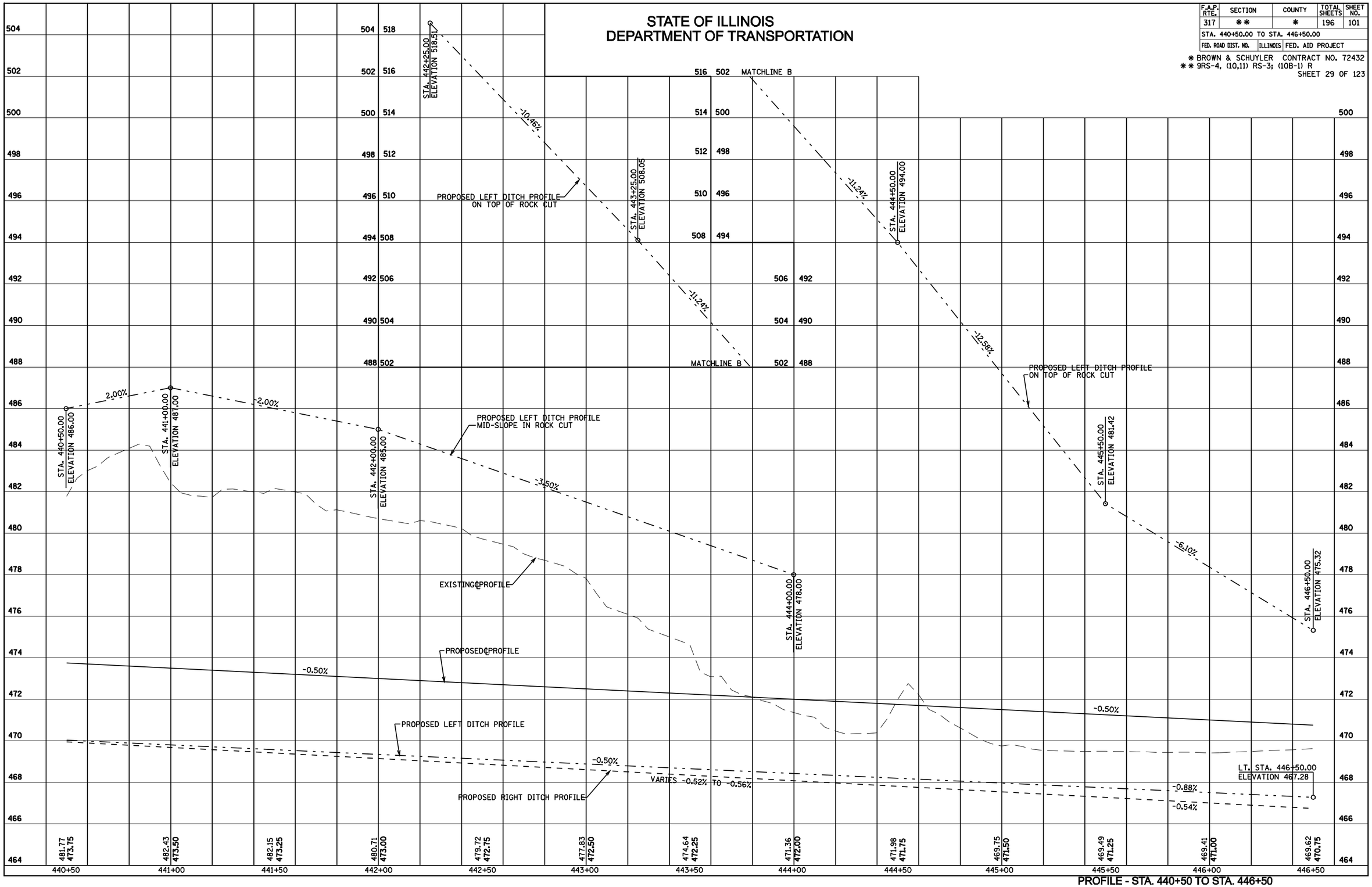
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	101
STA. 440+50.00 TO STA. 446+50.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 29 OF 123

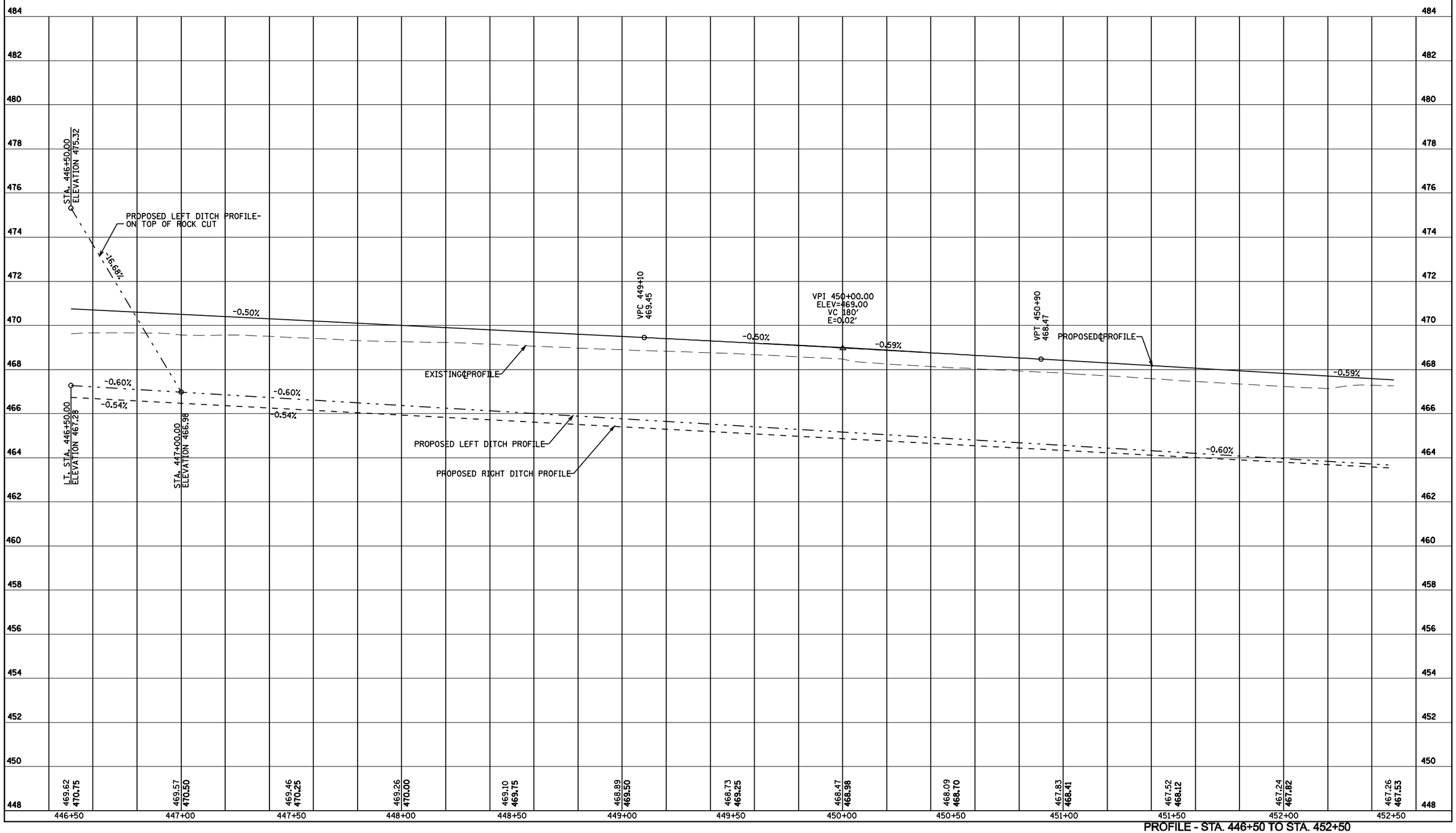


PROFILE - STA. 440+50 TO STA. 446+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	102
STA. 446+50.00 TO STA. 452+50.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

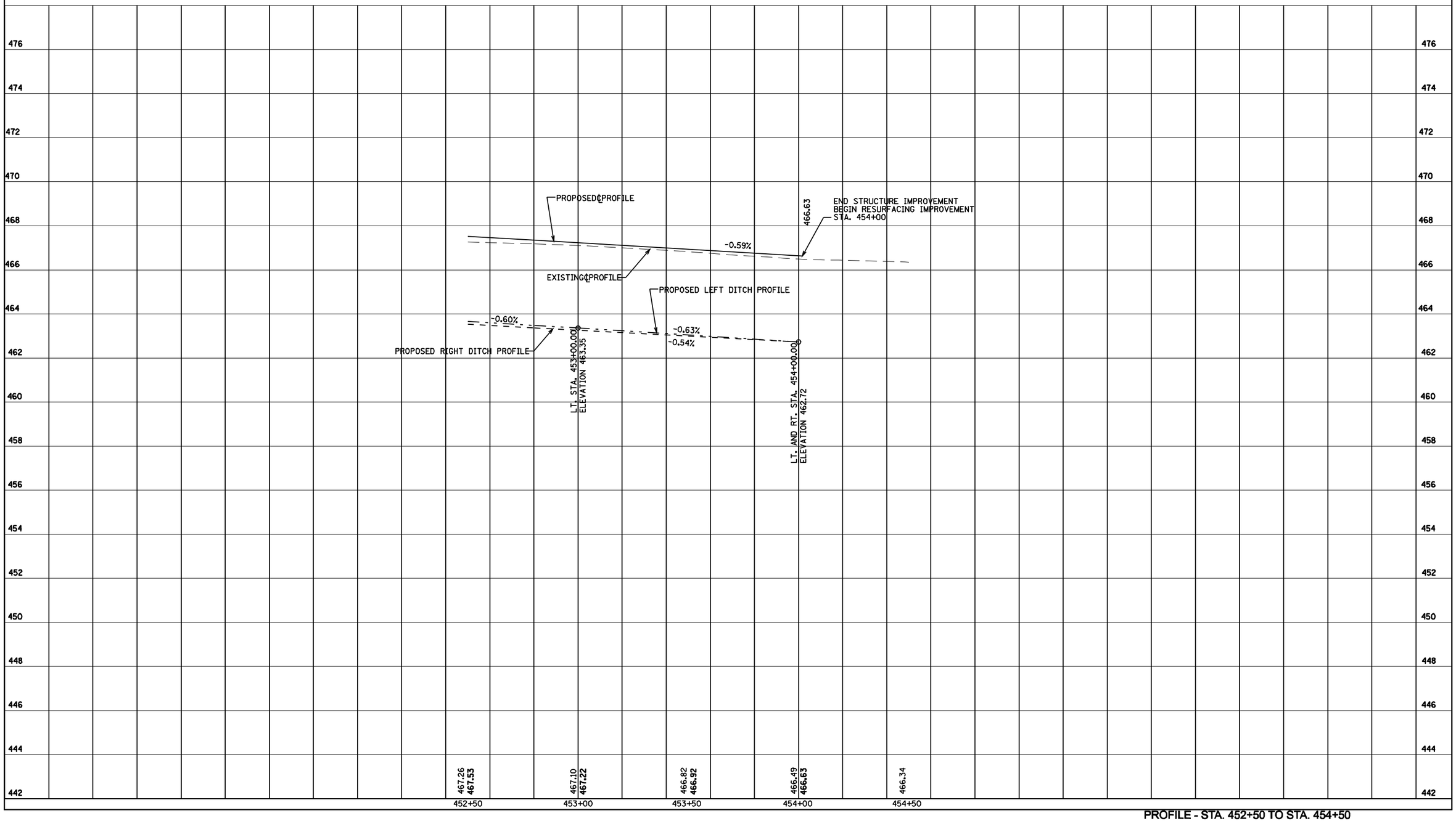


PROFILE - STA. 446+50 TO STA. 452+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	103
STA. 452+50.00 TO STA. 454+50.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

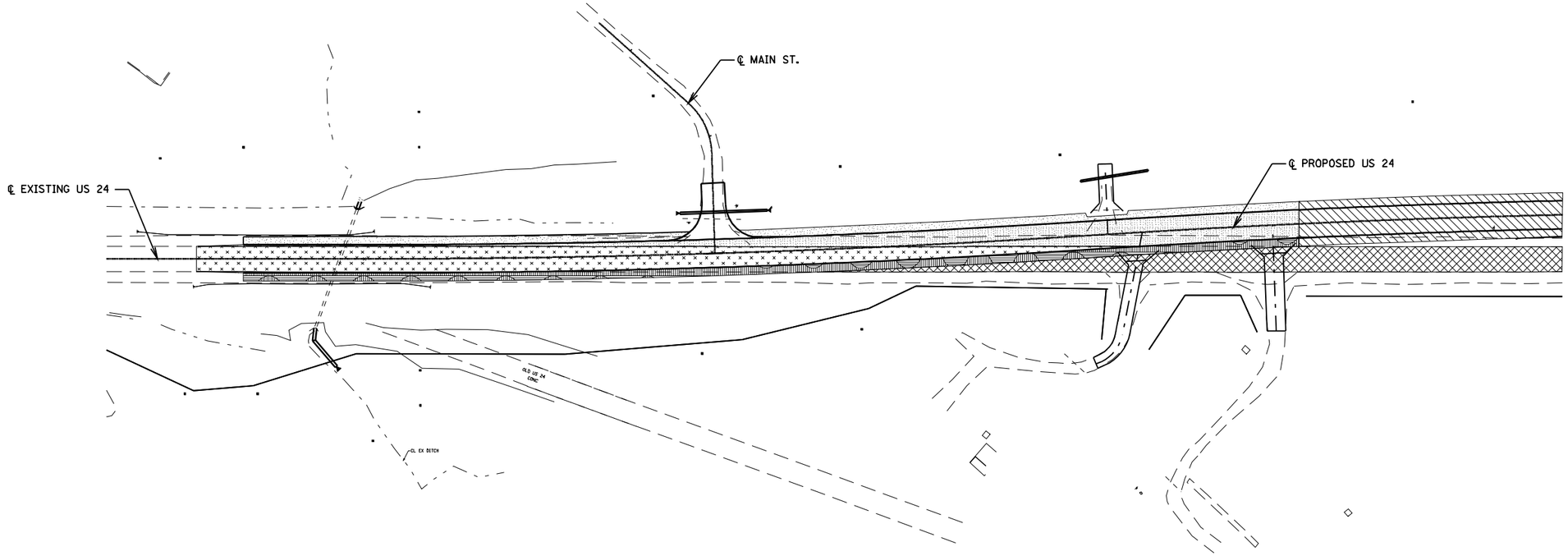


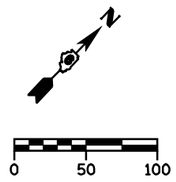
PROFILE - STA. 452+50 TO STA. 454+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	104
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 32 OF 123





STAGE 1

US 24:

1. PERFORM ALL PROPOSED WORK, TO INCLUDE EARTHWORK, AGGREGATE SUBBASE, HMA BASE COURSE, HMA BINDER COURSE, CONCRETE SUBSTRUCTURE AND CONCRETE SUPER STRUCTURE BETWEEN STATIONS 429+00 AND 445+00. USE TRAFFIC CONTROL AND PROTECTION STANDARD 701301 WHEN WORKING NEAR THE EXISTING ROADWAY.

