NC 27699-1548

SEP 13 2001

**RE: US 52-- REPLACE BRIDGE NUMBERS 256 AND 257 OVER LIBERTY STREET  
AND THE NORFOLK SOUTHERN RAILROAD--TIP PROJECT NO. U-2826A**

Dear Mr. Gilmore:

Let me again thank you for allowing us to participate in the discussions leading up to a decision regarding the bridge replacements and ramp closure on US 52 at Liberty Street. I had previously noted some concerns regarding this project, and the fact that a major redevelopment project had not been considered as part of the State's study.

We recently held a follow-up meeting with your staff and the critical elements of the redevelopment project had been incorporated into the revised study. Under this proposal, two alternatives were identified for ramp closure to address weaving problems in the area. Alternative 1 recommended removing the Liberty Street off-ramp and Alternative 2 recommended removing the 28<sup>th</sup> Street on-ramp.

Given both alternatives offered pros and cons and the long-term implications of this decision, we felt that additional discussion was necessary at the local level. We now have had additional discussion and reached a consensus regarding an acceptable alternative. While from a development standpoint, Alternative 2 would be the preferred alternative, we also recognize the critical factors that make Alternative 1 more feasible from the State's viewpoint. This being the case, the City is willing to accept Alternative 1 given the following stipulations.

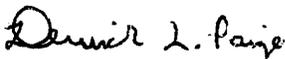
- 1) Installation of a signal at the intersection of 28<sup>th</sup> Street/Indiana Avenue and the US 52 on-ramp/off-ramp.
- 2) Addition of an additional northbound lane on Liberty Street north of 28<sup>th</sup> Street/Indiana Avenue.

- 3) Adequate directional signage and lighting in the area including pedestrian lighting along 28<sup>th</sup> Street/Indiana Avenue and Liberty Street between 28<sup>th</sup> Street/Indiana Avenue and 30<sup>th</sup> Street.
- 4) Realignment of 26<sup>th</sup> Street with the US 52 on-ramp/off-ramp.
- 5) Improvement of the pedestrian treatments at the intersections of 25<sup>th</sup> Street/Liberty Street and 28<sup>th</sup> Street/Indiana Avenue/Liberty Street including crosswalks, pedestrian traffic signals, and sidewalks on Liberty Street between 28<sup>th</sup> Street/Indiana Avenue and 30<sup>th</sup> Street.
- 6) Noise reduction treatment for the residential properties located in the area bound by US 52 on the west, 25<sup>th</sup> Street on the south, and Indiana Avenue on the north and east.
- 7) Installation of a traffic signal at 30<sup>th</sup> Street and Liberty Street, if warranted.
- 8) Improvements at the intersection of Liberty Street and Indiana Avenue to enhance visibility through the intersection.
- 9) Elimination of the loop from the US 52 northbound exit to 25<sup>th</sup> Street.

In addition to these items, most of which were discussed during our August 29, 2001 meeting with Ms. Alethia Raynor and other NCDOT representatives, the State should also contact the three property owners for the residents in #6 above to ascertain their interest in selling these properties. If a consensus is reached among these individuals, these properties should be acquired and the noise treatments should be foregone. At that time, Ms. Raynor advised that all of these items discussed appeared reasonable and acceptable requests which could be incorporated into the project at the State's expense. Upon your review of this information, please advise if your opinion on any of these requests differs from Ms. Raynor's.

I am available to further discuss this matter and may be reached at 336-727-8040 regarding any questions, comments, or concerns.

Sincerely,



Derwick L. Paige  
Development Director

cc: Alderman Vivian Burke  
Alderman Joycelyn Johnson  
Bryce A. Stuart, City Manager  
Tom Griffin, Assistant City Manager/Public Works  
Greg Turner, Department of Transportation Director  
Paul Norby, City-County Planning Director  
Pat Ivey, NCDOT Division Nine  
Edwin Cox, Smith Reynolds Airport Director

