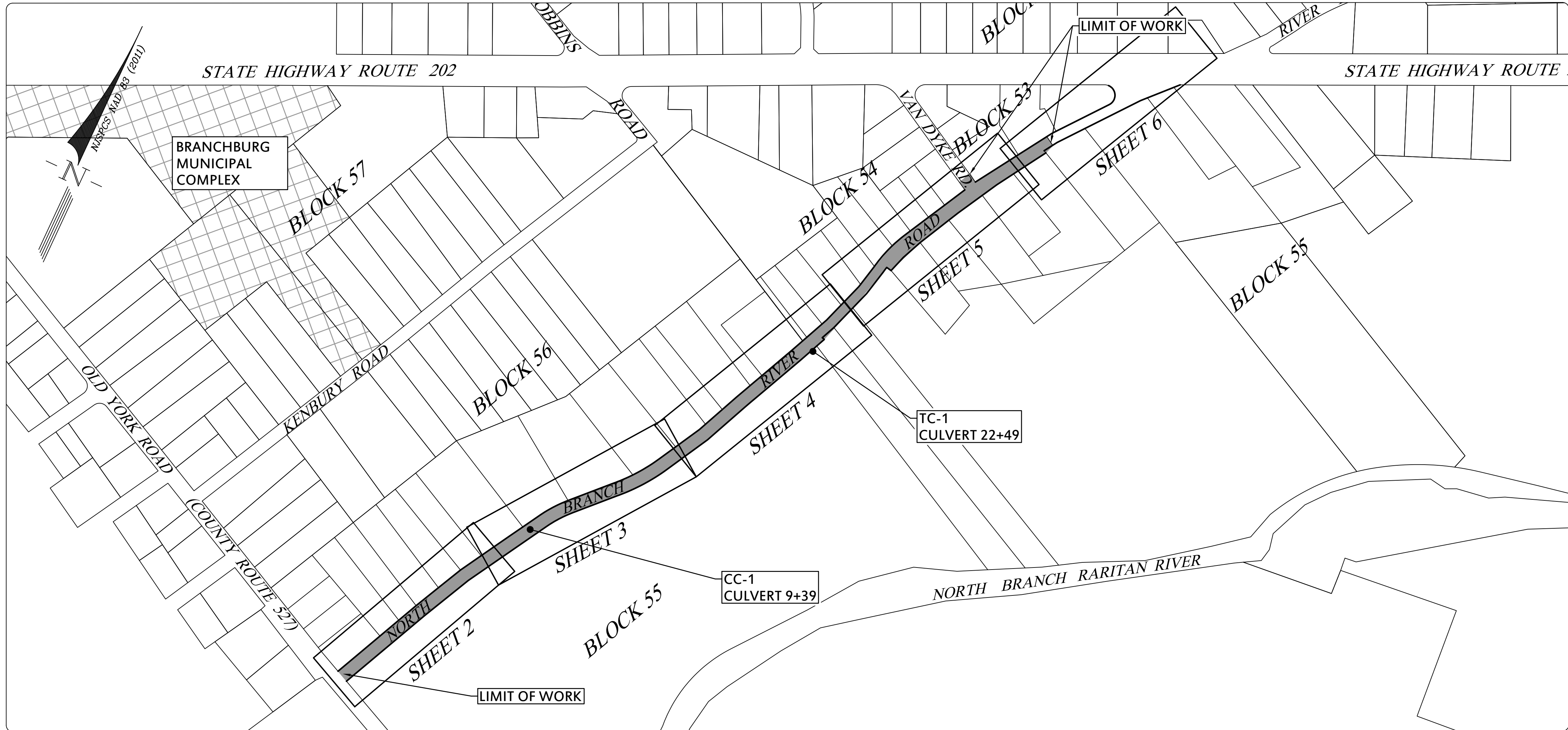


90% PROGRESS DRAFT

NORTH BRANCH RIVER ROAD IMPROVEMENTS

TOWNSHIP OF BRANCHBURG SOMERSET COUNTY, NEW JERSEY



KEY MAP
1" = 250'

NOTES

1. This survey is only valid when embossed seal is affixed hereto.
2. The certification shown hereon is not transferable to additional institutions or subsequent owners.
3. The Reynolds Group, Inc. and/or its employees are not liable for errors within, and/or omissions from any documents provided by others.
4. Underground utilities shown hereon are approximate, their accuracy or completeness are not guaranteed by the surveyor. Mark outs from utility companies and field confirmation by the contractor must be made prior to construction so that disturbance or disruption to these utilities may be avoided.
5. Horizontal Datum is NJSPCS NAD 83(2011) EPOCH(2010.00) (U.S. SURVEY FOOT) and Vertical Datum is NAVD 88(GEOD 12A) based on GPS observations.
6. Depths of Gas and Water lines as shown are based upon general information from utility companies only. No test pits were taken or as-built information was utilized to determine depths.

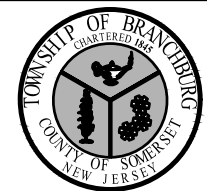
REFERENCES

1. Map entitled, "Robbins-Hockenbury Section of William Bradley Estate Branchburg Township Somerset County, NJ" prepared by William H. Cunningham and dated June 1947 and filed in the Office of the Clerk of Somerset County October 16, 1947 as Map No. 180.
2. Map entitled, "William Bradley Estate Vosseller Section Branchburg Township Somerset County N.J." prepared by William H. Cunningham and dated December 8, 1938 and filed in the Office of the Clerk of Somerset County on May 22, 1946 as Map No. 161.
3. Map entitled, "Final Map Subdivision of Lot 11 Block 55 Branchburg Township, Somerset County New Jersey" prepared by Templin Engineering Associates and revised to January 16, 1996 and filed in the Office of the Clerk of Somerset County on July 23, 1997 as Map No. 191.
4. Survey of Lot 8 Block 56 prepared by Saladin Associates, P.C. dated 12-09-10 file #5T66608
5. Official Tax Map of Branchburg Township Sheet #16.
6. Map entitled, "New Jersey State Highway Department General Property Parcel Map Route 29(1927) Section 12 Route U.S. 202(1958) Centreville To Frelinghuysen Ave showing existing Right of Way and parcels to be acquired in the Township of Readington & Township of Branchburg and Bridgewater dated September 1958 Sheet 7A map number 29-206.
7. Map entitled, "New Jersey State Highway Department General Property Key Map Route 29 Section 12 Centreville To Frelinghuysen Ave showing existing Right of Way and parcels to be acquired in the Township of Readington & Township of Branchburg and Bridgewater dated May 1932 Sheet 2 of 2 map number 29-206.
8. GIS mapping provided by PSE&G showing Gas and Electric Utilities, maps dated April 23, 2018.
9. Map provided by Elizabeth Town Water Company showing water utilities.
10. Maps entitled, "Sanitary Sewer Program, Township of Branchburg Somerset County New Jersey, dated March 1971, map numbers 21-24 of 38.



SHEET INDEX

1. T-1 TITLE SHEET
2. T-2 PLAN AND PROFILE, STA. 0+00 TO 7+50
3. T-3 PLAN AND PROFILE, STA. 7+50 TO 16+00
4. T-4 PLAN AND PROFILE, STA. 16+00 TO 24+50
5. T-5 PLAN AND PROFILE, STA. 24+50 TO 33+00
6. T-6 PLAN AND PROFILE, STA. 33+00 TO 39+50
7. CC-1 PLAN AND PROFILE OF CULVERT AT STA. 9+39
8. TC-1 PLAN AND PROFILE OF CULVERT AT STA. 22+49
9. SEC-1 SOIL EROSION CONTROL PLANS
10. SEC-2 SOIL EROSION CONTROL PLANS
11. CD-1 CONSTRUCTION DETAILS
12. CD-2 CONSTRUCTION DETAILS
13. TCP-1 TRAFFIC CONTROL PLAN



TOWNSHIP OF BRANCHBURG
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COUNTY OF SOMERSET
TELE: (908) 526-1300 FAX: (908) 526-2452 WWW.BRANCHBURG.NJ.US

**TITLE SHEET
FOR
NORTH BRANCH RIVER ROAD
IMPROVEMENTS**
BRANCHBURG TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

90% PROGRESS DRAFT

DOUGLAS A. BALL P.E. - TOWNSHIP ENGINEER
New Jersey Professional Engineer License No. GE041594000
DRN. BY: SAW Scale: N.T.S. Date: 3.11.19

NOT FOR CONSTRUCTION

revisions

no.	date	description	by
1	4/10/19	REVISED PER SUSCO COMMENTS	SAW

LEGEND

- GAS VALVE
- GAS METER
- WATER VALVE
- HYDRANT
- WATER METER
- CURB STOP
- DRAINAGE MH
- CURB INLET
- LAWN INLET
- DOUBLE INLET
- FLAT INLET
- SANITARY MH
- CLEANOUT
- BOLLARD
- SIGN
- LIGHT
- GUY WIRE
- UTILITY POLE
- ELECTRIC MH
- CONIFEROUS TREE
- DECIDUOUS TREE
- FENCE
- GATE POST
- WATER LINE
- GAS LINE
- ELECTRIC LINE
- SANITARY LINE
- OVERHEAD WIRES
- TELECO LINE
- MONITORING WELL
- TRAFFIC SIGNAL
- TELCO MH
- MONUMENT SET
- CAPPED IRON PIN FOUND
- CAPPED IRON PIN SET