2. PLACE PROPOSED GUARDRAIL FOR NEW CONCRETE SUPERSTRUCTURE.

STAGE 2

US 24:

SOUTH END

1. PLACE HMA BASE COURSE AND HMA BASE COURSE WIDENING AS SHOWN ON PLANS FROM STATION 420+00 TO STATION 429+00 UNDER TRAFFIC USING TRAFFIC CONTROL AND PROTECTION STANDARD 701326. HMA BASE COURSE AND HMA BASE COURSE WIDENING WILL BE PLACED IN TWO 3 1/2 INCH LIFTS MINIMUM. IF NEW PAVEMENT IS ABOVE EXISTING PAVEMENT A TAPER WILL BE PLACED TO TRANSITION TO EXISTING PAVEMENT. IF NEW PAVEMENT IS BELOW EXISTING PAVEMENT PLACE LIFTS TO MATCH EXISTING PAVEMENT. PLACE LIFTS IN ACCORDANCE WITH STANDARD SPECIFICATION 407.06 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2007.

2. CLOSE MAIN STREET USING TRAFFIC CONTROL AND PROTECTION STANDARD BLR 22-6 AND INSTALL THE CROSSROAD PIPE CULVERT AND CONSTRUCT THE PROPOSED MAIN STREET INTERSECTION.

3. PLACE THE PROPOSED HMA SHOULDERS TO THE TOP OF EXISTING PAVEMENT ON THE LEFT SIDE STATION 420+00 TO STATION 429+00 USING TRAFFIC CONTROL AND PROTECTION STANDARD 701326 WHILE WORKING ALONG EXISTING PAVEMENT.

4. INSTALL THE ENTRANCE CULVERT AND CONSTRUCT THE FIELD ENTRANCE ON THE LEFT SIDE AT STATION 427+37.

STAGE 3

US 24:

1. MOVE TRAFFIC ONTO THE NEW PAVEMENT USING TRAFFIC CONTROL AND PROTECTION STANDARD 701331. COLD MILL 2" OF EXISTING HMA SURFACE FROM STA. 420+00 TO 427+64. PLACE HMA BINDER COURSE TO BUILD THE SUPER ELEVATION FROM STATION 420+14 TO 427+76. USE TRAFFIC CONTROL AND PROTECTION STANDARD 701306 WHEN REMOVING THE HMA SURFACE AND PLACING THE PRIME, HMA BINDER AND HMA SURFACE COURSE.

2. PLACE THE TOP LIFT OF THE HMA SHOULDER AND THE AGGREGATE SHOULDER LEFT STATION 420+00 TO 429+00 USING TRAFFIC CONTROL AND PROTECTION STANDARD 701326.

3. CLOSE THE EXISTING US 24 AT STATION 430+00 USING APPLICABLE PORTIONS OF TRAFFIC CONTROL AND PROTECTION STANDARD 701331

4. REMOVE ALL EXISTING PAVEMENT NO LONGER IN USE AND THE EXISTING STRUCTURE, SHAPE THE AREAS AS SHOWN ON THE TYPICALS AND CROSS SECTIONS. MAINTAIN ACCESS AT ALL PRIVATE ENTRANCES.

5. CONSTRUCT THE HMA AND AGGREGATE SHOULDERS ON THE RIGHT SIDE STATION 419+60 TO STATION 430+00.

6. RECONSTRUCT THE PRIVATE ENTRANCES ON THE RIGHT SIDE STATION 427+66 AND STATION 428+77.

7. PERFORM FINAL SEEDING AND MULCH OR EROSION CONTROL BLANKET ALL AREAS.

LEGEND

- STAGE 1 CONSTRUCTION
- STAGE 2 CONSTRUCTION
- STAGE 3 SHOULDER CONSTRUCTION
- STAGE 3 MILLING
- EXISTING PAVEMENT REMOVAL

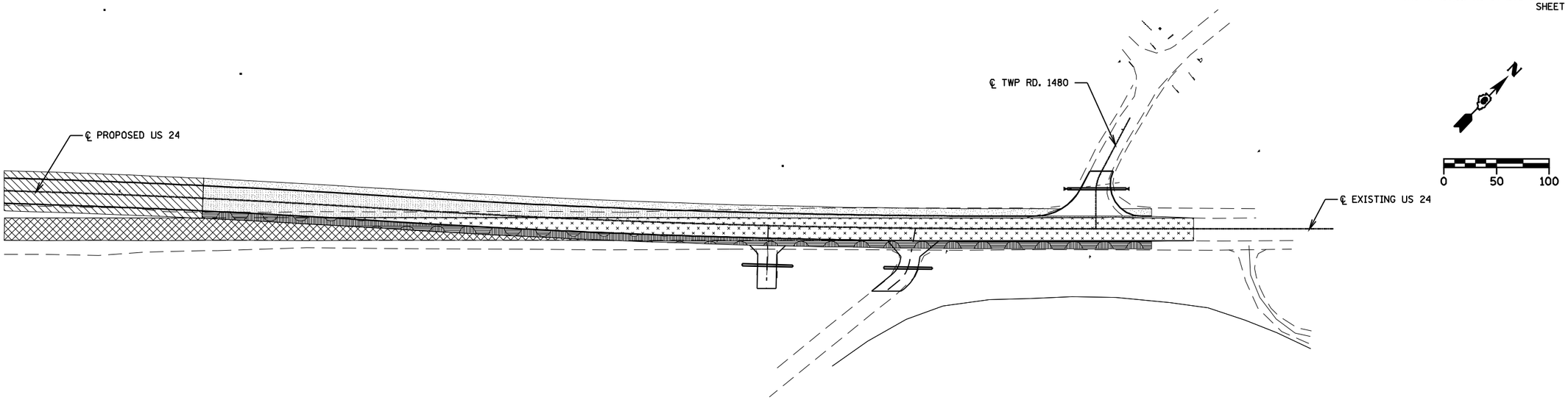
TRAFFIC STAGING PLAN

SHEET 1 OF 2
US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24)
SECTION 9RS-4, (10,11) RS-3; (10B-1) R
BROWN & SCHUYLER COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	105
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 33 OF 123



STAGE 1

US 24:

1. SEE TRAFFIC STAGING PLAN SHEET 1 OF 2.

STAGE 2

US 24:

NORTH END

1. PLACE HMA BASE COURSE AND HMA BASE COURSE WIDENING AS SHOWN ON PLANS FROM STATION 445+00 TO STATION 454+00 UNDER TRAFFIC USING TRAFFIC CONTROL AND PROTECTION STANDARD 701326. HMA BASE COURSE AND HMA BASE COURSE WIDENING WILL BE PLACED IN TWO 3 1/2 INCH LIFTS MINIMUM. IF NEW PAVEMENT IS ABOVE EXISTING PAVEMENT A TAPER WILL BE PLACED TO TRANSITION TO EXISTING PAVEMENT. IF NEW PAVEMENT IS BELOW EXISTING PAVEMENT PLACE LIFTS TO MATCH EXISTING PAVEMENT. PLACE LIFTS IN ACCORDANCE WITH STANDARD SPECIFICATION 407.06 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2007.

2. INSTALL THE CROSSROAD PIPE CULVERT AND CONSTRUCT THE PROPOSED TWP. RD INTERSECTION. USE TRAFFIC CONTROL AND PROTECTION STANDARD 701201.

3. PLACE THE PROPOSED HMA SHOULDERS TO THE TOP OF EXISTING PAVEMENT ON THE LEFT SIDE STATION 445+00 TO STATION 454+00 USING TRAFFIC CONTROL AND PROTECTION STANDARD 701326 WHILE WORKING ALONG EXISTING PAVEMENT.

STAGE 3

US 24:

1. PERFORM STAGE 3 OPERATIONS AS OUTLINED ON TRAFFIC STAGING PLAN SHEET NUMBER 1 OF 2.

ADDITIONALLY:

2. MOVE TRAFFIC ONTO THE NEW PAVEMENT USING TRAFFIC CONTROL AND PROTECTION STANDARD 701331. COLD MILL 2" OF EXISTING HMA SURFACE FROM STA. 445+00 TO 454+00. PLACE HMA BINDER COURSE TO BUILD THE SUPER ELEVATIONS FROM STATION 446+07 TO 453+67.

3. PLACE THE TOP LIFT OF THE HMA SHOULDER AND THE AGGREGATE SHOULDER LEFT STATION 445+00 TO 454+00 USING TRAFFIC CONTROL AND PROTECTION STANDARD 701326.

4. CLOSE THE EXISTING US 24 AT STATION 445+00 USING APPLICABLE PORTIONS OF TRAFFIC CONTROL AND PROTECTION STANDARD 701331

5. CONSTRUCT THE HMA AND AGGREGATE SHOULDERS ON THE RIGHT SIDE STATION 445+00 TO STATION 454+40.

6. INSTALL THE ENTRANCE CULVERT AND CONSTRUCT THE FIELD ENTRANCE ON THE RIGHT SIDE AT STATION 450+37 AND THE PRIVATE ENTRANCE STATION 451+77

LEGEND

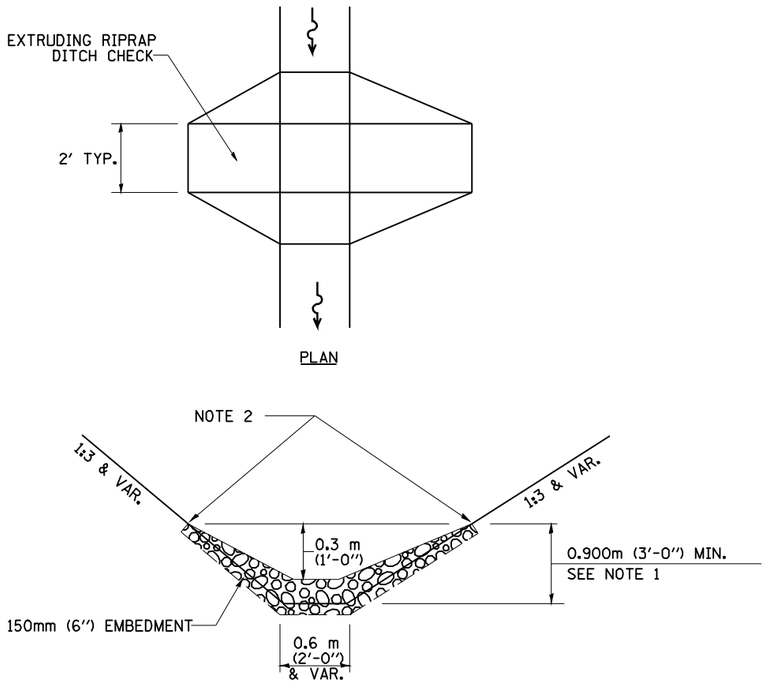
- STAGE 1 CONSTRUCTION
- STAGE 2 CONSTRUCTION
- STAGE 3 SHOULDER CONSTRUCTION
- STAGE 3 MILLING
- EXISTING PAVEMENT REMOVAL

TRAFFIC STAGING PLAN
SHEET 2 OF 2
US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24)
SECTION 9RS-4, (10,11) RS-3; (10B-1) R
BROWN & SCHUYLER COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	106
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

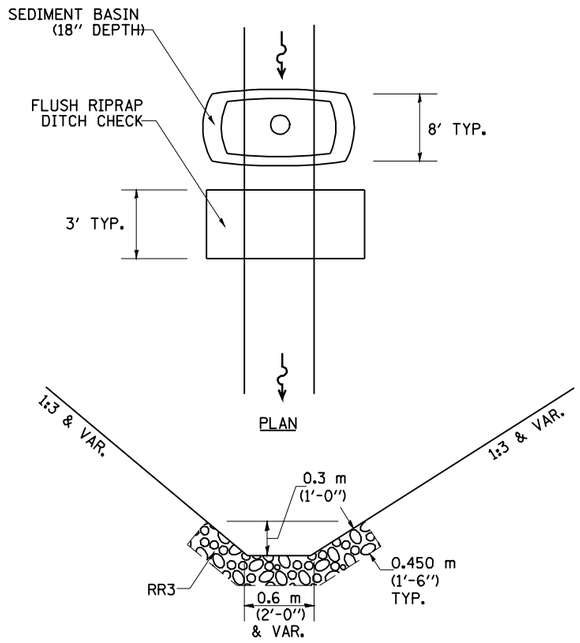
* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 34 OF 123



ELEVATION

OPTION 1

(EXTRUDING DITCH CHECK)
RECOMMENDED FOR AREAS
W/ RIPRAP DITCH LINING



ELEVATION

OPTION 2

(FLUSH DITCH CHECK)
RECOMMENDED FOR AREAS
W/O RIPRAP DITCH LINING

AGGREGATE DITCH CHECKS

(TYPICAL & OPTIONS 1 & 2
AS DIRECTED BY THE ENGINEER)

NOTE 1: RIPRAP SHALL EXTEND FAR ENOUGH UP THE SLOPES TO ALLOW 0.3m (1') OVERTOPPING TO AVOID ERODING AROUND THE EDGES OF THE RIPRAP.