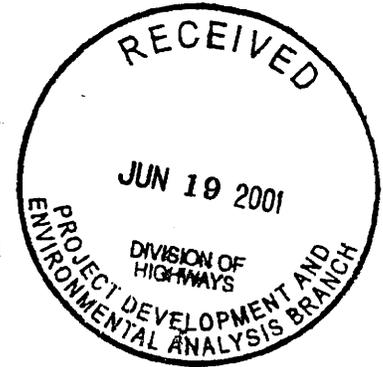


# CITY OF WINSTON-SALEM

DEPARTMENT OF TRANSPORTATION

P.O. BOX 2511 • WINSTON-SALEM, NORTH CAROLINA 27102-2511

336-727-2707 • fax 336-748-3370



June 15, 2001

Mr. William Gilmore, PE, Manager  
North Carolina Department of Transportation  
Project Development and Environmental Analysis Branch  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

JUN 19 2001

SUBJECT: US 52 Bridges Replacement over Liberty Street and Norfolk Southern Railroad (U-2826A)

Dear Mr. Gilmore:

Thank you for providing us an opportunity to participate in the planning for the replacement of the US 52 bridges over North Liberty Street and the Norfolk Southern Railroad line in northern Winston-Salem. We attended the March 26<sup>th</sup> meeting at the Division Nine office, the April 16<sup>th</sup> Meeting with Winston-Salem Alderman Joycelyn Johnson at the Smith-Reynolds Airport, and the April 30<sup>th</sup> Public Officials meeting and Citizens Informational Workshop. After attending those meetings and studying the hand-out materials and maps of the area, we have a few comments to share with you:

- 1) The replacement bridges over Liberty Street and the Norfolk Southern Railroad tracks must have sufficient width to accommodate adding at least one more through travel lane in each direction plus enough width for breakdown lanes. This work should be coordinated with TIP Project U-2826B which proposes to widen US 52 from Business Interstate 40 (US 421) north to Patterson Avenue to three (3) lanes in each direction.
- 2) The new bridges must have support structures that allow for sufficient horizontal clearance for the future widening of Liberty Street to a five (5) lane cross-section with a sidewalk on the east side of the street. As you have learned during this study process, the Liberty Street Corridor Improvement Project is very important to our citizens.
- 3) The construction of the temporary detour bridge should be built on the west side of US 52 because it will have less of a negative impact on the overall community. Generally speaking, the acquisition of a few businesses is less disruptive than relocating several families.
- 4) The issue of permanently closing one or more of the entrance or exit ramps for US 52 in the study area is very difficult. We believe that access for the adjoining businesses and neighborhoods should be provided at the 25<sup>th</sup>/28<sup>th</sup> Street interchange, and, therefore, improvements should be made to the entrance and exit ramps. The northbound on-ramp to US 52 is very important for the area and should be reconstructed to provide an adequate area for merging. This may mean that the northbound Liberty Street off-ramp will have to be modified or eliminated. If this off-ramp is eliminated, then Liberty Street should be widened to a five (5) lane cross-section from 28<sup>th</sup> Street to at least Fairchild Drive, and possible to the Smith Reynolds airport terminal driveways. Redesign of the 25<sup>th</sup>/28<sup>th</sup> Street interchange should include safer and easier turns to get to 25<sup>th</sup> Street.

An adequate deceleration lane and off-ramp for southbound US 52 at the 25th/28th Street interchange is also badly needed and must be included in this project.

- 5) The bridge over 25<sup>th</sup> Street should be widened to provide three (3) northbound travel lanes and a deceleration lane. The bridge over 28<sup>th</sup> Street should be widened to provide for three (3) northbound travel lanes and an acceleration/entrance lane.
- 6) We also support the realignment of 26<sup>th</sup> Street to the ramp termini of the 25th/28th Street interchange. We recommend that the homes on 26<sup>th</sup> Street from Cleveland Avenue to Claremont Avenue be acquired as part of the realignment of 26<sup>th</sup> Street. In the future, 26<sup>th</sup> Street could be extended to the northeast to provide additional access for the planned Brookwood Business Park south of the airport.
- 7) Adequate lighting is needed for the project area, particularly for the 25th/28th Street interchange.

Please let me know if you have any questions or need any additional information.