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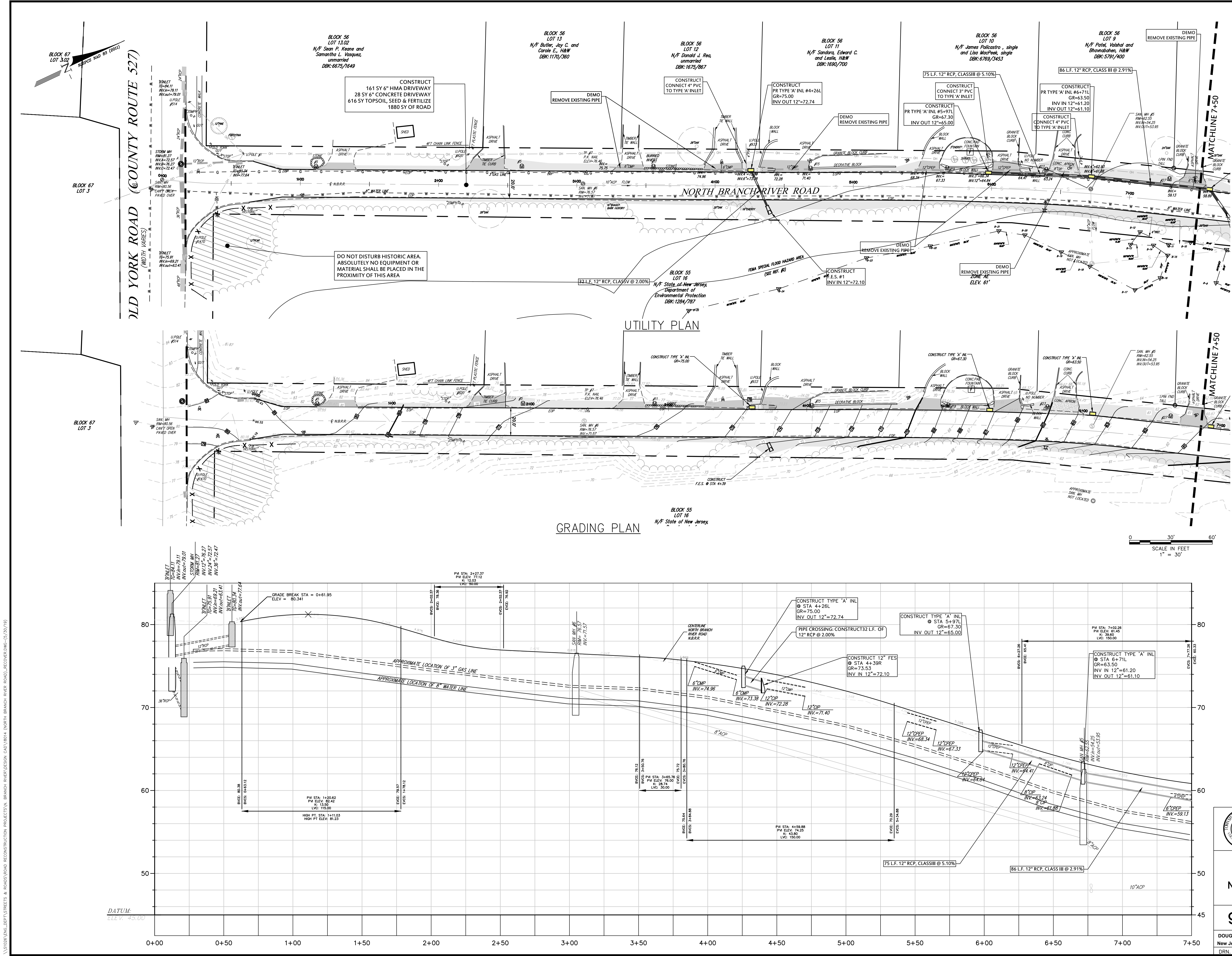
State of New Jersey
Certificate of Authorization
Number 24GA27969200
Number 21MH00004300

F. Mitchell Ardman, P.E., P.P.
Jeffrey D. Reynolds, P.L.A.

DAVID C. COLEMAN, PLS
PROFESSIONAL LAND SURVEYOR, N.J. No. GS35826

COVER SHEET

drawing title	NORTH BRANCH RIVER RD from OLD YORK ROAD to ROUTE 202 NORTH TOWNSHIP OF BRANCHBURG SOMERSET COUNTY, NEW JERSEY	
job number	18-014	drawing number
scale	AS SHOWN	T-1
checked by	DCC	
drawn by	TW	
date	5/17/18	sheet 1 of 6



LEGEND

- GAS VALVE
- GAS METER
- WATER VALVE
- HYDRANT
- WATER METER
- CURB STOP
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- LAWN INLET
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PLAN & PROFILE

drawing title

NORTH BRANCH RIVER RD
from
OLD YORK ROAD TO ROUTE 202 NORTH
TOWNSHIP OF BRANCHBURG
SOMERSET COUNTY, NEW JERSEY

job number 18-014 drawn by TW

scale V: 1"=5'
H: 1"=30' date 5/17/18

checked by DCC

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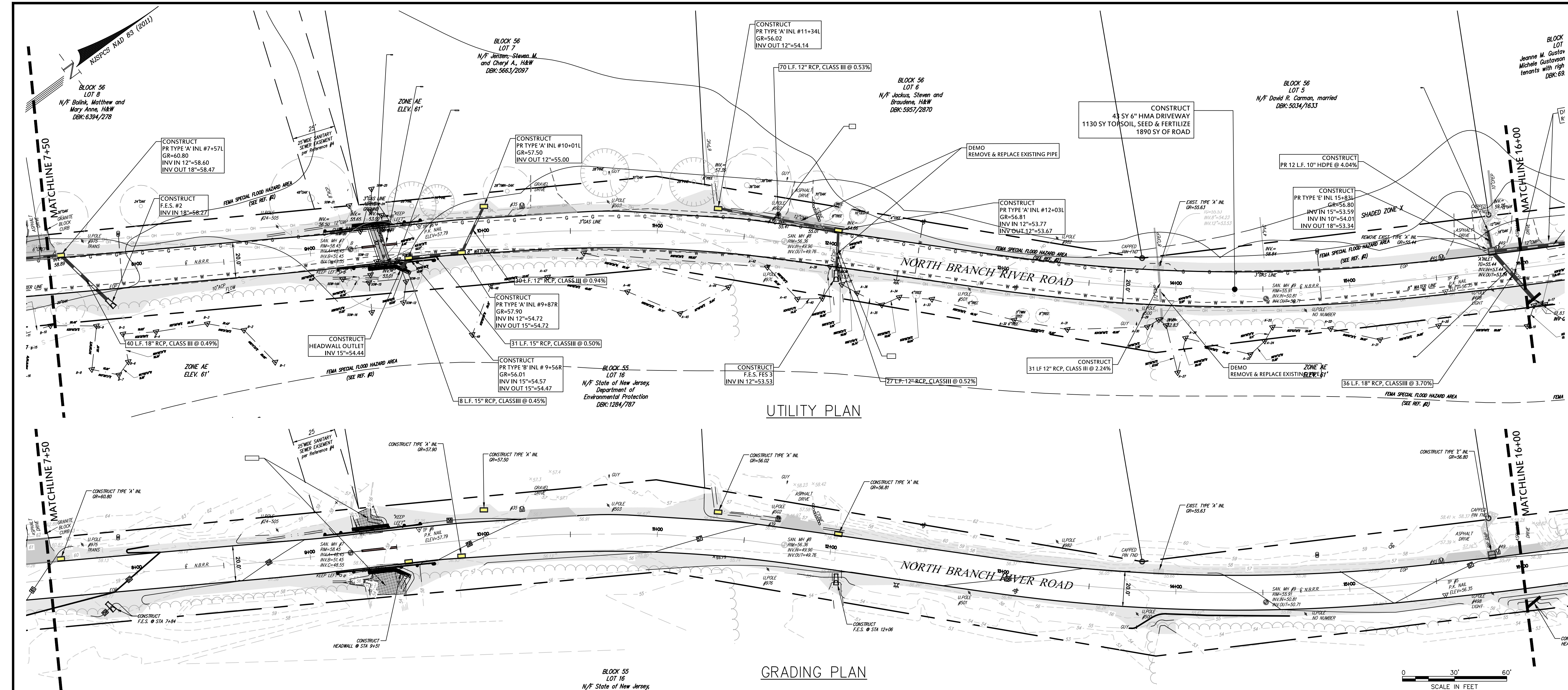
PLAN and PROFILE FOR
North Branch River Road Improvements
BRANCHBURG TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

90% PROGRESS DRAFT

DOUGLAS A. BALL P.E. - TOWNSHIP ENGINEER
New Jersey Professional Engineer License No. GEO41594000
DRN. BY: SAW Scale: N.T.S. Date: 2.20.2019

T - 2

\\S02KING\DEPT\STREETS & ROADS\ROAD RECONSTRUCTION PROJECTS\N. BRANCH RIVER ROAD\RECON.DWG (5/20/19)



LEGEND	
	GAS VALVE
	GAS METER
	WATER VALVE
	HYDRANT
	WATER METER
	CURB STOP
	DRAINAGE MH
	CURB INLET
	LAWN INLET
	DOUBLE INLET
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PLAN & PROFILE