NOTE 2: ENDS SHALL BE TIED INTO SLOPES.

LEGEND FOR STORM WATER POLLUTION PREVENTION PLAN

ITEM	SYMBOL
AGGREGATE (EROSION CONTROL) [AGGREGATE DITCH CHECKS: Height = 0.6m (2')]	
TEMPORARY DITCH CHECKS	
INLET PIPE PROTECTION (I&PP)	
EROSION CONTROL FENCE	
EARTH EXCAVATION FOR EROSION CONTROL (SEDIMENT BASINS)	
PRESERVE EXISTING TREES, WOODLANDS, AND UNDERSTORY (OUTSIDE CONSTRUCTION LIMITS)	
ITEM PLACED AT BEGINNING OF CONSTRUCTION (Requirement)	* ITEM *
ITEM PLACED AS DIRECTED BY ENGINEER (When required by situation)	ITEM
DIRECTION OF OVERLAND FLOW	
EROSION CONTROL FIBER BLANKET	

GENERAL NOTES:
All items shall be constructed as shown on this sheet, on Standard 280001, and as directed by the Engineer.

The symbology on the STORM WATER POLLUTION PREVENTION PLAN sheets does not represent the size or quantity of bales, for number of bales refer to details and notes shown on this sheet and/or as directed by the Engineer.

THE CONTRACTOR SHALL INSTALL DITCH CHECKS AS DIRECTED BY THE ENGINEER. IF THE ENGINEER ELECTS TO UTILIZE FLUSH RIPRAP DITCH CHECKS IN LIEU OF TEMPORARY DITCH CHECKS AS SHOWN ON THE FOLLOWING PLAN SHEETS, THE SPACING SHOULD BE DOUBLED.

STORMWATER POLLUTION PREVENTION PLANS

SHEET 1 OF 6
US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24)
SECTION 9RS-4, (10,11) RS-3; (10B-1) R
BROWN & SCHUYLER COUNTIES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	107
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

STORM WATER POLLUTION PREVENTION PLAN

Route: FAP 317 Marked: US 24

Section: R9S-4, (10,11) RS-3; (10B-1)R Project No.:

Counties: BROWN & SCHUYLER Contract No.: 72432

This plan has been prepared to comply with the provision of the NPDES Permit Number ILR10_____ issued by the Illinois Environmental Protection Agency for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. Based on my inquire of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____
(Signature) (Date)

_____
(Title)

Note: The above boxed in area will be filled out by IDOT - Construction after the award of the contract to obtain the required NPDES permit.

The following plan was established and included in these plans to direct the Contractor in the placement of temporary erosion control systems and to provide a storm water pollution prevention plan for compliance under NPDES. The Contractor shall abide to all requirements within this plan as part of the contract.

The purpose of this plan is to prevent / minimize siltation within the construction zone and to eliminate sediments from entering and leaving the construction zone by utilizing proper temporary erosion control systems and providing ground cover within a reasonable time.

Certain items, as shown in this plan and referenced by the legend, shall be placed by the Contractor at the beginning of construction. Other items shall be placed by the Contractor as directed by the Engineer on a case by case situation resulting from the Contractor's sequence of activities, time of the year, and expected weather conditions.

The Contractor shall place permanent erosion control systems and seeding within a reasonable amount of time; therefore, reducing the amount of area being open to the possibility of erosion and reducing the amount of temporary erosion control systems and temporary seeding. The Resident Engineer will determine if temporary erosion control systems shown in the plan can be deleted, the size of the proposed ditch checks, the proper method of installation, and if any additional temporary erosion control systems shall be added which are not included in this plan. The Contractor shall perform all work as directed by the Engineer and as shown in special details and in Standard 280001 of the plans.

The special provisions Temporary Seeding, Temporary Erosion Control Seeding, and Temporary Erosion Control additionally supplement this plan.

All disturbed areas having high potential for erosion, as determined by the Engineer, shall be temporarily seeded or permanently seeded by October 1, 2010 and shall not be reopened until after the winter shutdown period.

SITE DESCRIPTION

Description of Construction Activity:

1. The proposed project consists of widening and resurfacing of 0.644 miles of a two lane highway (US 24), including removing and replacing the bridge over the Lamoine River, realignment of a section of US 24, a new bridge over the Lamoine River, improved shoulders, and new ditches.
2. Construction consists of grading, constructing culverts / removal of one existing structure and constructing a new structure on the realigned portion of US 24, widening, bituminous resurfacing, placing aggregate and bituminous shoulders, and miscellaneous work to complete improvements to the proposed roadway.

Description of Intended Sequence of Major Construction Activities Which Will Disturb Earth and Lead to Possible Erosion for Major Portions of the Construction Site:

1. Tree removal will be completed to clear approximately 2.1 acres of wooded land.
2. Excavation will be completed along the entire length to grade out for proposed roadway ditches and waterways.
3. Excavation will also be completed in proposed cut sections to lower the existing ground elevation to meet the proposed roadway grade/vertical alignment.
4. Embankment will be completed in fill areas to raise the existing ground elevation to meet the proposed roadway foreslope and backslope.
5. Drainage structures will be installed before and/or during the construction of the excavation and embankment to allow proper drainage across the proposed two lane facility.
6. Placement, maintenance, removal and proper clean-up of temporary erosion control, such as perimeter erosion barrier, hay or straw bale ditch checks, riprap ditch checks, sediment basins, temporary seeding, etc.
7. Placement of permanent erosion control, such as riprap ditch lining, stilling basins, excelsior blanket, seeding, fabric formed concrete revetment mat, stone riprap at structure, etc.
8. Final grading, paving, shoulder work, and other miscellaneous items.

Area of Construction Site:

The total drainage area entering and including the construction site is estimated to be 21.8 acres in which 11.8 acres will be disturbed by excavation, grading or other activities.

Other Reports, Studies and Plans which Aid in the Development of this Storm Water Pollution Prevention Plan as Referenced Documents:

1. Estimated run-off coefficients are contained in the project drainage study which were utilized for proposed placement of the temporary erosion control systems.
2. Information on the soils within the site was obtained from field reviews which were utilized for proposed placement of the temporary erosion control systems.
3. Site maps indicating drainage patterns and approximate slopes were contained in the project design report, USGS drainage maps, project drainage study, and project plan documents were all utilized for proposed placement of the temporary erosion control systems.

Drainage Tributaries Receiving Water from this Construction Site:

1. Lamoine River
2. Minor tributaries of the above

STORMWATER POLLUTION PREVENTION PLANS

SHEET 2 OF 6

US 24 OVER LAMOINE RIVER

F.A.P. RTE 317 (US RTE 24)

SECTION 9RS-4, (10,11) RS-3; (10B-1) R

BROWN & SCHUYLER COUNTIES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	108
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 36 OF 123

CONTROLS - EROSION CONTROLS AND SEDIMENT CONTROLS

Description of Stabilization Practices at the Beginning of Construction:

1. The area between the existing and proposed right-of-way/temporary easement boundaries and limits of the project will be improved and managed for the purposes of controlling erosion within the area, reducing water flow by temporary diversion and minimizing siltation into the construction zone, and establishing vegetative cover which will become permanent vegetation and act as an erosion barrier. Work at the beginning of construction will consist of the following:

   (a) Areas of existing vegetation (woods and grasslands) outside the proposed construction slope limits shall be identified for preserving and shall be protected from mowing, brush cutting, tree removal and other activities which would be detrimental to their maintenance and development.

   (b) Dead, diseased, or unsuitable vegetation within the site shall be removed as directed by the Engineer, along with required tree removal.

   (c) As soon as reasonable access is available (such as trees cleared) to all locations where water drains away from the project, sediment basins, riprap ditch checks, temporary ditch checks, and/or erosion control fence shall be installed as called out in this plan and directed by the Engineer.

   (d) Bare and sparsely vegetated ground in highly erodible areas as determined by the Engineer shall be temporarily seeded at the beginning of construction where no construction activities are immediately expected as stated in the special provision "Temporary Erosion Control Seeding".

   (e) Immediately after tree removal is completed in certain areas which are highly erodible areas as determined by the Engineer, the areas shall be temporarily seeded where no construction activities are immediately expected as stated in the special provision •Temporary Erosion Control Seeding•.

   (f) At locations where a significant amount of water drains into the construction zone from outside areas (adjacent landowners), erosion control fence, temporary ditch checks, or riprap ditch checks will be utilized to locally divert water, reduce flow rates, and collect outside siltation inside the right-of-way line. Erosion control items will not be allowed to be installed to cause flooding to upstream private property which could cause crop damages or other undesirable conditions.

2. Establishment of these temporary erosion control measures will have additional benefits to the project. Desirable grass seed will become established in these areas and will spread seeds onto the construction site until permanent seeding/mowing and overseeding can be complete.

3. A third benefit of these filter areas is that they will begin to provide a screen and buffer. They will help protect the construction site from winds and excess sun and mitigate construction noise and dust.

Description of Stabilization Practices During Construction:

1. During roadway construction, areas outside the construction slope limits as outlined previous herein shall be protected from damaging effects of construction. The Contractor shall not use this area for staging (except as designated on the plans or directed by the Engineer), parking of vehicles or construction equipment, storage of materials, or other construction related activities.
   (a) Within the construction zone, critical areas which have high flows of water as determined by the Engineer shall remain undisturbed until full scale construction is underway to prevent unnecessary soil erosion.
   (b) Top soil and earth stockpiles shall be temporarily seeded if they are to remain unused for more than fourteen days.
   (c) As the Contractor constructs a portion of roadway in a fill section, he/she shall follow the following steps as directed by the Engineer:

   i. Place temporary erosion control systems at locations where water leaves and enters the construction zone
   ii. Temporary seed highly erodible areas outside the construction slope limits
   iii. Construct roadside ditches and provide temporary erosion control systems
   iv. Temporary divert water around proposed culvert locations
   v. Build necessary embankment at culvert locations and then excavate and place culvert
   vi. Continue building up the embankment to the proposed grade while at the same time place permanent erosion control such as riprap ditch lining and conduct final shaping to the slopes

   (d) The Contractor shall immediately follow major earth moving operations with final grading equipment. After the major earth spread operation has moved to a new location, final grading shall be completed within fourteen days. If grading is not completed within fourteen days, all major earth moving operations will be stopped, as directed by the Engineer, until disturbed areas are final graded and seeded.

   (e) Excavated areas and embankments shall be permanently seeded when final graded. If not, they shall be temporarily seeded as stated in the special provision "Temporary Erosion Control Seeding".

   (f) Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or pollution run-off in compliance with EPA water quality regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site.

   (g) The Resident Engineer shall inspect the project daily during activities and weekly or after large rains during the winter shutdown period. The project shall additionally be inspected by the Construction Field Engineer on a bi-weekly basis to determine that erosion control efforts are in place and effective and if other control work is necessary.

   (h) Sediment collected during construction by the various temporary erosion control systems shall be disposed of on the site on a regular basis as directed by the Engineer. The cost of this maintenance will be paid for in accordance with Article 109.04 of the Standard Specifications.

   (i) The temporary erosion control systems shall be removed as directed by the Engineer after use is no longer needed or no longer functioning. The costs of this removal shall be included in the unit bid price for the temporary erosion control system. No additional compensation will be allowed.

Description of Structural Practices After Final Grading:

1. Temporary erosion control systems shall be left in place with proper maintenance until permanent erosion control is in place and working properly and all proposed turf areas seeded and established with a proper stand.

2. Once permanent erosion control systems as proposed in the plans are functional and established, temporary items shall be removed, cleaned up, and disturbed turf reseeded. Temporary riprap ditch checks will be allowed to remain in place where approved by the Engineer.

Maintenance after Construction:

1. Construction is complete after acceptance is received at the final inspection.

2. Areas will be inspected on a regular basis by IDOT District 6 Bureau of Operations.

3. Maintenance crews will perform regular mowings to aid in keeping weeds down and establishing a good roadside seed stand.

4. Maintenance crews will also aid in any ditch lining maintenance or in any drainage problems.

5. All maintenance will be conducted at times when weather conditions will not cause site damage.

DOCUMENTATION

1. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with Section 4.b. shall be made and retained as part of the plan for at least three years after the date of inspection. The report shall be signed in accordance with part VI. G of the general permit.

2. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incident of Noncompliance (ION)" report for the identified violation. The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G. of the general permit. The report of noncompliance shall be mailed to the following address:

   Illinois Environmental Protection Agency
   Division of Water Pollution Control
   2200 Churchill Road, P.O. Box 19276
   Springfield, IL 62794-9276
   Attn: Compliance Assurance Section

STORMWATER POLLUTION PREVENTION PLANS

SHEET 3 OF 6
US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24)
SECTION 9RS-4, (10,11) RS-3; (10B-1) R
BROWN & SCHUYLER COUNTIES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	109
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 37 OF 123

CONTRACTOR CERTIFICATION STATEMENT

This certification statement is part of the Storm Water Pollution Plan for the project described below in accordance with NPDES Permit No. ILR10_____, issued by the Illinois Environmental Protection Agency on _____.

Route: FAP 317 Marked: US 24

Section: R9S-4, (10,11) RS-3; (10B-1)R Project No.:

Counties: BROWN & SCHUYLER Contract No.: 72432

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature_____ Date_____

Title_____

Name of Firm_____

Street Address_____

City, State, Zip_____

Phone Number_____

Note: The above boxed in area shall be filled out by the Contractor after the award of the contract to obtain the required NPDES Permit from IEPA. This is a requirement for this contract.

STORMWATER POLLUTION PREVENTION PLANS

SHEET 4 OF 6
US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24)
SECTION 9RS-4, (10,11) RS-3; (10B-1) R
BROWN & SCHUYLER COUNTIES

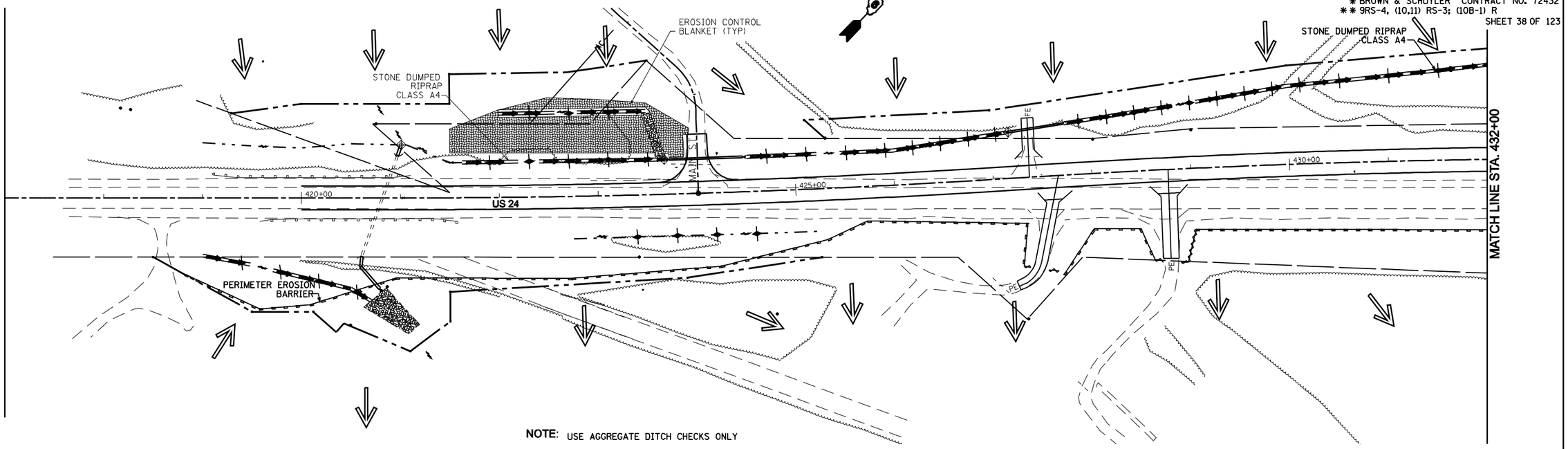
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	110
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

SHEET 38 OF 123

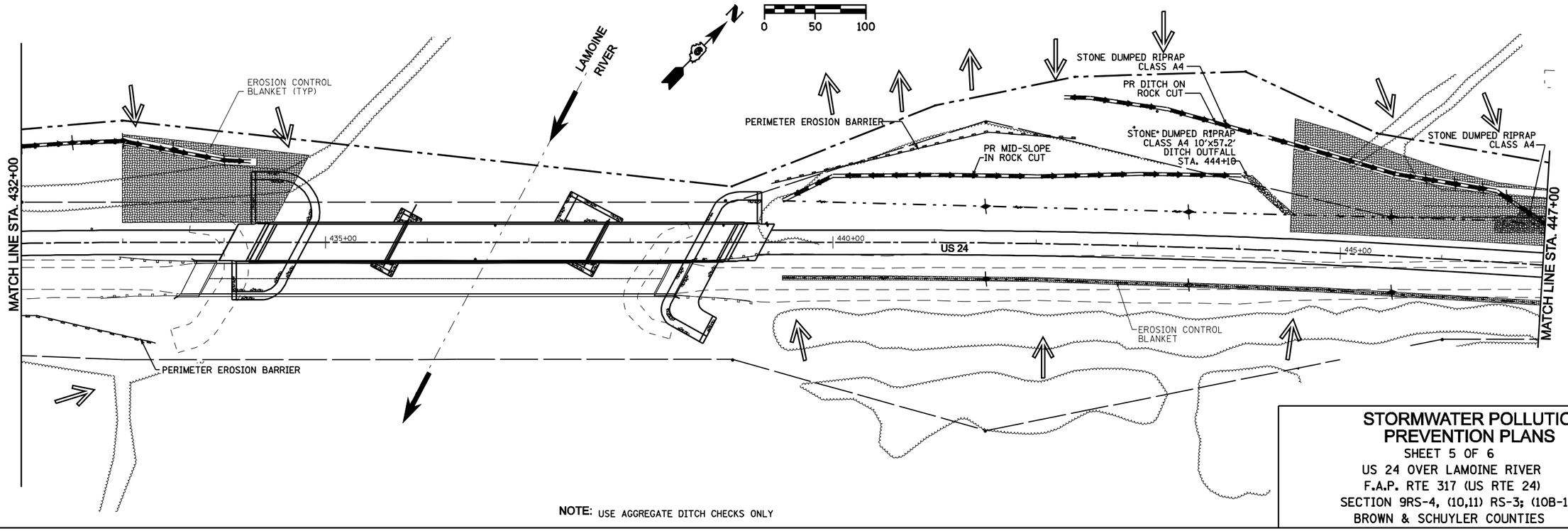
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

0 50 100



NOTE: USE AGGREGATE DITCH CHECKS ONLY

0 50 100



NOTE: USE AGGREGATE DITCH CHECKS ONLY

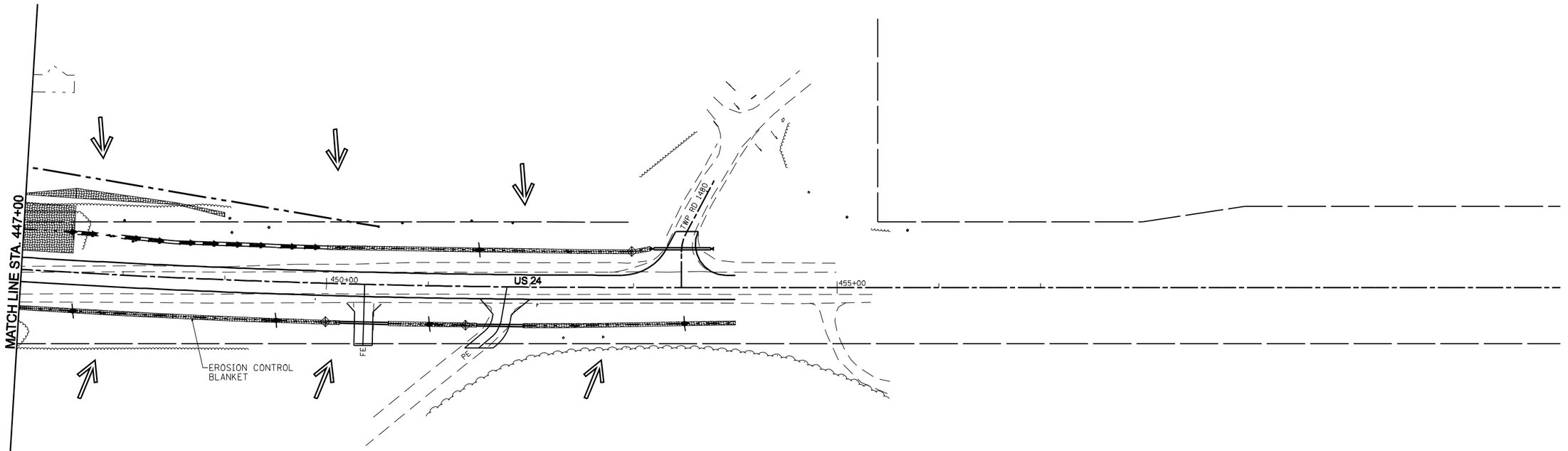
STORMWATER POLLUTION PREVENTION PLANS

SHEET 5 OF 6
US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24)
SECTION 9RS-4, (10,11) RS-3; (10B-1) R
BROWN & SCHUYLER COUNTIES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	111
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 39 OF 123



NOTE: USE AGGREGATE DITCH CHECKS ONLY

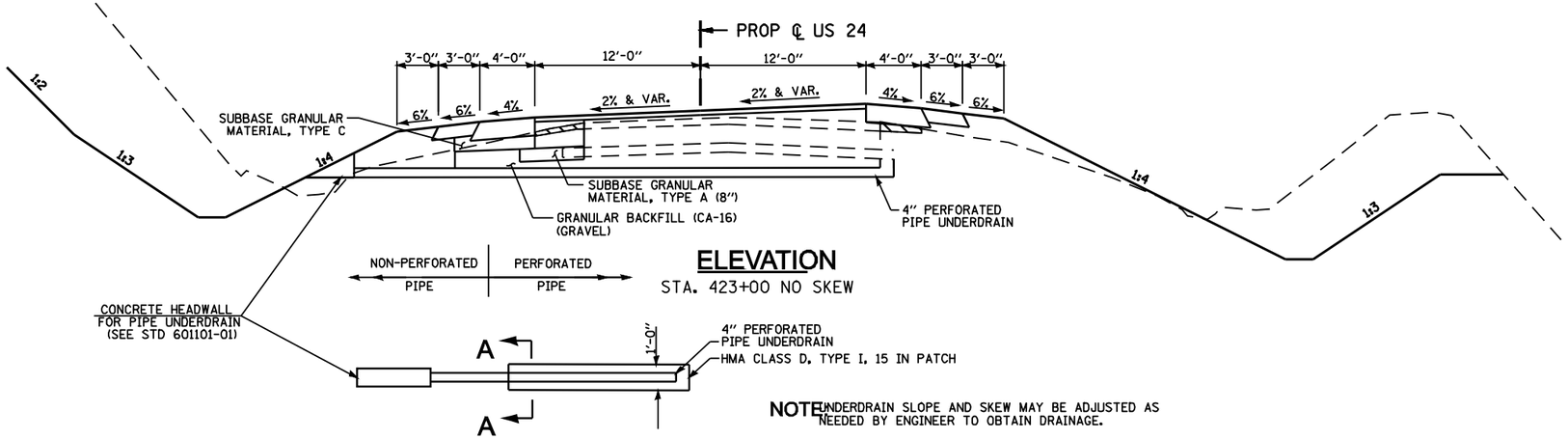
STORMWATER POLLUTION PREVENTION PLANS

SHEET 6 OF 6
US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24)
SECTION 9RS-4, (10,11) RS-3; (10B-1) R
BROWN & SCHUYLER COUNTIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	112
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 40 OF 123

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

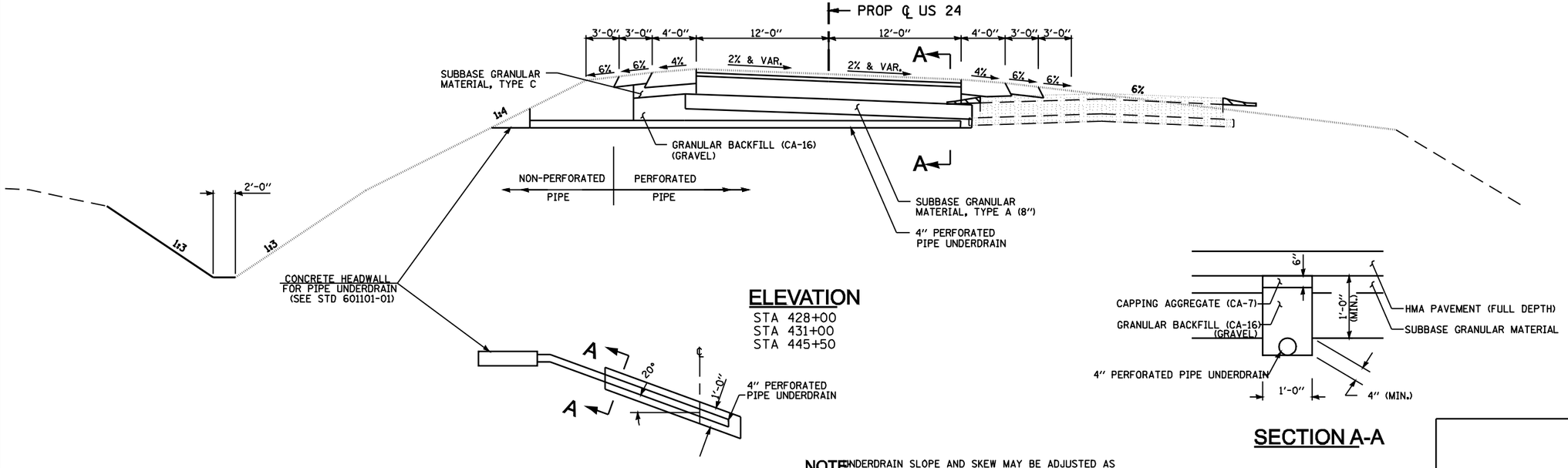


ELEVATION
STA. 423+00 NO SKEW

PLAN

NOTE: UNDERDRAIN SLOPE AND SKEW MAY BE ADJUSTED AS NEEDED BY ENGINEER TO OBTAIN DRAINAGE.