Sincerely,

GREG ERNETT FOR BRENT MCKINNEY

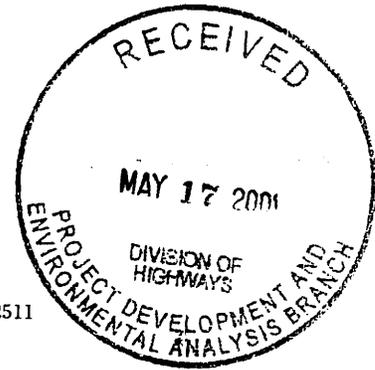
Brent McKinney  
Director of Transportation

pc: Alderman Vivian Burke  
Alderman Joycelyn Johnson  
Bryce A. Stuart, City Manager  
Tom Griffin, Public Works  
Ron Graham, Forsyth County  
Derwick Paige, Development Office  
Paul Norby, City-County Planning Board  
Ed Cox, Smith Reynolds Airport  
US 52 Bridge Replacement files



CITY OF WINSTON-SALEM  
DEPARTMENT OF TRANSPORTATION

P.O. BOX 2511 • WINSTON-SALEM, NORTH CAROLINA 27102-2511  
336-727-2707 • fax 336-748-3370



MAY 18 2001

May 14, 2001

Mr. William Gilmore, P.E.  
Manager  
North Carolina Department of Transportation  
Project Development and Environmental Analysis Branch  
1548 Mail Service Center  
Raleigh, NC 27699-1548

Dear Mr. Gilmore:

Let me thank you for the several meetings your department has held in Winston-Salem regarding the replacement of bridges 256 and 257 on US 52 over Liberty Street and the Norfolk Southern Railroad tracks. On behalf of our citizens, elected officials, and the Department of Transportation staff, I thank you for the interest and effort you have put forward to assure that the process is open and all concerns are taken into consideration.

I know there are many environmental impacts and social issues that you will be taking into consideration during this study. I offer my support and encourage you to look carefully at the noise impacts to residences along the US 52 Corridor.

In addition to several alternative designs for the 25th/28th Streets interchange that you will be studying, I would like for you to also look at the feasibility of providing future access to the Airport Business Park via 26<sup>th</sup> Street. If you would look at this alternative and advise me of the initial issues, perhaps we can work with your department to mediate the negative impacts.

Again, I want to thank you for involving our elected officials, citizens, and the Department of Transportation staff in this planning process. We look forward to working with you to address all of our concerns for a successful project.

Sincerely,

Brent McKinney  
Director of Transportation

BM:jb

CC: Alderman Vivian Burke, Northeast Ward  
Alderman Joycelyn Johnson, East Ward  
Alderman Robert Northington, Jr., West Ward  
Bryce A. Stuart, City Manager  
Tom Griffin, Assistant City Manager

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# CITY OF WINSTON-SALEM

ENTERPRISE COMMUNITY DEVELOPMENT DEPARTMENT

P.O. BOX 2511 • WINSTON-SALEM, NORTH CAROLINA 27102-2511

336-727-8040 • fax 336-748-3060

MAY 14 2001

May 9, 2001

Mr. William Gilmore, PE, Manager  
North Carolina Department of Transportation  
Project Development and Environmental Analysis Branch  
1548 Mail Service Center  
Raleigh, NC 27699-1548



**RE: US 52-- REPLACE BRIDGE NUMBERS 256 AND 257 OVER LIBERTY STREET  
AND THE NORFOLK SOUTHERN RAILROAD--TIP PROJECT NO. U-2826A**

Dear Mr. Gilmore:

First, let me thank you for the opportunity to attend the formal briefing session recently held at City Hall South to discuss the US 52 Bridge Replacements over Liberty Street. I see this project as having a tremendous impact on the future development of this area; hence, it is imperative that I repeat the concerns that I previously raised. Enclosed you will find the NCDOT Comment Sheet as well as other documentation regarding the ongoing redevelopment efforts in the area.

As you will see from this information, the City of Winston-Salem is truly committed to the revitalization of the Liberty Street corridor and surrounding areas. Through the various redevelopment programs, more than \$10.6 million City and federal funds already have been allocated to the revitalization of the corridor. Much of this effort centers around Smith Reynolds Airport. I believe that to eliminate direct interstate access to this facility and the surrounding area would have a detrimental effect on these efforts.