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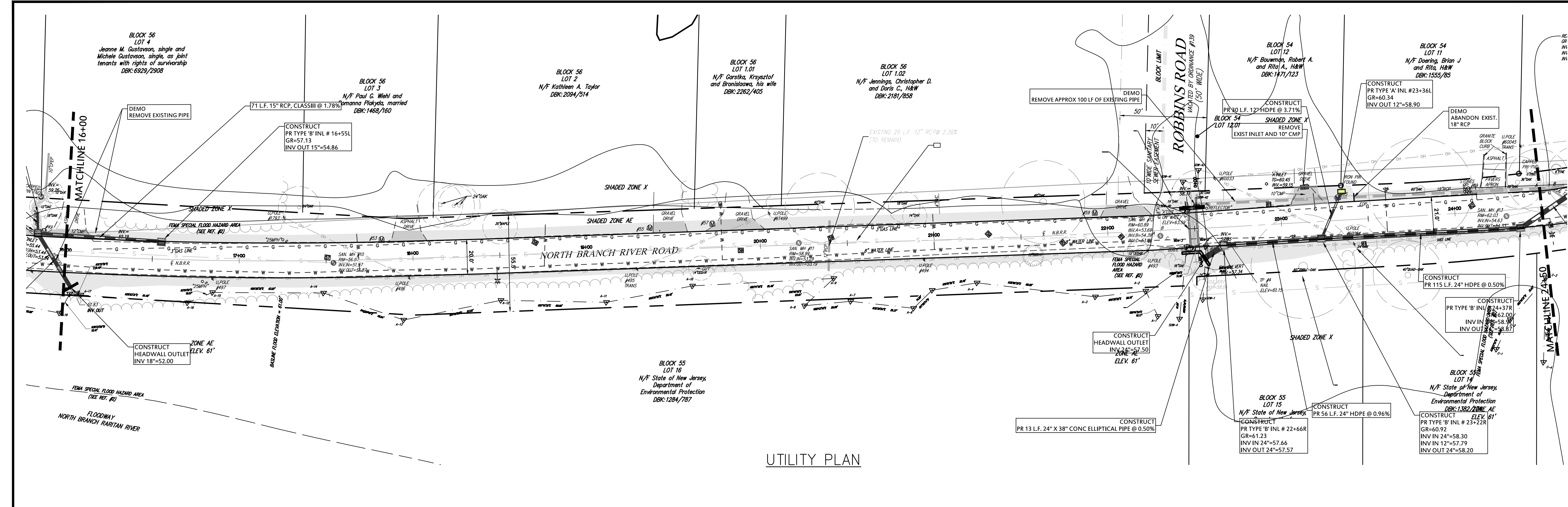
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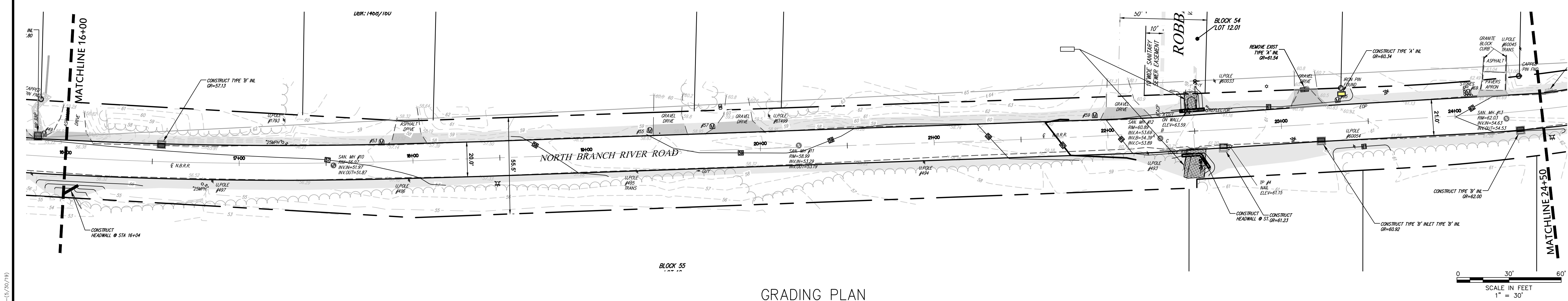
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New Jersey Professional Engineer License No. GE041594000
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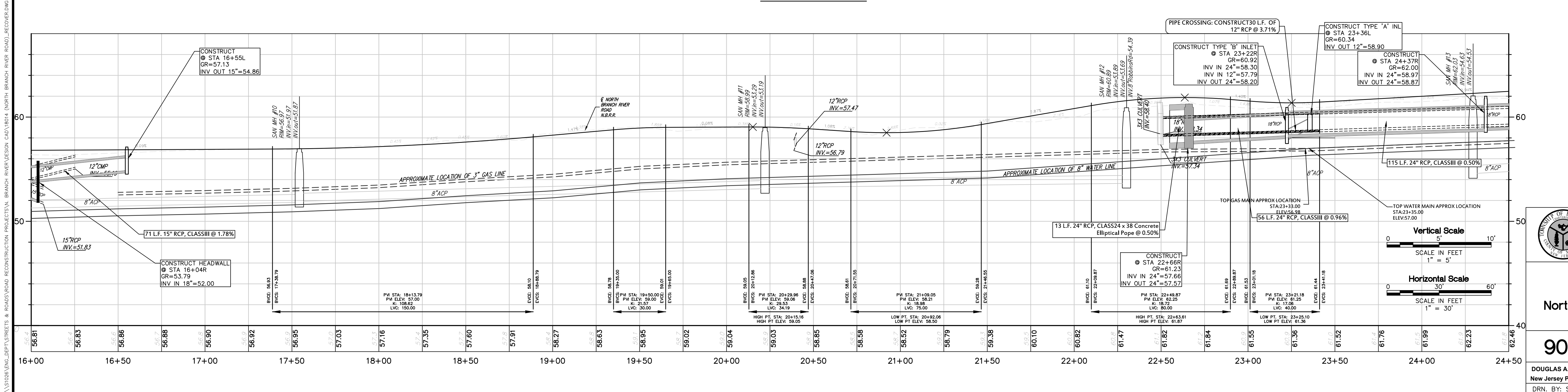
T - 3



UTILITY PLAN



GRADING PLAN



LEGEND

- GAS VALVE
- GAS METER
- WATER VALVE
- HYDRANT
- WATER METER
- CURB STOP
- DRAINAGE MH
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- MONUMENT SET
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- CAPPED IRON PIN SET

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job number	18-014	drawn by	TW
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checked by	DCC		

NOT FOR CONSTRUCTION

no.	date	description	by
1	4/10/19	REVISED PER SUSCD COMMENTS	SAW



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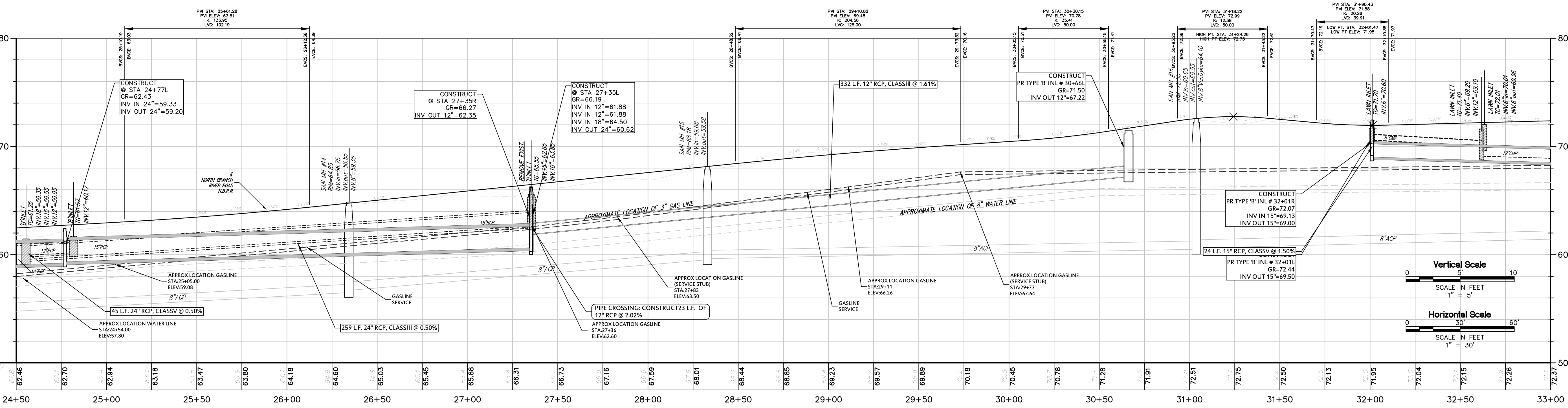
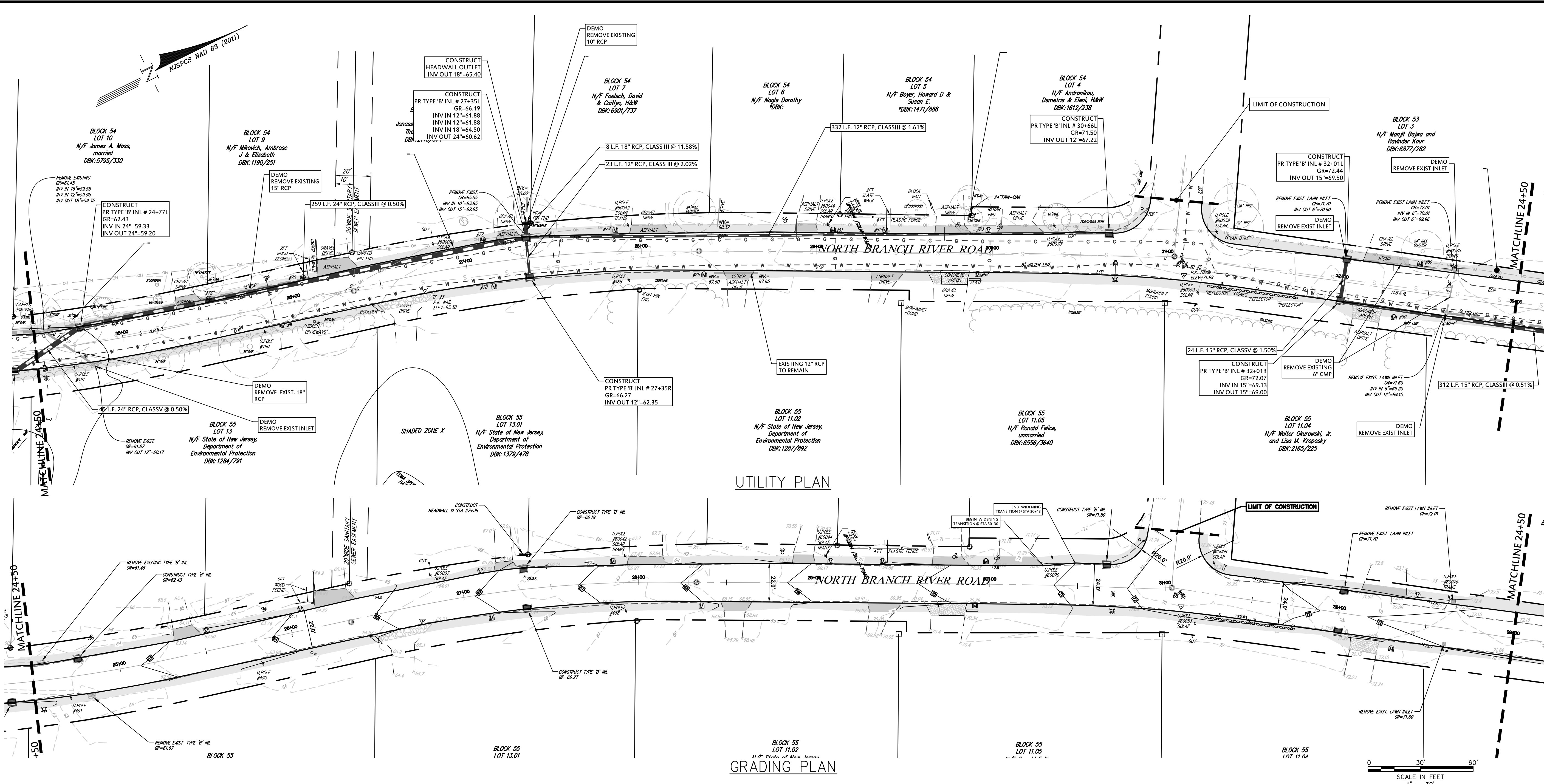
PLAN and PROFILE
 FOR

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 SOMERSET COUNTY, NEW JERSEY

90% PROGRESS DRAFT

DOUGLAS A. BALL P.E. - TOWNSHIP ENGINEER
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\\020\ENR\PROJECTS\STREETS & ROADS\ROAD RECONSTRUCTION PROJECTS\N. BRANCH RIVER ROAD\RECON.DWG (2/20/19)