TRANSVERSE DRAIN SUPERELEVATED PAVEMENT
NOT TO SCALE



ELEVATION
STA 428+00
STA 431+00
STA 445+50

PLAN

NOTE: UNDERDRAIN SLOPE AND SKEW MAY BE ADJUSTED AS NEEDED BY ENGINEER TO OBTAIN DRAINAGE.

SECTION A-A

TRANSVERSE DRAIN SUPERELEVATED PAVEMENT
NOT TO SCALE

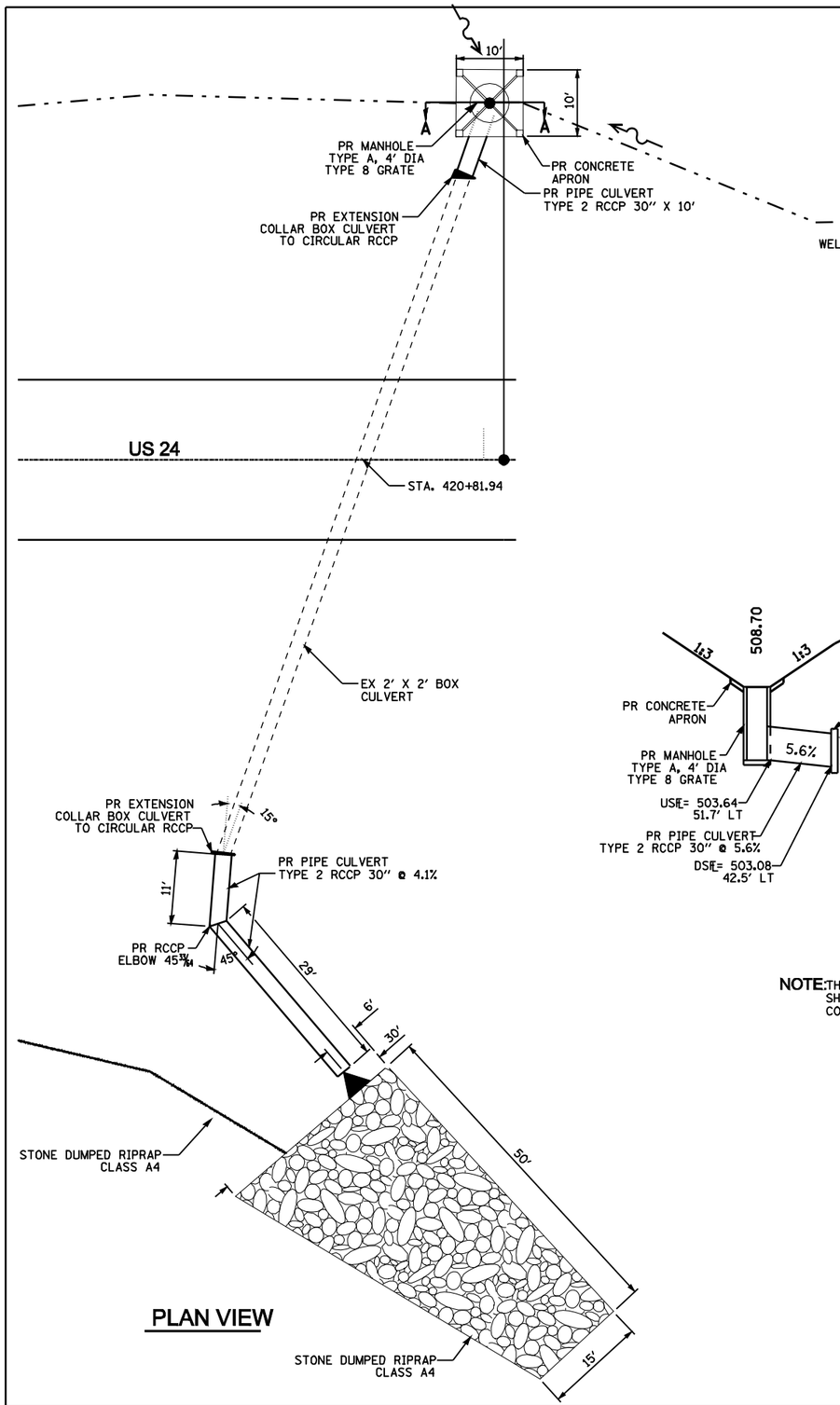
TRANSVERSE DRAIN SUPERELEVATED PAVEMENT

US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24)
SECTION 9RS-4, (10,11) RS-3; (10B-1) R
BROWN & SCHUYLER COUNTY

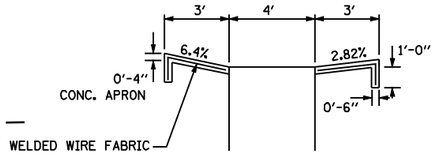
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	113
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 41 OF 123

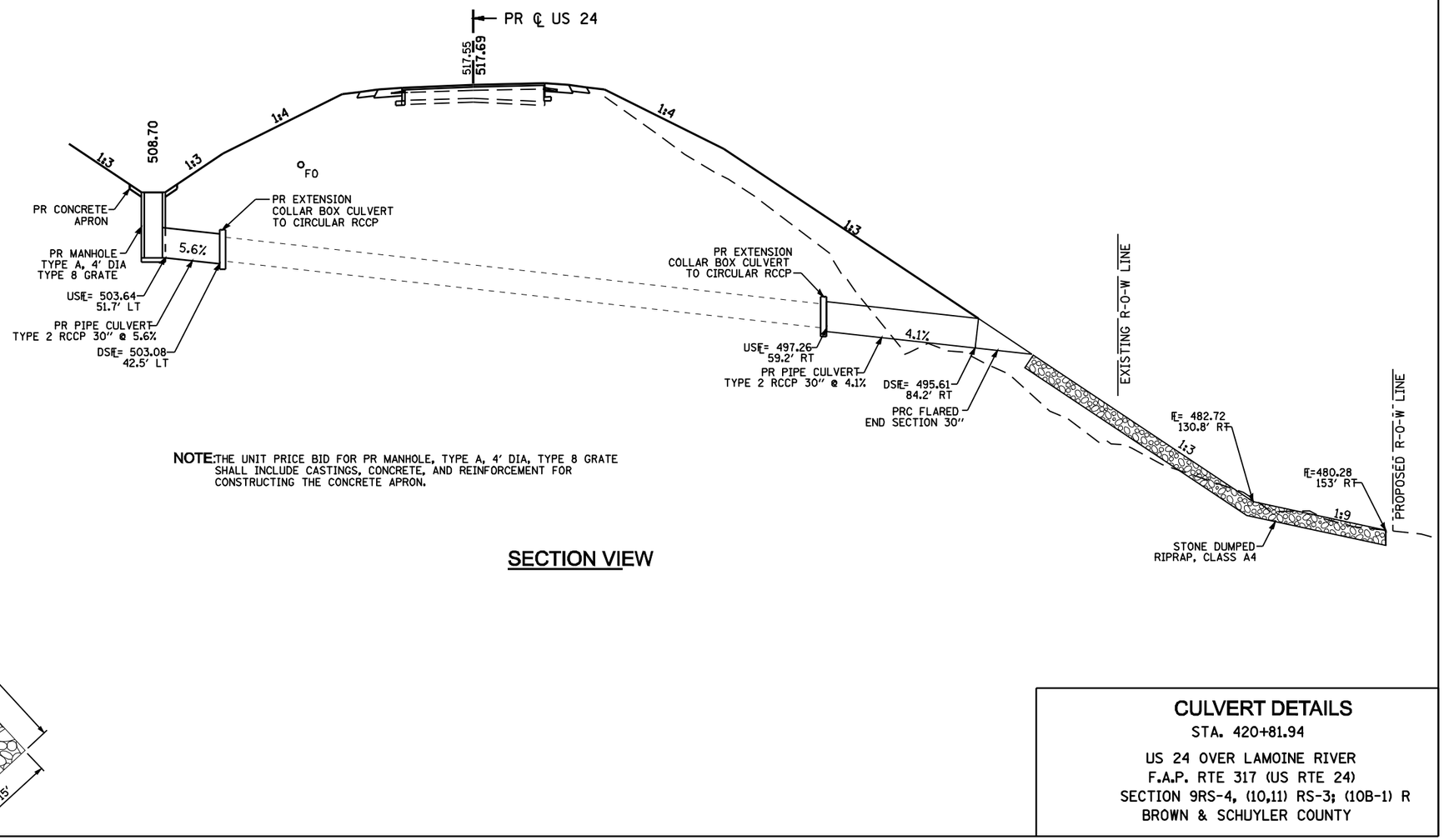


PLAN VIEW



SECTION A-A

NOTE: THE UNIT PRICE BID FOR PROP. MANHOLE, TYPE A, 4' DIA., TYPE 8 GRATE SHALL INCLUDE CASTINGS, CONCRETE, AND REINFORCEMENT FOR CONSTRUCTING THE CONCRETE APRON.



NOTE: THE UNIT PRICE BID FOR PR MANHOLE, TYPE A, 4' DIA, TYPE 8 GRATE SHALL INCLUDE CASTINGS, CONCRETE, AND REINFORCEMENT FOR CONSTRUCTING THE CONCRETE APRON.

SECTION VIEW

CULVERT DETAILS

STA. 420+81.94

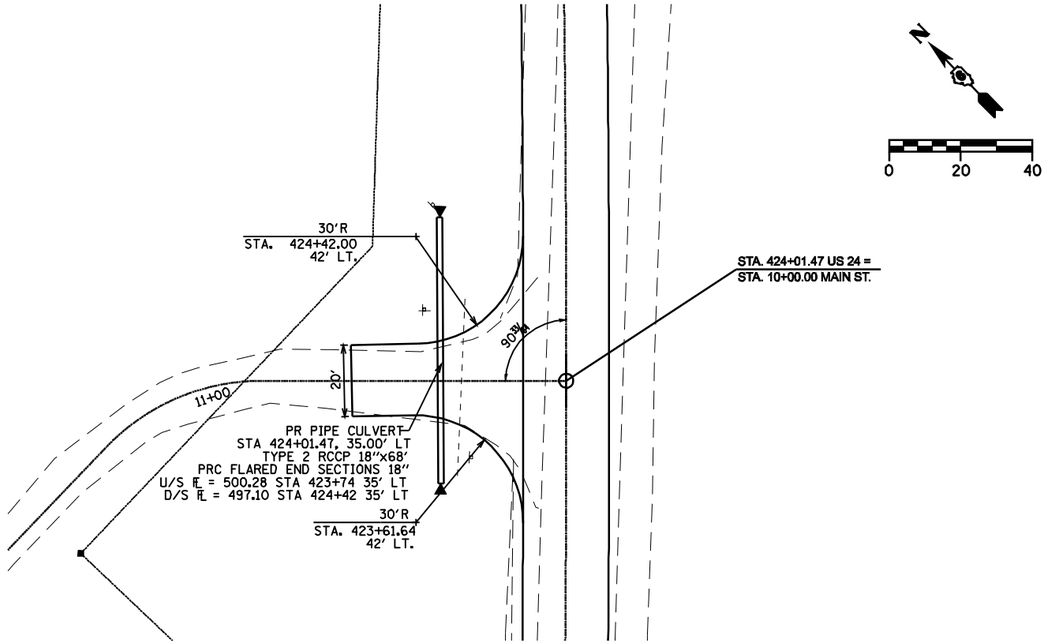
US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24)
SECTION 9RS-4, (10,11) RS-3; (10B-1) R
BROWN & SCHUYLER COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