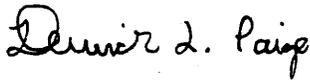
But, it is just not the City that is seeking to revitalize this area, it is the entire community. Forsyth County currently is constructing a new General Maintenance Facility along Liberty Street. This facility will generate hundreds of new trips per day. In addition, their future plans envision the construction of a new vehicle maintenance facility on Liberty Street.

Besides the public investment occurring in the area, the private and non-profit sectors also are actively involved in revitalizing the area. In the last six (6) months, four (4) businesses between the 2900 block of North Liberty Street and the 3300 block of North Liberty Street have participated in the City's Building Improvement Program. Participation in this program requires a significant matching investment and commitment by these small business owners. Two community-based, non-profit organizations, Pangaea Development Corporation and Northeast Winston Development

Corporation, also are actively involved in the redevelopment efforts of the corridor. All of these organizations could be adversely affected by the NCDOT decision.

Upon your review of this information, I hope that you will give careful consideration to these concerns prior to making your final decision regarding the temporary and permanent closure of the Liberty Street ramp. I am available to further discuss this matter and may be reached at 336-727-8040 regarding any questions, comments, or concerns.

Sincerely,



Derwick L. Paige  
Development Director

cc: Alderman Vivian Burke  
Alderman Joycelyn Johnson  
Alderman Robert Northington  
Bryce A. Stuart, City Manager  
Graham Pervier, County Manager  
Brent McKinney, Department of Transportation Director  
Paul Norby, City-County Planning Director  
Edwin Cox, Smith Reynolds Airport Director

enclosures

## **APPENDIX B**

### **RELOCATION REPORTS**

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## **DIVISION OF HIGHWAYS RELOCATION PROGRAMS**

It is the policy of NCDOT to ensure comparable replacement housing will be available prior to construction of state and federally-assisted projects. Furthermore, the North Carolina Board of Transportation has the following three programs to minimize the inconvenience of relocation:

- Relocation Assistance
- Relocation Moving Payments
- Relocation Replacement Housing Payments or Rent Supplement

As part of the Relocation Assistance Program, experienced NCDOT staff will be available to assist displacees with information such as availability and prices of homes, apartments, or businesses for sale or rent and financing or other housing programs. The Relocation Moving Payments Program, in general, provides for payment of actual moving expenses encountered in relocation. Where displacement will force an owner or tenant to purchase or rent property of higher cost or to lose a favorable financing arrangement (in case of ownership), the Relocation Replacement Housing Payments or Rent Supplement Program will compensate up to \$22,500 to owners who are eligible and qualify and up to \$5,250 to tenants who are eligible and qualify.

The relocation program for the proposed action will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), and/or the North Carolina Relocation Assistance Act (GS-133-5 through 133-18). The program is designed to provide assistance to displaced persons in relocating to a replacement site in which to live or do business. At least one relocation officer is assigned to each highway project for this purpose.

The relocation officer will determine the needs of displaced families, individuals, businesses, non-profit organizations, and farm operations for relocation assistance advisory services without regard to race, color, religion, sex, or national origin. The NCDOT will schedule its work to allow ample time, prior to displacement, for negotiations and possession of replacement housing which meets decent, safe, and sanitary standards. The displacees are given at least a 90-day written notice after NCDOT purchases the property. Relocation of displaced persons will be offered in areas not generally less desirable in regard to public utilities and commercial facilities. Rent and sale prices of replacement property will be within the financial means of the families and individuals displaced and will be reasonably accessible to their places of employment. The relocation officer will also assist owners of displaced businesses, non-profit organizations, and farm operations in searching for and moving to replacement property.

All tenant and owner residential occupants who may be displaced will receive an explanation regarding all available options, such as (1) purchase of replacement housing, (2) rental of replacement housing, either private or public, or (3) moving existing owner-occupant housing to another site (if possible). The relocation officer will also supply

information concerning other state and federal programs offering assistance to displaced persons and will provide other advisory services as needed in order to minimize hardships to displaced persons in adjusting to a new location.