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DAVID C. COLEMAN, PLS
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PLAN & PROFILE

drawing title

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from
OLD YORK ROAD TO ROUTE 202 NORTH
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SOMERSET COUNTY, NEW JERSEY

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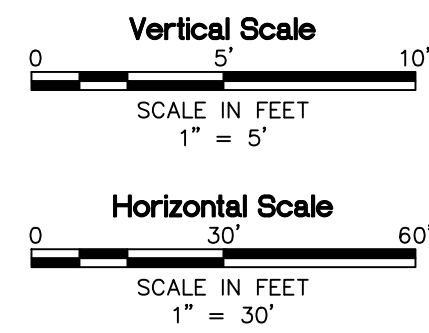
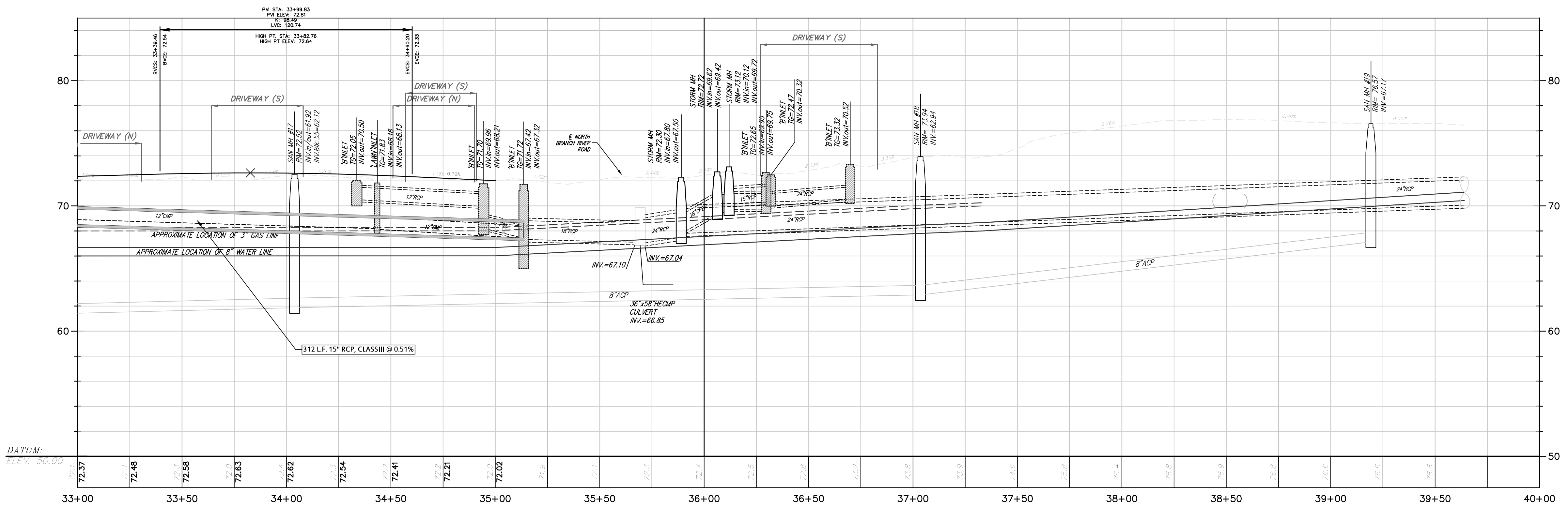
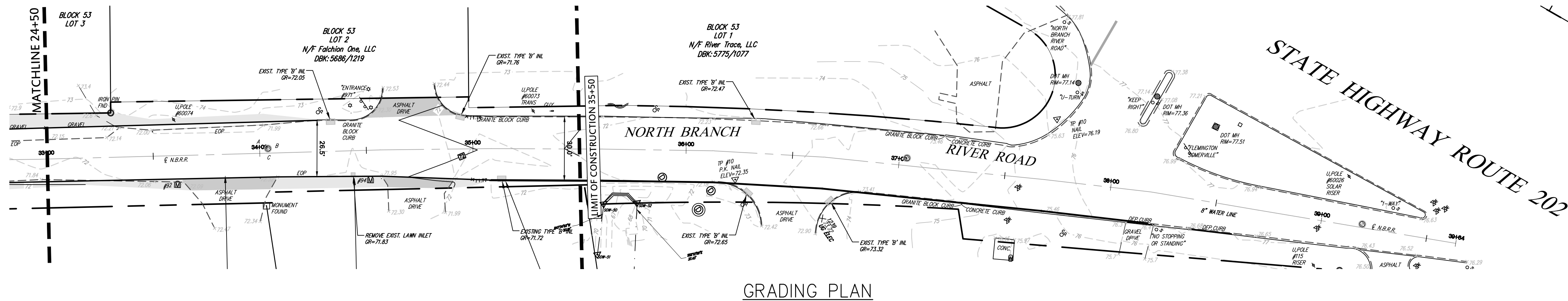
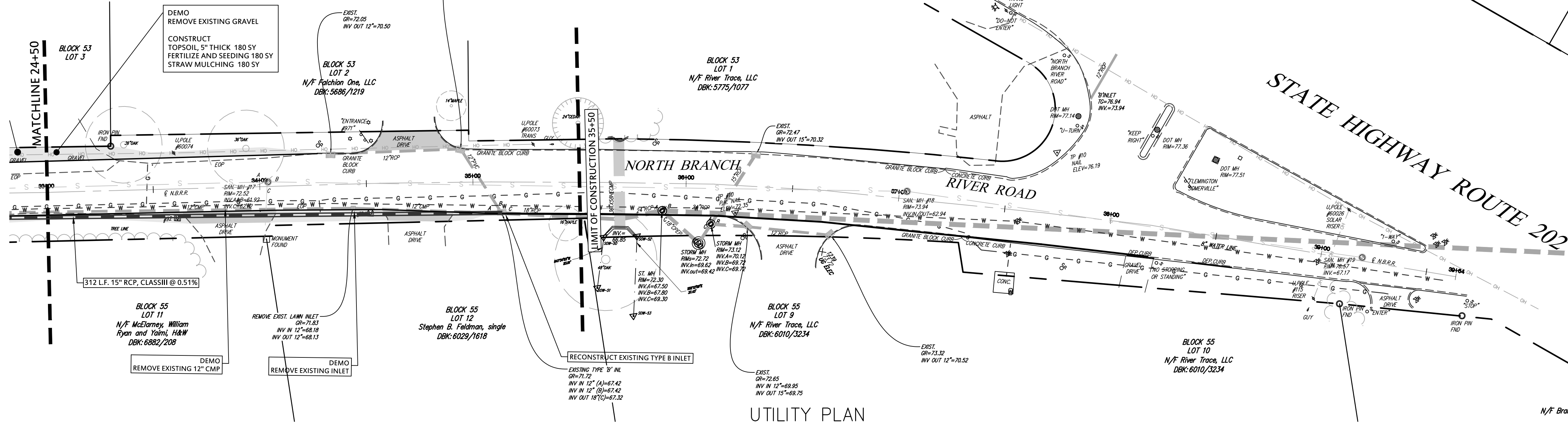
PLAN and PROFILE
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BRANCHBURG TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

90% PROGRESS DRAFT

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New Jersey Professional Engineer License No. GE041594000
DRN. BY: SAW Scale: 1"=30' Date: 3.11.19

T - 5

\\s020\eng\proj\streets & roads\road reconstruction\projects\N. Branch River Road\Reconstr.DWG (1/20/19)



- LEGEND**
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PLAN & PROFILE

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checked by	DCC
drawn by	TW
date	5/17/18

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PLAN and PROFILE FOR

North Branch River Road Improvements
BRANCHBURG TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

90% PROGRESS DRAFT

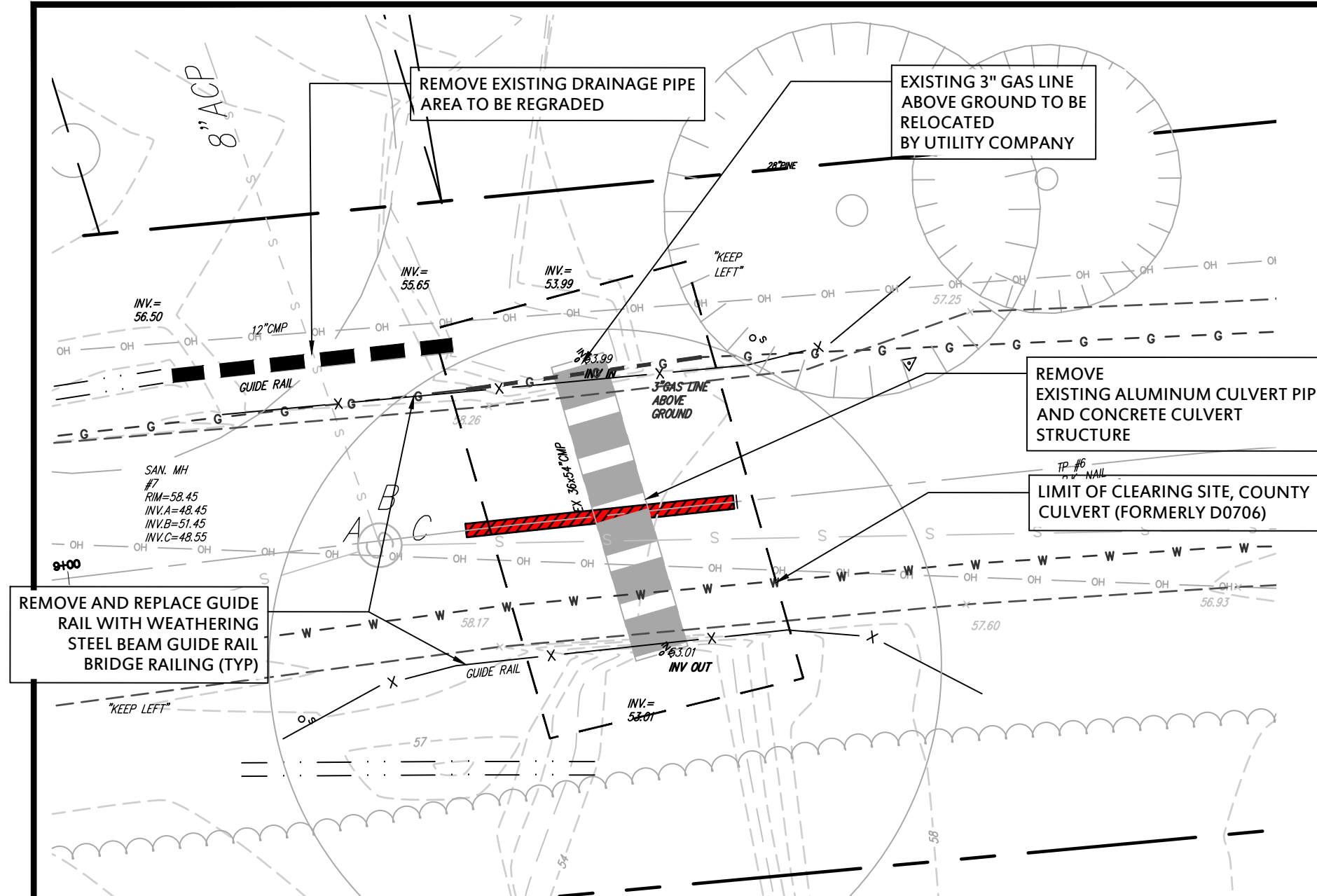
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New Jersey Professional Engineer License No. GE041594000
DRN. BY: SAW Scale: 1"=30' Date: 3.11.16