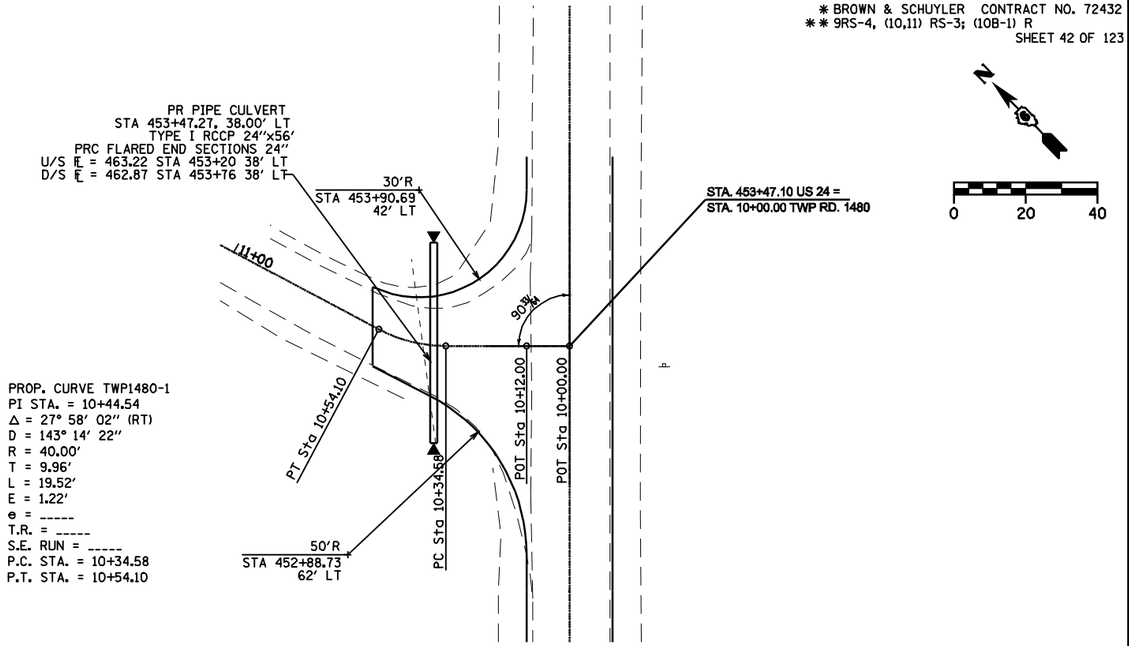
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	114
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

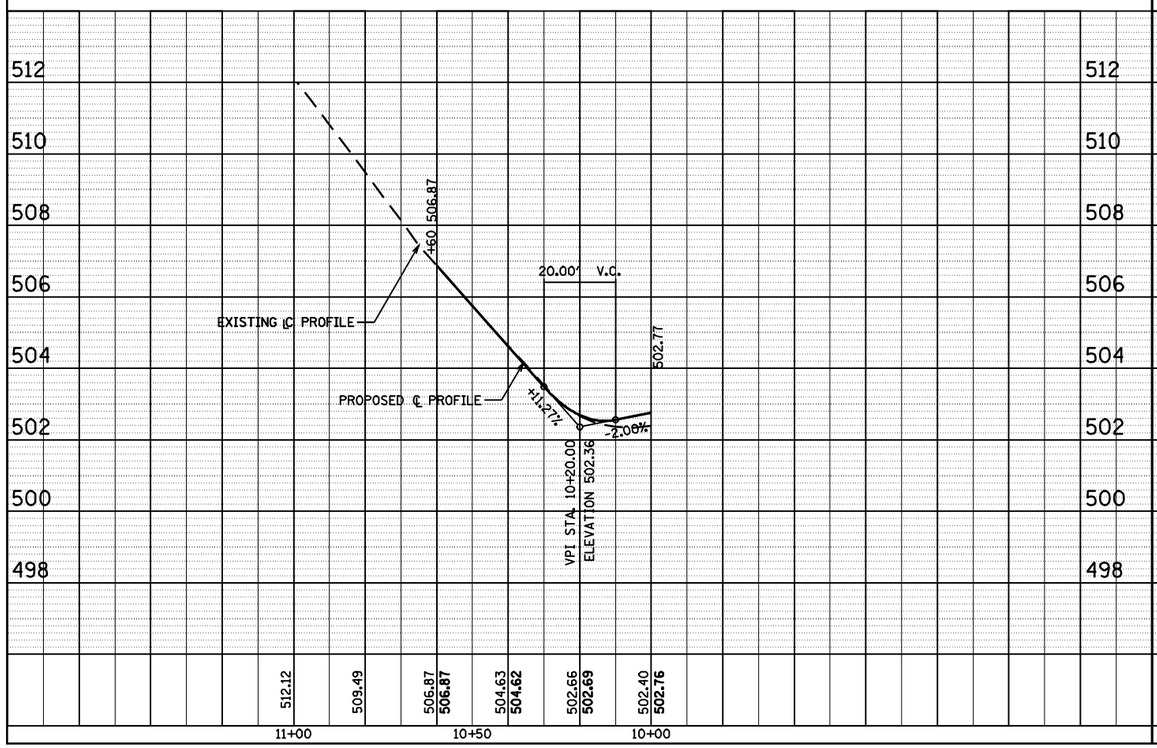
SHEET 42 OF 123

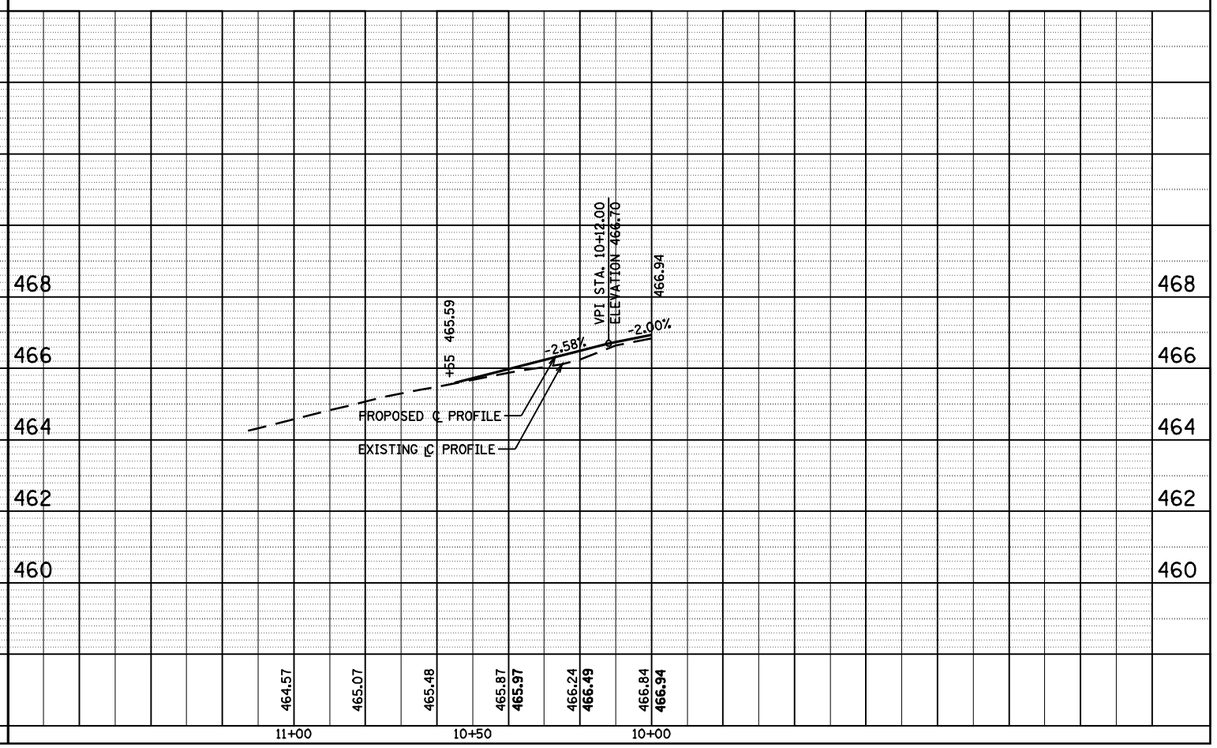


MAIN ST.



TWP. RD. 1480

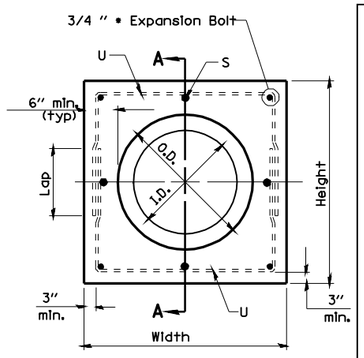




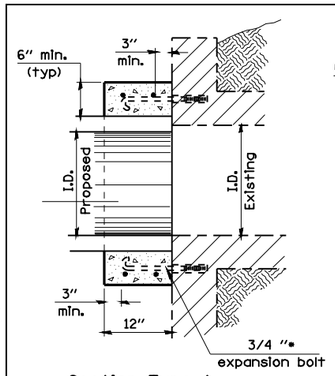
SIDE ROAD PLAN AND PROFILE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	115
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

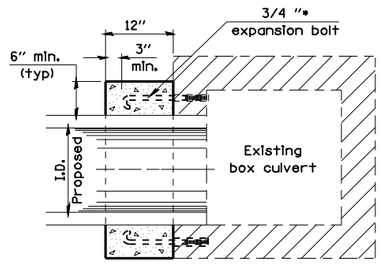
* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 43 OF 123



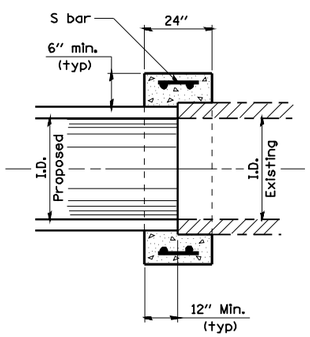
PIPE CULVERT EXTENSION COLLAR



Section Type A
(Box end extension)

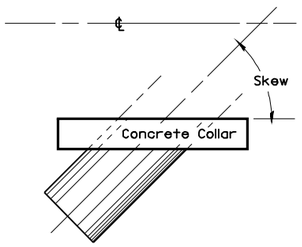


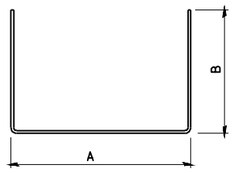
Section Type B
(Pipe in side extension)



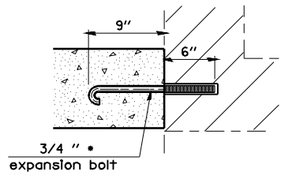
Section Type C
(Pipe end to pipe end extension
No expansion bolts required)

Section A - A





*4 U - bar

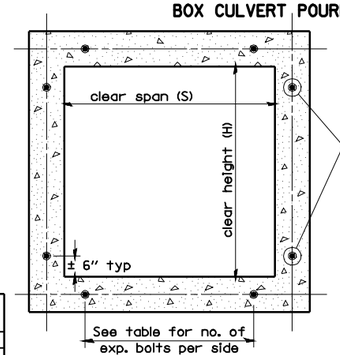


Expansion Bolt Detail

Notes:

1. Expansion bolts shall consist of self drilling expansion shields and ¾" Ø hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete. Minimum Certified Proof Load - 4,080 lbs.
2. Use minimum of 1 (one) expansion bolt at each corner.

BOX CULVERT POURED IN PLACE EXTENSION



Section Thru Barrel

EXPANSION BOLTS REQUIRED FOR CULVERT EXTENSIONS

H or S	No. Expansion Bolts Req'd. Per Side			
	Extension ≤ 15ft		Extension > 15ft	
	No.	Spacing	No.	Spacing
24"	*	*	*	*
30"	2	18"	2	18"
36"	2	24"	2	24"
48"	3	18"	3	18"
60"	4	16"	3	24"
72"	5	15"	4	20"
84"	5	18"	4	24"
96"	6	17"	5	21"
108"	6	19"	5	24"
120"	7	18"	6	21"
132"	8	17"	6	24"
144"	8	19"	7	22"

Note: Number of expansion bolts in table based on non-skewed culverts.

* Use minimum 1 (one) expansion bolt in each corner.

Station	Section Type	Skew	Existing Culvert Size	Proposed Culvert I.D.	Proposed Culvert O.D.	Collar Height	Collar Width	Reinforcement Bars S bar No.	S bar Size	S bar Length	U bar No.	U bar Size	U bar A	U bar B	U bar Lap	U bar Length	Expansion Bolts 3/4 " lb	Expansion Bolts 3/4 " Each	Class SI Concrete Collar yd³
420+60.97 RT.	A	04°30'30"	2'x2'	30"	37"	4'-1"	4'-1"	4	#4	0'-8"	4	#4	3'-7"	2'-5"	15"	8'-5"	25	4	0.34
420+97.18 LT.	A	19°29'21"	2'x2'	30"	37"	4'-1"	4'-1"	4	#4	0'-8"	4	#4	3'-7"	2'-5"	15"	8'-5"	25	4	0.34
														Total			50	8	0.68

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CONCRETE COLLAR AND CULVERT EXTENSION DETAILS

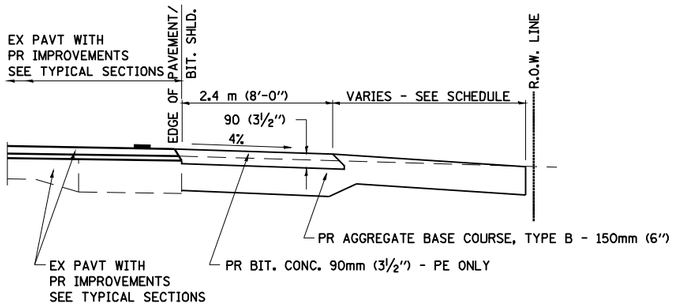
SCALE: VERT.
HORIZ.
DATE: OCTOBER 6, 1999

DRAWN BY CADD
CHECKED BY RLD

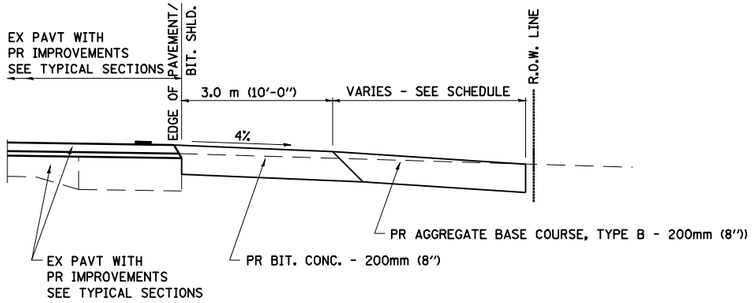
COLLAR

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	116
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