The Moving Expense Payments Program is designed to compensate the displacee for the costs of moving personal property from homes, businesses, non-profit organizations, and farm operations acquired for a highway project. Under the Replacement Program for Owners, NCDOT will participate in reasonable incidental purchase payments for replacement dwellings such as attorney's fees, surveys, appraisals, and other closing costs and, if applicable, make a payment for any increased interest expenses for replacement dwellings. Reimbursement to owner-occupants for replacement housing payments, increased interest payments, and incidental purchase expenses may not exceed \$22,500 (combined total), except under the Last Resort Housing provision.

A displaced tenant may be eligible to receive a payment, not to exceed \$5,250, to rent a replacement dwelling or to make a down payment, including incidental expenses, on the purchase of a replacement dwelling. The down payment is based upon what the state determines is required when the rent supplement exceeds \$5,250.

It is a policy of the state that no person will be displaced by the NCDOT's state of federally-assisted construction projects unless and until comparable replacement housing has been offered or provided for each displacee within a reasonable period of time prior to displacement. No relocation payment received will be considered as income for the purposes of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law.

Last Resort Housing is a program used when comparable replacement housing is not available, or when it is unavailable within the displacee's financial means, and the replacement payment exceeds the federal/state legal limitation. The purpose of the program is to allow broad latitudes in methods of implementation by the state so that decent, safe, and sanitary replacement housing can be provided. It is not felt that this program will be necessary on the project, since there appear to be adequate opportunities for relocation within the area.

# RELOCATION REPORT

North Carolina Department of Transportation  
AREA RELOCATION OFFICE

E.I.S.     CORRIDOR     DESIGN

PROJECT:	8.1622802	COUNTY:	FORSYTH	Alternate	1	of	4	Alternate
I.D. NO.:	U-2826 A	F.A. PROJECT	NHF-52(14)	( NORTHBOUND DETOUR, NO RAMP (EAST SIDE)				
DESCRIPTION OF PROJECT:		US 52- Replace Bridge Nos. 256 and 257 over Liberty Street (SR 2456) and the Norfolk Southern Railroad.						

ESTIMATED DISPLACED					INCOME LEVEL							
Type of Displacee	Owner	Tenant	Total	Minority	0-15M	15-25M	25-35M	35-50M	50 UP			
Residential	0	0	0	0	NA	NA	NA	NA	NA			
Businesses	0	1	1	0	VALUE OF DWELLING			DSS DWELLING AVAILABLE				
Farms	0	0	0	0	Owners		Tenants		For Sale      For Rent			
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0
					20-40M	0	150-250	0	20-40M	0	150-250	0
					40-70M	0	250-400	0	40-70M	0	250-400	0
					70-100M	0	400-600	0	70-100M	0	400-600	0
					100 UP	0	600 UP	0	100 UP	0	600 UP	0
					TOTAL	0		0		0		0

**ANSWER ALL QUESTIONS**

Yes	No	Explain all "YES" answers.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Will special relocation services be necessary?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Will schools or churches be affected by displacement?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Will business services still be available after project?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Will relocation cause a housing shortage?
<input type="checkbox"/>	<input type="checkbox"/>	6. Source for available housing (list).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	7. Will additional housing programs be needed?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	8. Should Last Resort Housing be considered?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. Are there large, disabled, elderly, etc. families?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. Will public housing be needed for project?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	11. Is public housing available?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	12. Is it felt there will be adequate DSS housing available during relocation period?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	13. Will there be a problem of housing within financial means?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? <span style="border: 1px solid black; padding: 2px;">12 months</span>

**REMARKS (Respond by Number)**

#3. General business services will still be available.

#4. Carquest- 1SBLK. Bus.(4,000 +- sq.ft.) - 4 full time and 2 part time employees.

#11, 12 & 13. Questions are non-applicable -plans show only businesses are being affected.

#14. Winston-Salem Journal, Internet, and various local real estate companies.