T - 6

Hydraulic and Hydrologic Data	
Drainage Area	63.5 Acres
Design Discharge	196.81 CFS
Design Water Surface Elevation (FT)	59.85
Energy Line Elevation (FT)	56.96
Frequency	100 Year

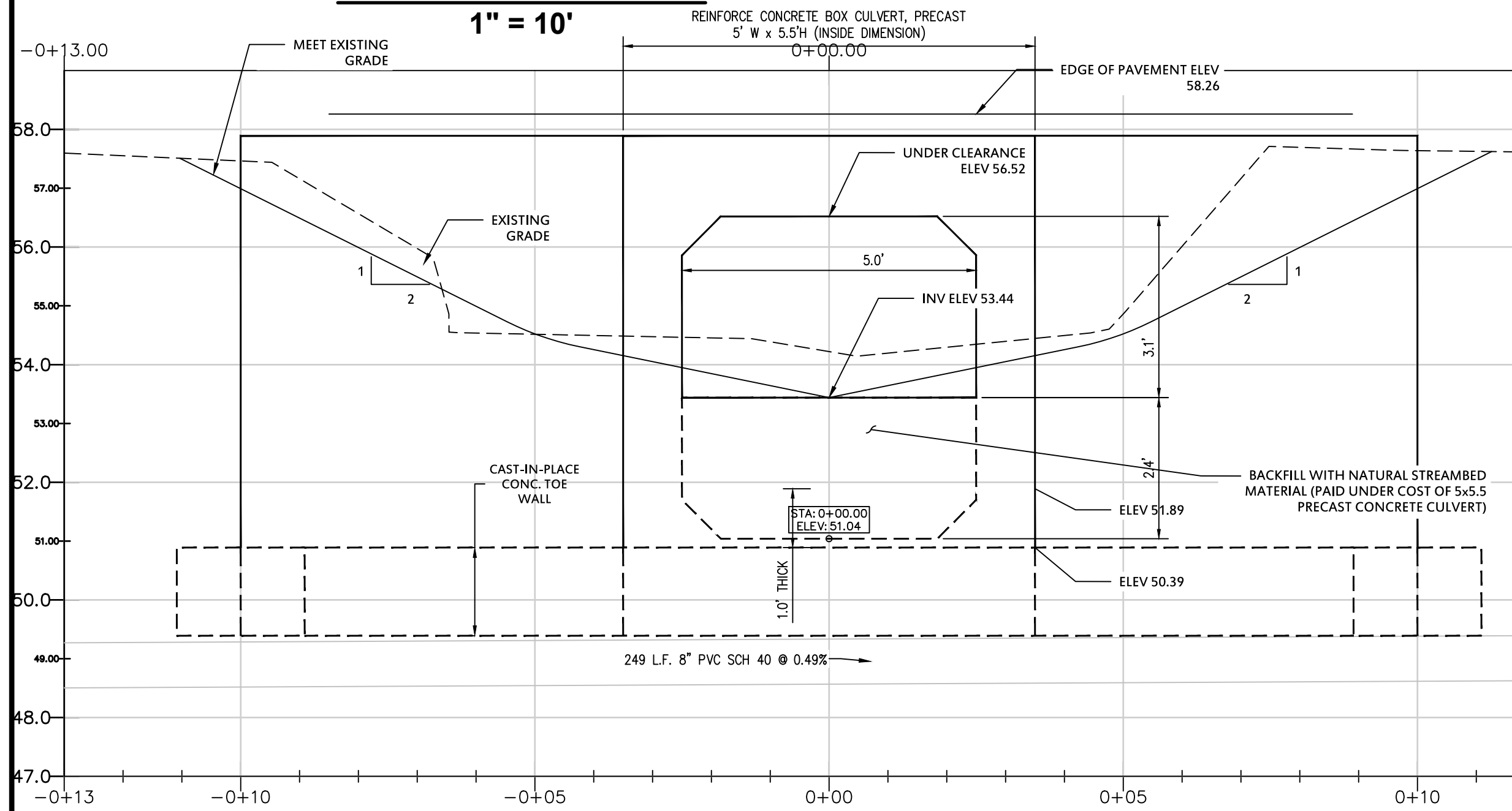
NOTE:

1. THE INFORMATION ON THIS PLAN IS FOR THE PURPOSE OF STUDY AND IS NOT INTENDED TO BE COMPLETE OR ALL INCLUSIVE. THE BIDDER SHALL CAREFULLY EXAMINE THE SITE OF THE PROPOSED PROJECT BEFORE SUBMITTING A PROPOSAL TO ASCERTAIN THE EXTENT OF WORK. THE INFORMATION SHOWN SHALL NOT BE CONSTRUED IN ANY WAY AS A WAIVER FOR THE BIDDER TO MAKE SUCH INDEPENDENT INVESTIGATION AND EXAMINATION AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO THE CONDITIONS TO BE ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
2. THE EXISTING CONCRETE CULVERT AND ALUMINUM ELLIPTICAL PIPE IS TO BE REMOVED IN ITS ENTIRETY AND SHALL BE PAID FOR UNDER "CLEARING SITE, COUNTY CULVERT (FORMERLY D0706)"
3. "THE ITEMS "CLEARING SITE, COUNTY CULVERT (FORMERLY D0706)" SHALL INCLUDE, BUT IS NOT LIMITED TO, THE REMOVAL AND DISPOSAL OF ALL SUBSTRUCTURES, FOOTINGS, MASONRY WALLS, ALUMINUM PIPE, AND ALL OTHER EXISTING BRIDGE COMPONENTS.
4. DURING DEMOLITION, THE CONTRACTOR SHALL NOT PERMIT DEBRIS TO FALL INTO THE STREAM (NO DROP ZONE), ADEQUATE CARE SHALL BE TAKEN TO PREVENT DEBRIS AND UNWANTED MATERIAL FROM FALLING INTO THE STREAM. HOWEVER, IF THIS HAPPENS, THE CONTRACTOR SHALL REMOVE THE DEBRIS IMMEDIATELY AT NO ADDITIONAL COST TO THE TOWNSHIP.
5. EXISTING BRIDGE MATERIAL WITHIN THE STREAM PRIOR TO DEMOLITION SHALL BE REMOVED AND SHALL BE INCLUDED IN THE PRICE BID "CLEARING SITE, COUNTY CULVERT (FORMERLY D0706)"
6. COST OF DEWATERING SHALL BE INCLUDED IN THE ITEM "MAINTENANCE OF STREAM FLOW". THE EXCAVATION SUPPORT SYSTEM SHALL BE DESIGNED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER. CALCULATIONS AND WORKING DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 107.02 OF THE SPECIFICATIONS.
7. COST OF CLASS B CONCRETE FOR THE CONCRETE HEADWALL SHALL BE INCLUDED IN THE COST FOR THE PAY ITEM "CONCRETE WINGWALL"
8. THREADED INSERTS AND DOWELS REINFORCEMENT SHALL BE CAPABLE OF DEVELOPING 125% OF YIELD STRENGTH OF REINFORCEMENT BAR AND MEET THE APPLICABLE REQUIREMENTS OF AASHTO
9. THE PLACEMENT OF STREAM BED MATERIAL INSIDE THE BOX CULVERT SHALL BE INCLUDED IN THE PAY ITEM "5X5.5 PRECAST CONCRETE CULVERT"
10. WHERE SLOPES ARE GRADED STEEPER THAN 2:1 INSTALL BIODEGRADABLE EROSION CONTROL BLANKET TOPSOIL STABILIZATION MATTING.
11. PSE&G TO BE CONTACTED PRIOR TO CONSTRUCTION OF CULVERT. CONTRACTOR TO COORDINATE GAS MAIN INSTALLATION.
12. CONTRACTOR IS RESPONSIBLE FOR THE EXCAVATION AND DEWATERING OF RELOCATED GAS LINE.



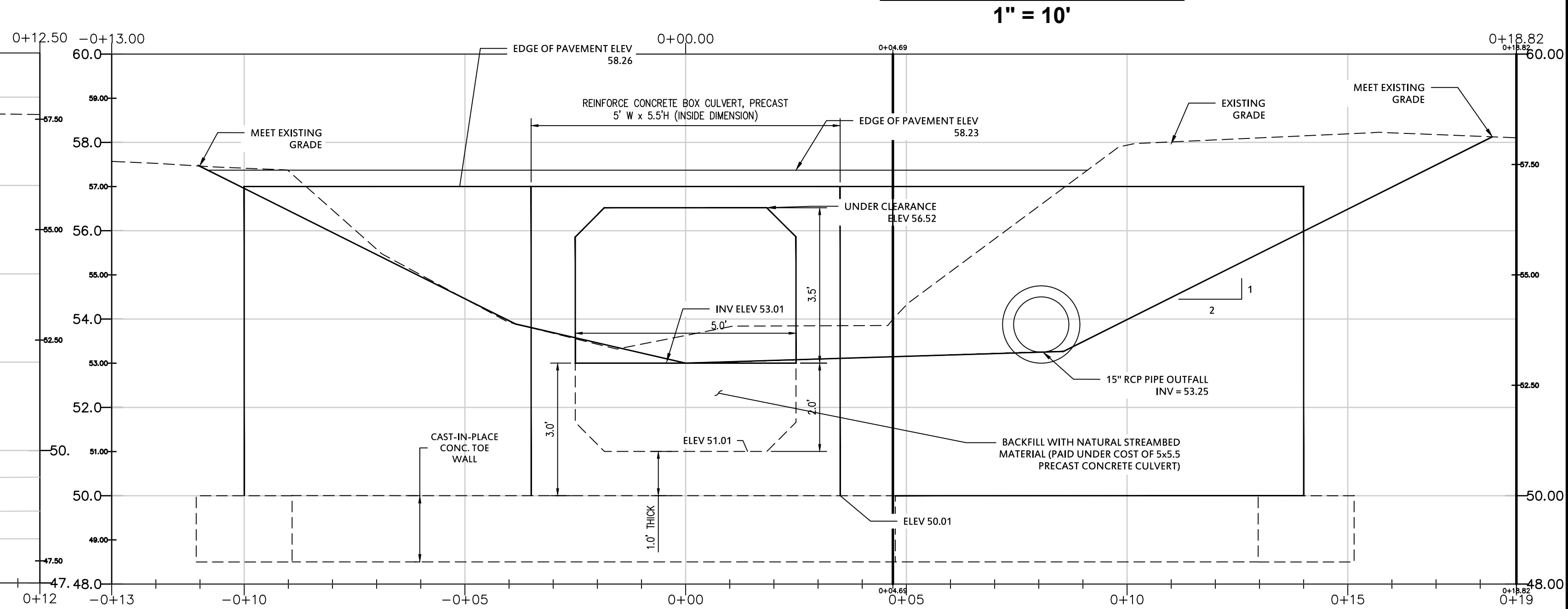
EXISTING SITE PLAN

1" = 10'