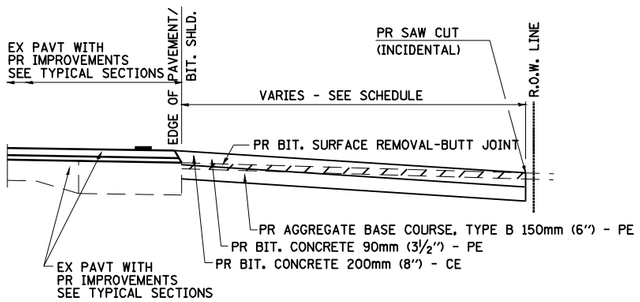
* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R



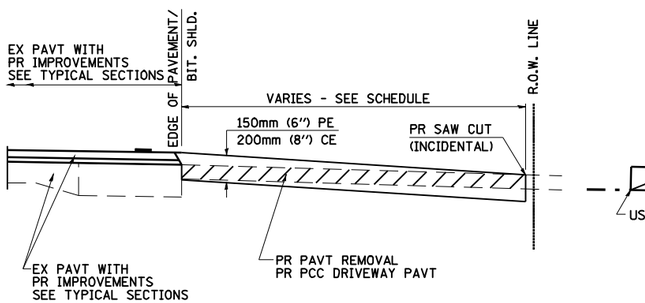
SECTION A-A FOR EX EARTH/AGGREGATE FE & PE



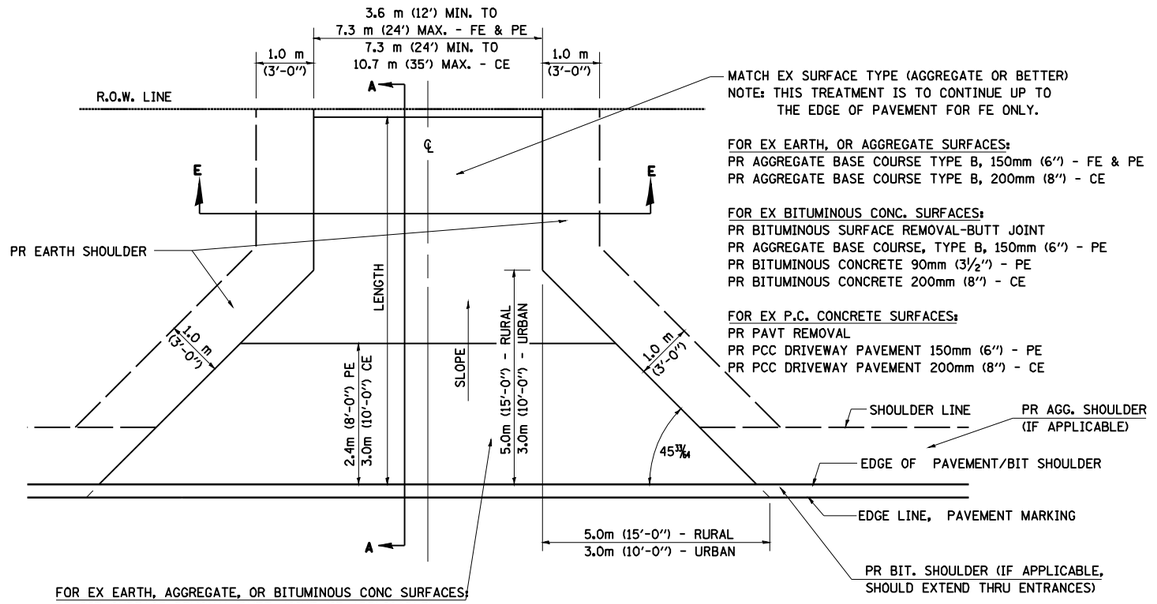
SECTION A-A FOR EX EARTH/AGGREGATE CE



SECTION A-A FOR EX BITUMINOUS PE & CE



SECTION A-A FOR EX P.C. CONC. PE & CE



MATCH EX SURFACE TYPE (AGGREGATE OR BETTER)
NOTE: THIS TREATMENT IS TO CONTINUE UP TO THE EDGE OF PAVEMENT FOR FE ONLY.

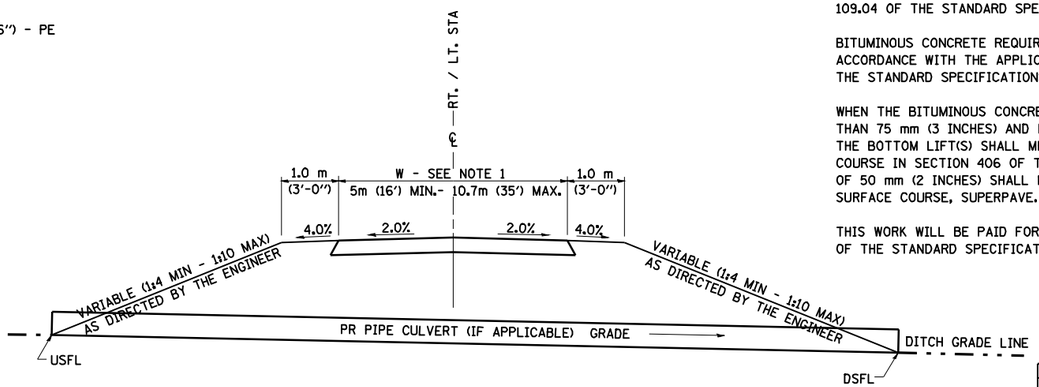
FOR EX EARTH, OR AGGREGATE SURFACES:
PR AGGREGATE BASE COURSE TYPE B, 150mm (6") - FE & PE
PR AGGREGATE BASE COURSE TYPE B, 200mm (8") - CE

FOR EX BITUMINOUS CONC. SURFACES:
PR BITUMINOUS SURFACE REMOVAL-BUTT JOINT
PR AGGREGATE BASE COURSE, TYPE B, 150mm (6") - PE
PR BITUMINOUS CONCRETE 90mm (3½") - PE
PR BITUMINOUS CONCRETE 200mm (8") - CE

FOR EX P.C. CONCRETE SURFACES:
PR PAVT REMOVAL
PR PCC DRIVEWAY PAVEMENT 150mm (6") - PE
PR PCC DRIVEWAY PAVEMENT 200mm (8") - CE

FOR EX EARTH, AGGREGATE, OR BITUMINOUS CONC SURFACES:
PR BIT SURFACE REMOVAL-BUTT JOINT (IF APPLICABLE)
PR AGGREGATE BASE COURSE TYPE B 150mm (6") - FE
PR AGGREGATE BASE COURSE TYPE B, 150mm (6") &
PR BITUMINOUS CONCRETE 90mm (3½") - PE
PR BITUMINOUS CONCRETE 200mm (8") - CE

FOR P.C. CONCRETE SURFACES:
PR PAVT REMOVAL
PR PCC DRIVEWAY PAVT 150mm (6") - PE
PR PCC DRIVEWAY PAVT 200mm (8") - CE



SECTION E - E ENTRANCE TYPICAL SECTION

NOTE 1: WIDTH OF ENTRANCE MAY BE INCREASED AT THE PIPE CULVERT DUE TO THE DITCHLINE BEING LOCATED IN THE ENTRANCE FLARE AREA.

GENERAL NOTES:

THE RESIDENT ENGINEER WILL DETERMINE THE EXACT TYPE OF IMPROVEMENT TO BE COMPLETED FOR ALL ENTRANCES, SIDEROADS AND MAILBOX TURNOUTS ON THIS PROJECT.

THE PLAN DETAILS AND SCHEDULES SHOULD BE USED AS A GUIDE FOR THE ENGINEER TO IMPLEMENT THE FINAL DESIGN. THE ENGINEER MAY DECIDE TO SALVAGE PORTIONS OF THE EXISTING ENTRANCE PAVEMENT STRUCTURE; THEREFORE, REDUCING PAY ITEM QUANTITIES. NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR THIS REDUCTION IN QUANTITIES.

ANY WORK THE ENGINEER REQUIRES WHICH IS NOT COVERED BY A PAY ITEM CONTAINED IN THE PLANS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

BITUMINOUS CONCRETE REQUIRED TO CONSTRUCT THE ENTRANCES SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 406 AND 408 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

WHEN THE BITUMINOUS CONCRETE PROPOSED FOR THE IMPROVEMENT IS THICKER THAN 75 mm (3 INCHES) AND REQUIRE PLACEMENT IN MORE THAN ONE LIFT. THE BOTTOM LIFT(S) SHALL MEET THE REQUIREMENTS OF BITUMINOUS BASE COURSE IN SECTION 406 OF THE STANDARD SPECIFICATIONS AND THE TOP LIFT OF 50 mm (2 INCHES) SHALL MEET THE REQUIREMENTS OF BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE.

THIS WORK WILL BE PAID FOR IN ACCORDANCE WITH SECTIONS 351, 358, 408, 423 AND 440 OF THE STANDARD SPECIFICATIONS.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
JCN	2/19/03
JCN	4/01/04

DISTRICT SIX
DETAILS FOR RURAL / URBAN ENTRANCE & MAILBOX TURNOUT W / O CONCRETE GUTTER (3R - PROJECTS)

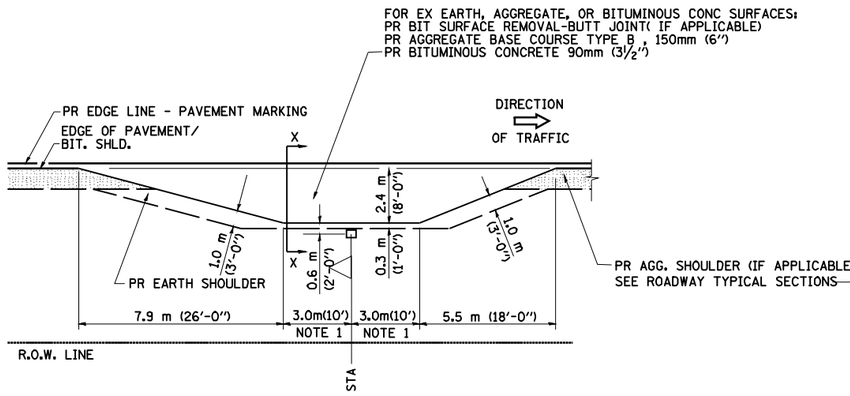
CADD
: FEBRUARY 23, 1999 JCN

ENT 3R

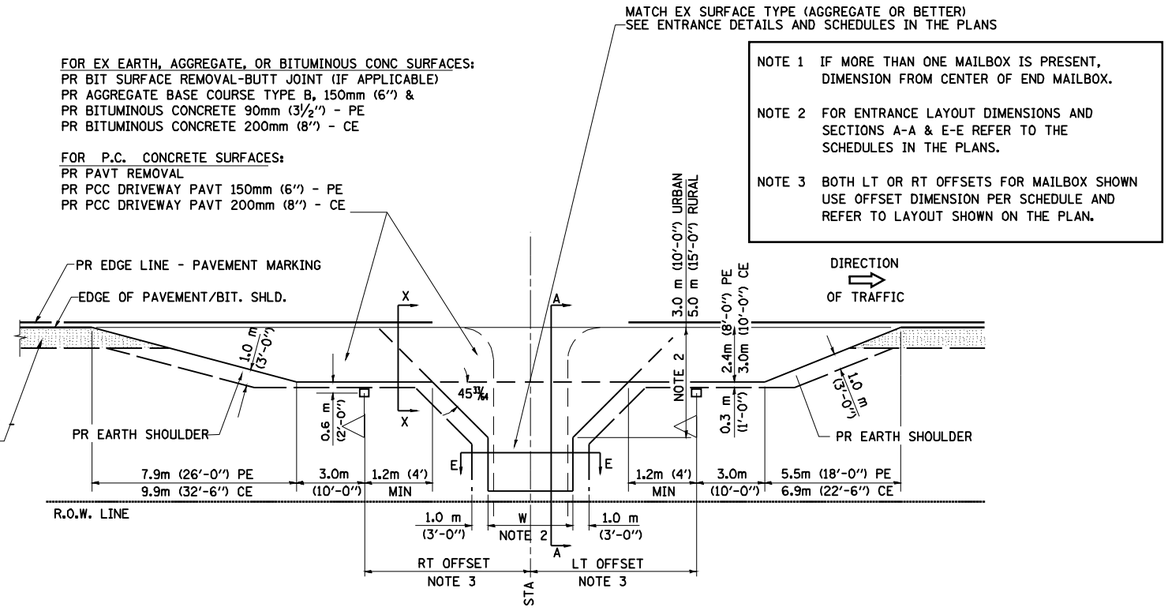
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	117
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