**Comment:**  
There is one billboard in the proposed right of way; approximate cost to move: \$15,000.00 to \$20,000.00

Kris Barr and Heather Fulghum	9-19-01			9-19-01
Relocation Agent	Date		Approved by	Date

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# RELOCATION REPORT

North Carolina Department of Transportation  
AREA RELOCATION OFFICE

E.I.S.     CORRIDOR     DESIGN

PROJECT:	8.1622802	COUNTY	FORSYTH	Alternate	2	of	4	Alternate
I.D. NO.:	U-2826 A	F.A. PROJECT	NHF-52(14)	( NORTHBOUND DETOUR, WITH RAMP (EAST SIDE) )				
DESCRIPTION OF PROJECT:		US 52- Replace Bridge Nos. 256 and 257 over Liberty Street (SR 2456) and the Norfolk Southern Railroad.						

ESTIMATED DISPLACEDS					INCOME LEVEL							
Type of Displacee	Owner	Tenant	Total	Minority	0-15M	15-25M	25-35M	35-50M	50 UP			
Residential	0	0	0	0	NA	NA	NA	NA	NA			
Businesses	0	1	1	0	VALUE OF DWELLING		DSS DWELLING AVAILABLE					
Farms	0	0	0	0	Owners		Tenants		For Sale      For Rent			
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0
					20-40M	0	150-250	0	20-40M	0	150-250	0
					40-70M	0	250-400	0	40-70M	0	250-400	0
					70-100M	0	400-600	0	70-100M	0	400-600	0
					100 UP	0	600 UP	0	100 UP	0	600 UP	0
					TOTAL	0		0		0		0

ANSWER ALL QUESTIONS		
Yes	No	Explain all "YES" answers.
	<input checked="" type="checkbox"/>	1. Will special relocation services be necessary?
	<input checked="" type="checkbox"/>	2. Will schools or churches be affected by displacement?
<input checked="" type="checkbox"/>		3. Will business services still be available after project?
<input checked="" type="checkbox"/>		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	<input checked="" type="checkbox"/>	5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
	<input checked="" type="checkbox"/>	7. Will additional housing programs be needed?
	<input checked="" type="checkbox"/>	8. Should Last Resort Housing be considered?
	<input checked="" type="checkbox"/>	9. Are there large, disabled, elderly, etc. families?
	<input checked="" type="checkbox"/>	10. Will public housing be needed for project?
<input type="checkbox"/>	<input type="checkbox"/>	11. Is public housing available?
<input type="checkbox"/>	<input type="checkbox"/>	12. Is it felt there will be adequate DSS housing available during relocation period?
<input type="checkbox"/>	<input type="checkbox"/>	13. Will there be a problem of housing within financial means?
<input checked="" type="checkbox"/>		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? <span style="border: 1px solid black; padding: 2px;">12 months</span>

REMARKS (Respond by Number)							
#3.	General business services will still be available.	#4.	Carquest- 1SBLK. Bus.(4,000+- sq.ft.) - 4 full time and 2 part time employees.	#11, 12 & 13.	Questions are non-applicable -plans show only businesses are being affected.	#14.	Winston-Salem Journal, Internet, and various local real estate companies.
<b>Comment:</b> There is one billboard in the proposed right of way; approximate cost to move: \$15,000.00 to \$20,000.00							

Kris Barr and Heather Fulghum	9-19-01		9-19-01
Relocation Agent	Date	Approved by	Date

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# RELOCATION REPORT

North Carolina Department of Transportation  
AREA RELOCATION OFFICE

E.I.S.     CORRIDOR     DESIGN

PROJECT:	8.1622802	COUNTY	FORSYTH	Alternate 3 of 4 Alternate
I.D. NO.:	U-2826 A	F.A. PROJECT	NH-52(14) ( SOUTHBOUND DETOUR, NO RAMP (WEST SIDE)	

DESCRIPTION OF PROJECT: **US 53- Replace Bridge Nos. 256 and 257 over Liberty Street (SR 2456) and the Norfolk Southern Railroad.**

ESTIMATED DISPLACED					INCOME LEVEL					
Type of Displacee	Owner	Tenant	Total	Minority	0-15M	15-25M	25-35M	35-50M	50 UP	
Residential	0	0	0	0	NA	NA	NA	NA	NA	
Businesses	0	1	1	0	VALUE OF DWELLING			DSS DWELLING AVAILABLE		
Farms	0	0	0	0	Owners		Tenants		For Sale      For Rent	
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0
					20-40M	0	150-250	0	20-40M	0
					40-70M	0	250-400	0	40-70M	0
					70-100M	0	400-600	0	70-100M	0
					100 UP	0	600 UP	0	100 UP	0
					TOTAL	0	0	0	0	0