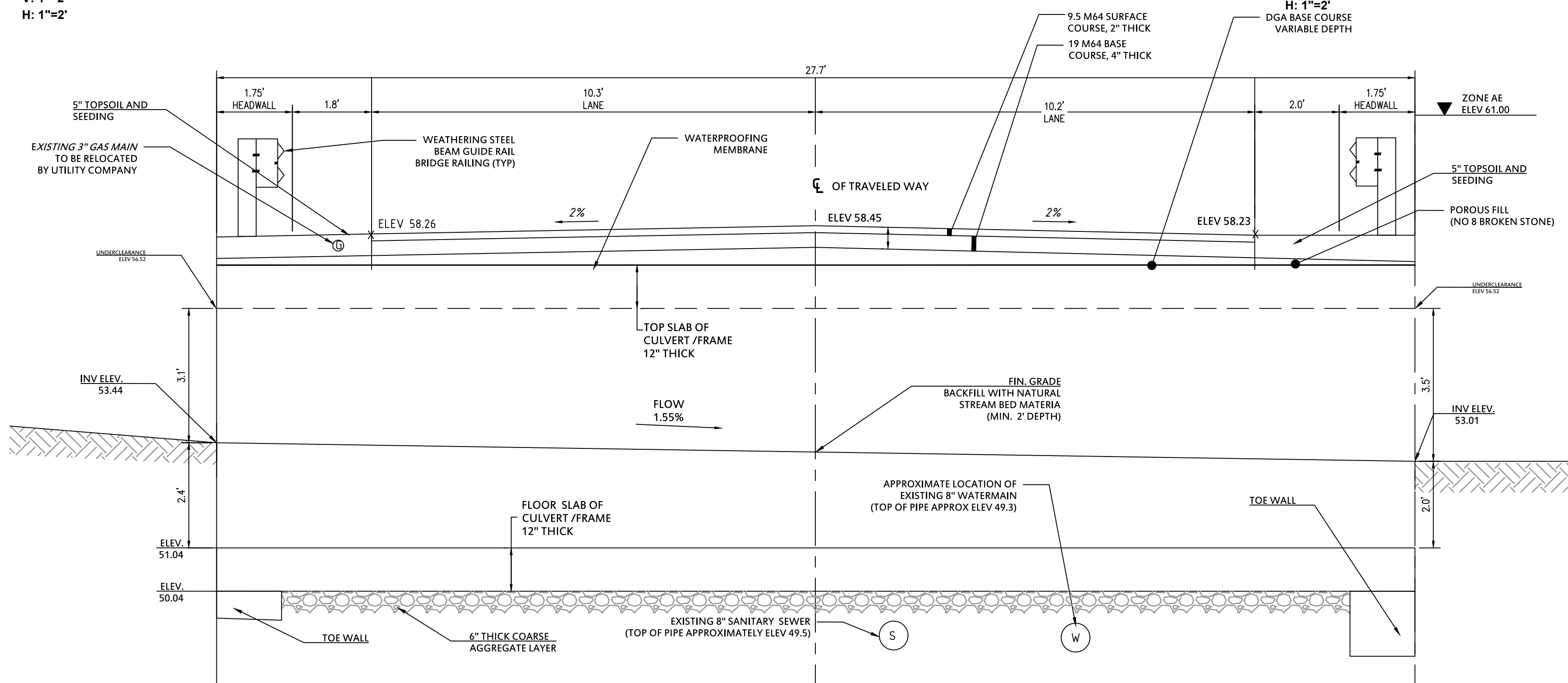
UPSTREAM SIDE ELEVATION

V: 1"=2'
H: 1"=2'



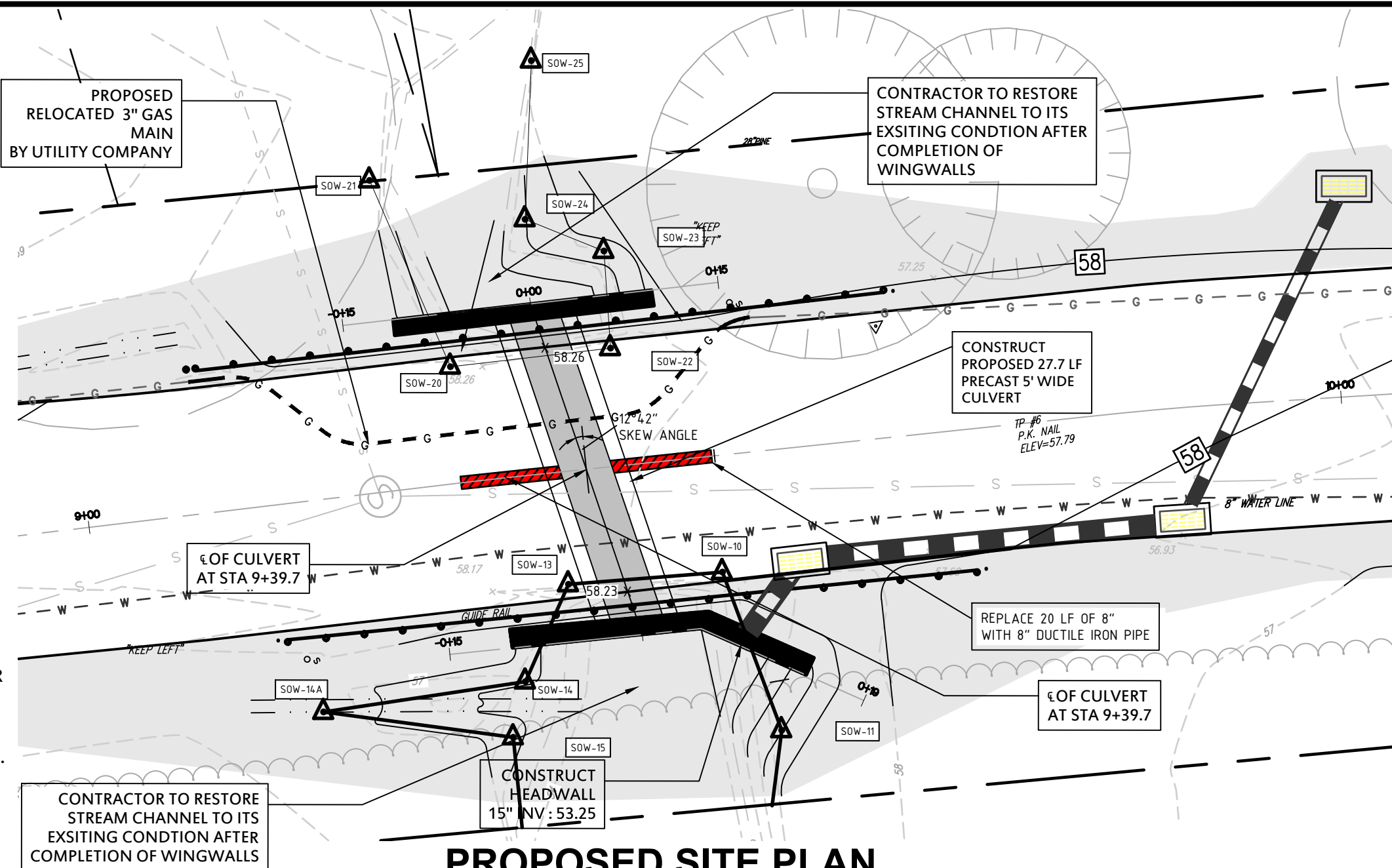
DOWNSTREAM SIDE ELEVATION

V: 1"=2'
H: 1"=2'



PROPOSED CULVERT AT MIDSPAN

V: 1"=2' H: 1"=2'



PROPOSED SITE PLAN

1" = 10'

revisions			
no.	date	description	by

LEGEND

- GAS VALVE
- GAS METER
- WATER VALVE
- HYDRANT
- WATER METER
- CURB STOP
- DRAINAGE MH
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575 Route 28, Suite 110
Raritan, N.J. 08869
908-722-1500
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www.REYNOLDSGRP.com

The Reynolds Group Inc.

State of New Jersey
Certificate of Authorization
Number 24GA27969200
Number 21MH00004300

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DAVID C. COLEMAN, PLS
PROFESSIONAL LAND SURVEYOR, N.J. No. GS35826

**BOX CULVERT
AT STA 9+39.7**

drawing title		drawing number	
NORTH BRANCH RIVER RD from OLD YORK ROAD TO ROUTE 202 NORTH TOWNSHIP OF BRANCHBURG SOMERSET COUNTY , NEW JERSEY		18-014	
job number	18-014	scale	V: 1"=5' H: 1"=30'
checked by	DCC	drawn by	TW
date	5/17/18	CC-1	

TOWNSHIP OF BRANCHBURG
1077 ROUTE 202 N. , BRANCHBURG N.J. 08876
COUNTY OF SOMERSET
TELE: (908) 526-1300 FAX: (908) 526-2452 WWW.BRANCHBURG.NJ.US

**COUNTY CULVERT
PLAN AND PROFILE
FOR
North Branch River Road Improvements**
BRANCHBURG TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

90% PROGRESS DRAFT

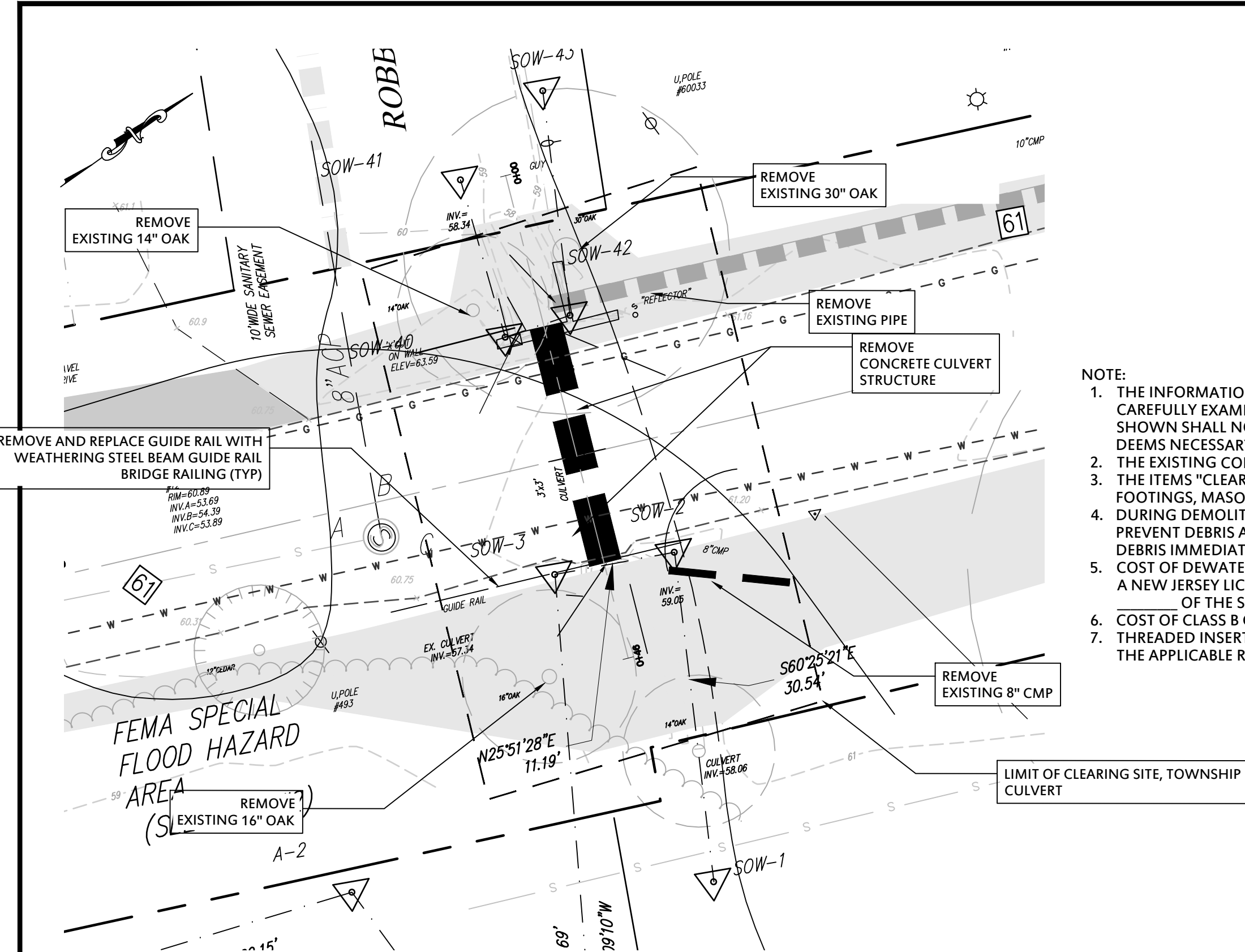
DOUGLAS A. BALL P.E. - TOWNSHIP ENGINEER
New Jersey Professional Engineer License No. GE041594000
DRN. BY: SAW Scale: 1"=10' | Date: 3.11.19

CC - 1

For vehicular live loads, use AASHTO LRFD HL-93 Vehicular Live Load, Refer to Design Manual for Bridges and Structures, Section 3.
The superstructure design shall include a 25 PSF additional dead load for a future 2-inch-thick overlay wearing course.
Compacted porous fill shall be No. 8 broken stone. Compacted porous fill shall be placed behind all abutments, headwalls and wingwalls; the limits are 6" from the back edges of all footings along the entire length and height of the walls to the bottom of the subgrade.
All pipes shall be cast monolithically within wall sections.