ANSWER ALL QUESTIONS		
Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
	X	2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
	X	8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
NA		11. Is public housing available?
NA		12. Is it felt there will be adequate DSS housing available during relocation period?
NA		13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? <span style="float: right;">12</span>

REMARKS (Respond by Number)					
#3.	General business services will still be available.	#4.	Carquest- 15BLK. Bus.(4,000+- sq.ft.) - 4 full time and 2 part time employees.	#11, 12 & 13.	Questions are non-applicable -plans show only businesses are being affected.
#14.	Winston-Salem Journal, Internet, and various local real estate companies.				

**Comment:**  
There are three billboards in the proposed right of way; approximate cost to move: \$15,000.00 to \$20,000.00 each.

**REVISED** due to the concrete slab behind the Liberty Butcher Shop shown in the Right of Way, will not affect the business operation, therefore, they will not be a displacee.

Kris Barr and Heather Fulghum	9-11-02		
Relocation Agent	Date	Approved by	Date

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# RELOCATION REPORT

North Carolina Department of Transportation  
AREA RELOCATION OFFICE

E.I.S.     CORRIDOR     DESIGN

PROJECT:	B.1622802	COUNTY	FORSYTH	Alternate    4    of    4    Alternate
I.D. NO.:	U-2825 A	F.A. PROJECT	NHF-52(14)	( SOUTHBOUND DETOUR, WITH RAMP (WEST SIDE)
DESCRIPTION OF PROJECT:		US 53- Replace Bridge Nos. 256 and 257 over Liberty Street (SR 2456) and the Norfolk Southern Railroad.		

ESTIMATED DISPLACED					INCOME LEVEL							
Type of Displacee	Owner	Tenant	Total	Minority	0-15M	15-25M	25-35M	35-50M	50 UP			
Residential	0	0	0	0	NA	NA	NA	NA	NA			
Businesses	0	1	1	0	VALUE OF DWELLING			DSS DWELLING AVAILABLE				
Farms	0	0	0	0	Owners		Tenants		For Sale    For Rent			
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0
ANSWER ALL QUESTIONS					20-40M	0	160-250	0	20-40M	0	160-250	0
Yes	No	Explain all "YES" answers.										
	X	1. Will special relocation services be necessary?										
	X	2. Will schools or churches be affected by displacement?										
X		3. Will business services still be available after project?										
X		4. Will any business be displaced? if so, indicate size, type, estimated number of employees, minorities, etc.										
	X	5. Will relocation cause a housing shortage?										
		6. Source for available housing (list).										
	X	7. Will additional housing programs be needed?										
	X	8. Should Last Resort Housing be considered?										
	X	9. Are there large, disabled, elderly, etc. families?										
	X	10. Will public housing be needed for project?										
NA		11. Is public housing available?										
NA		12. Is it felt there will be adequate DSS housing available during relocation period?										
NA		13. Will there be a problem of housing within financial means?										
X		14. Are suitable business sites available (list source).										
		15. Number months estimated to complete RELOCATION? <span style="float: right;">12</span>										

REMARKS (Respond by number)									
<p>#3. General business services will still be available.</p> <p>#4. Carquest- 1SBLK. Bus.(4,000+- sq.ft.) - 4 full time and 2 part time employees.</p> <p>#11, 12 &amp; 13. Questions are non-applicable -plans show only businesses are being affected.</p> <p>#14. Winston-Salem Journal, Internet, and various local real estate companies.</p> <p>Comment: There are three billboards in the proposed right of way; approximate cost to move: \$15,000.00 to \$20,000.00 each.</p> <p>REVISED due to the concrete slab behind the Liberty Butcher Shop shown in the Right of Way, will not affect the business operation, therefore, they will not be a displacee.</p>									

<p><i>Kris Barr</i> Kris Barr and Heather Fulghum Relocation Agent</p>	<p>9-11-02 Date</p>	<p style="text-align: right;"><i>[Signature]</i> Approved by</p> <p style="text-align: right;">9-11-02 Date</p>
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