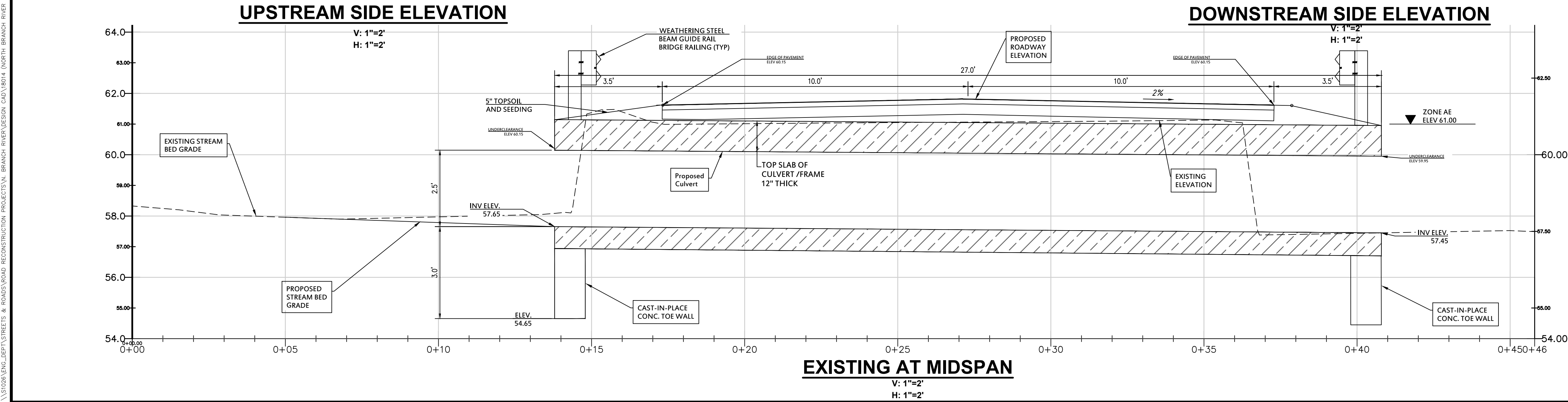
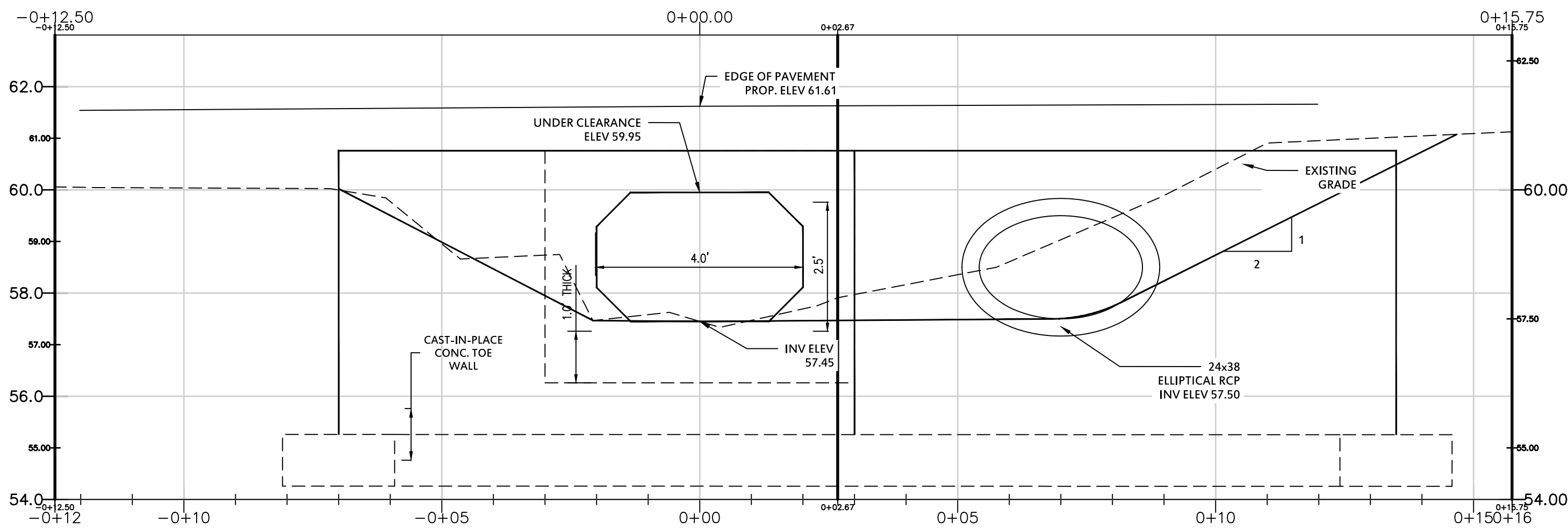
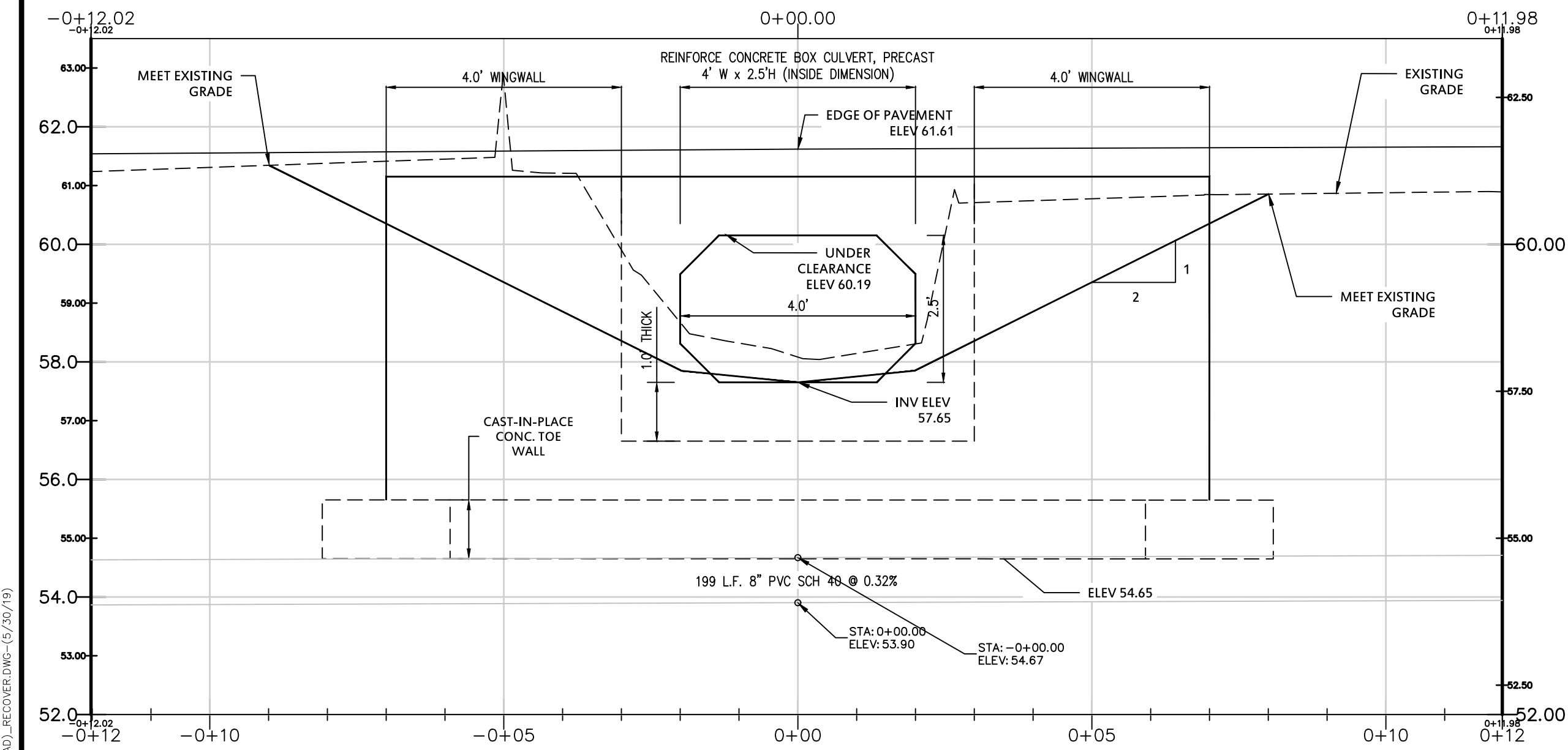
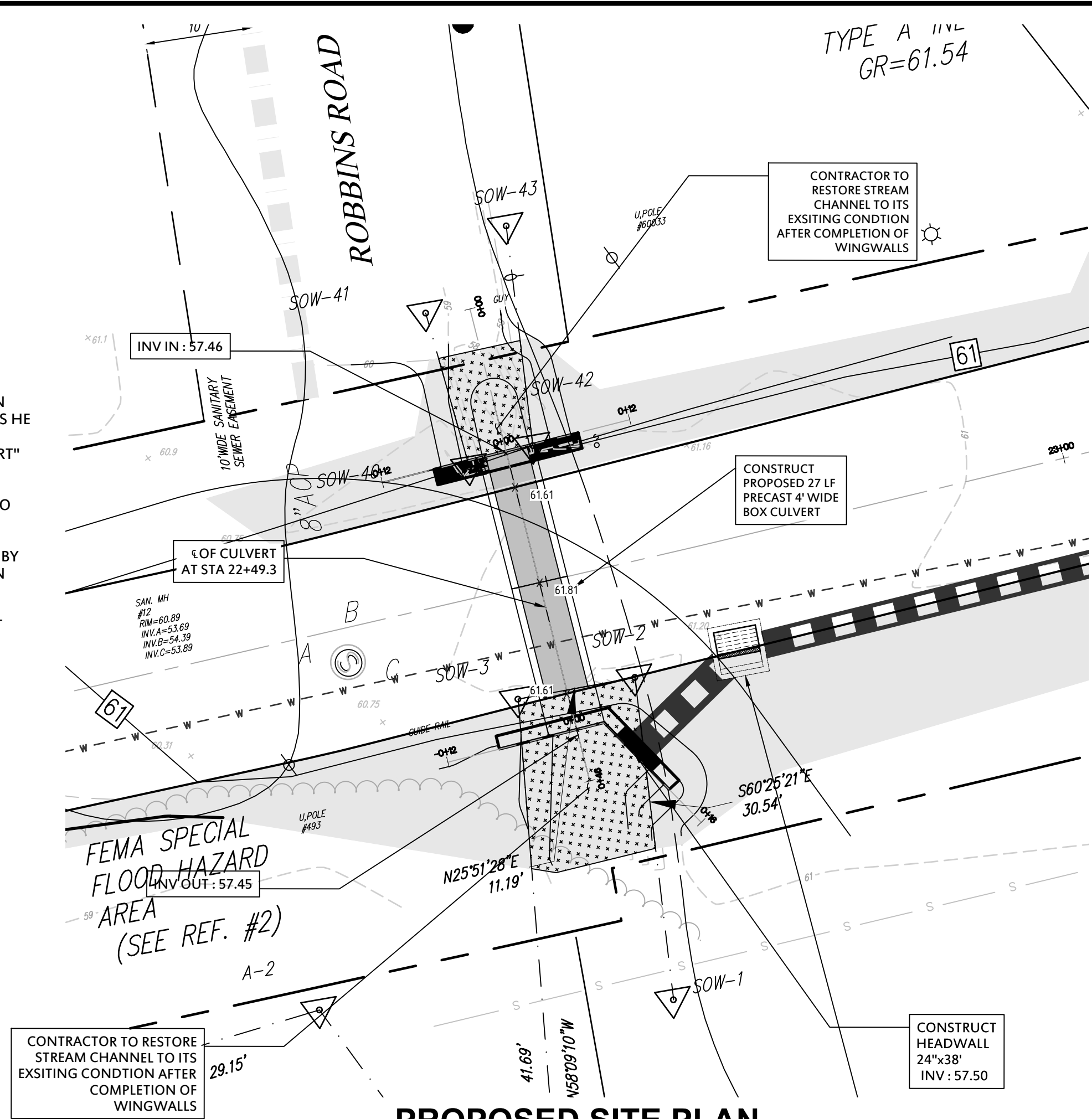
Vertical contraction joints shall be provided in the wingwalls, 1'-0" from the corner of wingwall/headwall near-face intersections and 2'-0" from the corner of abutment/wingwall near-face intersections. Such joints shall also be provided in wingwalls, headwalls and abutments as required, with a maximum spacing of 30'-0". Vertical expansion joints shall be provided in the walls, with contraction joints in the footing underneath at a maximum spacing of 90'-0". All required horizontal keys shall be raised and both horizontal and vertical keys shall be 3" x 5½" for walls 1'-6" thick. All vertical keys and joints are to stop 6" below the top of walls.
All exposed concrete edges shall have a ¼", 45-degree chamfer unless otherwise noted

\\s02k\eng\clp\st\streets & roads\road reconstruction\projects\N. BRANCH RIVER\RD202\NORTH BRANCH RIVER ROAD_RECONSTRUCT.DWG (3/20/19)



Hydraulic and Hydrologic Data	
Drainage Area	33.49 Acres
Design Discharge	42.94 CFS
Design Water Surface Elevation (FT)	58.98
Energy Line Elevation (FT)	59.41
Frequency	25 Year

- NOTE:
1. THE INFORMATION ON THIS PLAN IS FOR THE PURPOSE OF STUDY AND IS NOT INTENDED TO BE COMPLETE OR ALL INCLUSIVE. THE BIDDER SHALL CAREFULLY EXAMINE THE SITE OF THE PROPOSED PROJECT BEFORE SUBMITTING A PROPOSAL TO ASCERTAIN THE EXTENT OF WORK. THE INFORMATION SHOWN SHALL NOT BE CONSTRUED IN ANY WAY AS A WAIVER FOR THE BIDDER TO MAKE SUCH INDEPENDENT INVESTIGATION AND EXAMINATION AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO THE CONDITIONS TO BE ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
 2. THE EXISTING CONCRETE CULVERT AND PIPES IS TO BE REMOVED IN ITS ENTIRETY AND SHALL BE PAID FOR UNDER "CLEARING SITE, TOWNSHIP CULVERT"
 3. THE ITEMS "CLEARING SITE, TOWNSHIP CULVERT" SHALL INCLUDE, BUT IS NOT LIMITED TO, THE REMOVAL AND DISPOSAL OF ALL SUBSTRUCTURES, FOOTINGS, MASONRY WALLS, PARAPET WALLS, STEEL PLATES, AND ALL OTHER EXISTING BRIDGE COMPONENTS.
 4. DURING DEMOLITION, THE CONTRACTOR SHALL NOT PERMIT DEBRIS TO FALL INTO THE STREAM (NO DROP ZONE). ADEQUATE CARE SHALL BE TAKEN TO PREVENT DEBRIS AND UNWANTED MATERIAL FROM FALLING INTO THE STREAM. HOWEVER, IF THIS HAPPENS, THE CONTRACTOR SHALL REMOVE THE DEBRIS IMMEDIATELY AT NO ADDITIONAL COST TO THE TOWNSHIP.
 5. COST OF DEWATERING SHALL BE INCLUDED IN THE ITEM "MAINTENANCE OF STREAM FLOW". THE EXCAVATION SUPPORT SYSTEM SHALL BE DESIGNED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER. CALCULATIONS AND WORKING DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION OF THE SPECIFICATIONS.
 6. COST OF CLASS B CONCRETE FOR THE CONCRETE HEADWALL SHALL BE INCLUDED IN THE COST FOR THE PAY ITEM "CONCRETE WINGWALL"
 7. THREADED INSERTS AND DOWELS REINFORCEMENT SHALL BE CAPABLE OF DEVELOPING 125% OF YIELD STRENGTH OF REINFORCEMENT BAR AND MEET THE APPLICABLE REQUIREMENTS OF AASHTO



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TOWNSHIP BOX CULVERT AT STA 22+49.3

drawing title

NORTH BRANCH RIVER RD
from
OLD YORK ROAD TO ROUTE 202 NORTH
TOWNSHIP OF BRANCHBURG
SOMERSET COUNTY, NEW JERSEY

job number 18-014

scale V: 1"=1'
H: 1"=10'

checked by DCC

drawn by TW

date 5/17/18

drawing number

TC-1

NOT FOR CONSTRUCTION

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TC - 1