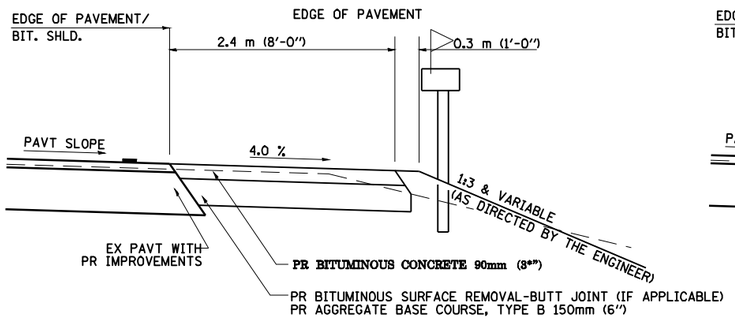
DETAILS OF MAILBOX TURNOUTS



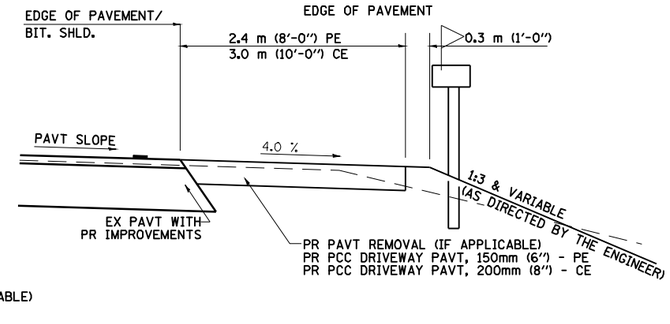
PLAN - MAILBOX TURNOUTS



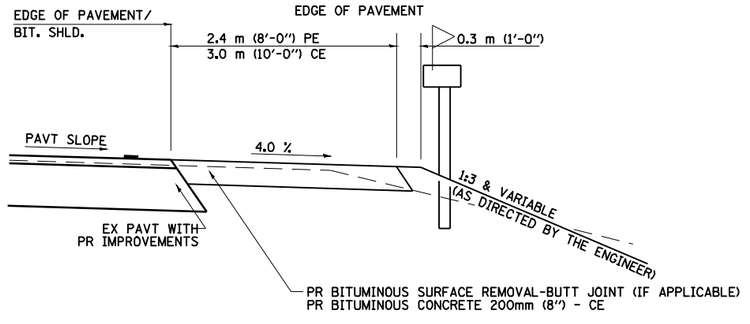
PLAN - COMBINED MAILBOX TURNOUT WITH TRAILING OR LEADING ENTRANCE



SECTION X-X THRU MAILBOX TURNOUT
ALSO APPLIES TO MAILBOX TURNOUTS COMBINED WITH EX EARTH, AGGREGATE, OR BITUMINOUS PE & FE



SECTION X-X THRU MAILBOX TURNOUT
COMBINED WITH EX CONC PE OR CE



SECTION X-X THRU MAILBOX TURNOUT
COMBINED WITH EX EARTH, AGGREGATE, OR BITUMINOUS CE

REVISIONS	
NAME	DATE
JCN	2/19/03
JCN	4/01/04

DISTRICT SIX
DETAILS FOR RURAL / URBAN
ENTRANCE & MAILBOX TURNOUT
W / O CONCRETE GUTTER
(3R - PROJECTS)

CADD
JCN

: FEBRUARY 23, 1999

ENT 3R

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	118
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

ENTRANCE IMPROVEMENT SCHEDULE FOR RURAL / URBAN "3R" PROJECTS

LOCATION	TYPE OF ENTRANCE	EX MATERIAL TYPE	WIDTH	RT OFFSET	LT OFFSET	LENGTH (FROM EDGE OF PVT/ BIT SHLD TO LIMITS OF IMPROVEMENT)	PR BIT. CONC. THICKNESS	BIT. SURF. REM. - BUTT JOINT	PAVEMENT REMOVAL	PREP OF BASE	AGG. BASE REPAIR	AGGREGATE BASE COURSE TY - B	BIT (P.C.)	AGG (P.C.	INCIDENTAL BIT. SURF.	P.C.C. DRIVEWAY PAVEMENT 6"	P.C.C. DRIVEWAY PAVEMENT 8"
(LT / RT) (STA) (+)	(FE / PE / CE / MB) (RURAL / URBAN)	(EARTH / AGG. / BIT. / P.C.C.)	FOOT	FOOT	FOOT	FOOT	INCH	SQ. YD.	SQ. YD.	SQ. YD.	TON	SQ. YD.	TON	TON	TON	SQ. YD.	SQ. YD.
LT STA. 427+36.50	FE	AGG.	12			44						72					
RT STA. 427+65.90	PE	AGG.	12			109.5						160			4.7		
RT STA. 428+77.00	PE	AGG.	16			74						145			5.2		
RT STA. 450+37.50	FE	AGG.	18			44						102					
RT STA. 451+77.40	PE	P.C.C.	18			53			112						3.2	139.00	
TOTAL =									112			479			13.1	139.00	

REVISIONS	
NAME	DATE
JCN	2/19/03

DISTRICT SIX
SCHEDULES FOR RURAL / URBAN
ENTRANCE & MAILBOX TURNOUT
W / O CONCRETE GUTTER
(3R - PROJECTS)

: FEBRUARY 23, 1999

CADD
JCN

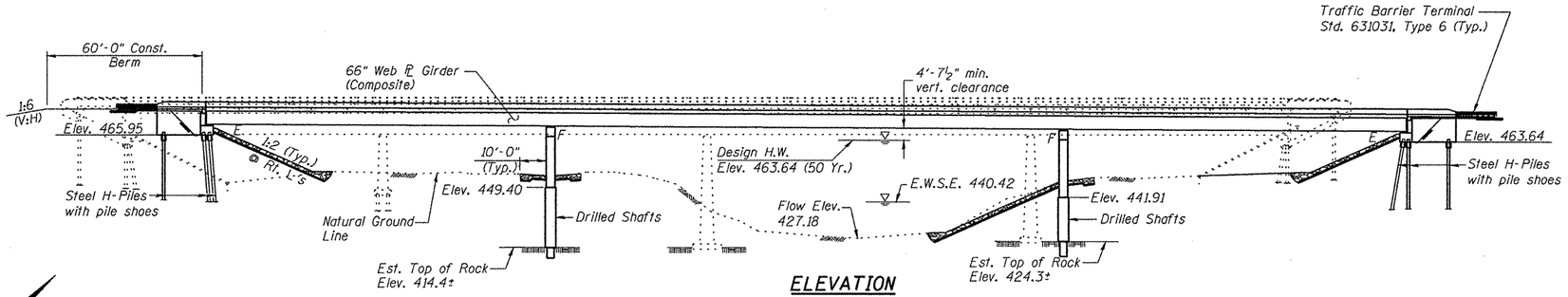
ENT 3R

Bench Mark UES26B: Chiseled "□" in S.E. hubguard of existing structure Sta. 433+55.881, 16.945' Rt, NAVD 88 = 477.098.

Existing Structure:
S.N. 005-0001 built in 1958 under SBI Route 31, Section 10B-1. Existing structure is a four span continuous 96" deep steel two-girder superstructure with floor beams and an 8" reinforced concrete deck with 1.5" bituminous overlay. The substructure consists of vaulted abutments and solid wall piers. 451'-0" bk. to bk. abutments, 35'-8" out to out and a skew of 27°-33'. The traffic shall be maintained on the existing structure during construction. The existing structure shall be removed after completion of the new structure.

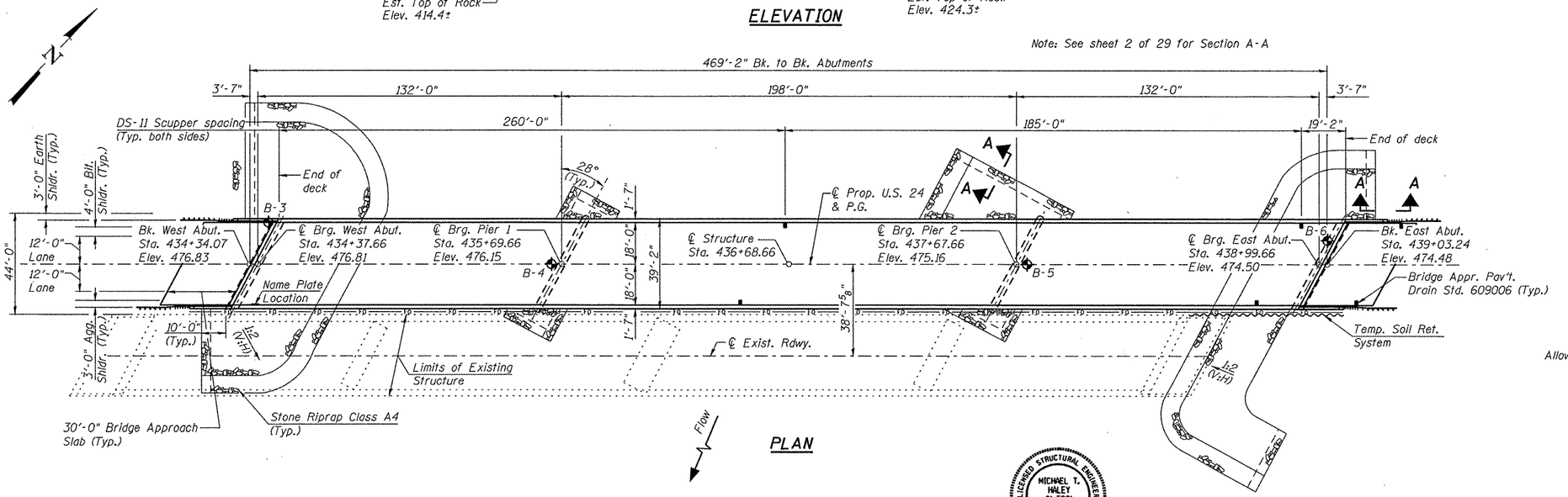
No Salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

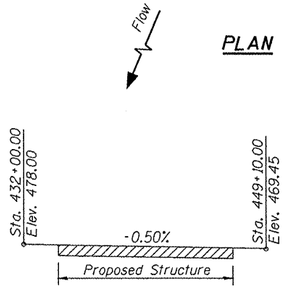


ELEVATION

Note: See sheet 2 of 29 for Section A-A



PLAN



PROFILE GRADE
(Along Proposed ℄ US 24)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	465.9	410.0	417.0	463.6

WATERWAY INFORMATION

Drainage Area = 1.293 mi² Exist. Low Grade Elev. 473.70 @ Sta. 439+65
Prop. Low Grade Elev. 474.00 @ Sta. 440+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	25,800	5,708	5,352	460.27	0.15	0.20	460.42	460.47
Design	50	38,500	6,587	6,624	463.64	0.33	0.42	463.97	464.06
Base	100	44,100	6,834	7,154	465.01	0.44	0.50	465.45	465.51
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	57,400	6,845	8,022	467.55	1.13	0.86	468.68	468.41

10 Year Velocity through Exist. Bridge = 5.08 fps 10 Year Velocity through Prop. Bridge = 5.09 fps

MICHAEL T. HALEY 81-5991 CHATHAM LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS

Michael T. Haley 4/28/10
Michael T. Haley — Date
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2010

APPROVED
For Structural Adequacy Only
Ralph E Anderson (TDD)
Engineer of Bridges & Structures

CURVE DATA

Prop. Curve 2
P.I. = Sta. 430+49.42
Δ = 3° 30' 01" Rt.
D = 0° 36' 03"
R = 9,535.00'
T = 291.34'
L = 582.50'
E = 4.45'
e = 2%
T.R. = 53.28'
S.E. Run = 53.28'
P.C. = Sta. 427+58.08
P.T. = Sta. 433+40.58
S.E. Removed Sta. 433+22.82 to Sta. 434+29.38

INDEX OF SHEETS

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

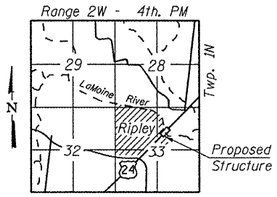
2002 AASHTO

DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (M270 Grade 50)
f_y = 36,000 psi (M270 Grade 36)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.043g
Site Coefficient (S) = 1.0



LOCATION SKETCH

GENERAL PLAN
US ROUTE 24 OVER LAMOINE RIVER
F.A.P. RTE. 317-SEC. (10B-1)R
BROWN/SCHUYLER COUNTY
STATION 436+68.66
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

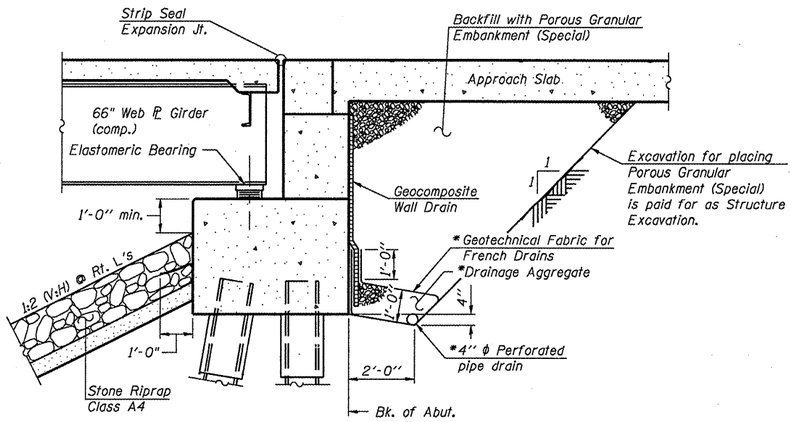
SHEET NO. 1
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	119
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$ in. ϕ, holes $\frac{15}{16}$ in. ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel = 687120 lbs (AASHTO M270, Grade 50)
   42890 lbs (AASHTO M270, Grade 36)
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
7. Concrete Sealer shall be applied to the exposed surfaces of the backwalls, bridge seats, and front face of pile caps of the abutments.
8. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
9. The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4. See Special Provision for "Cleaning and Painting New Metal Structures".
10. Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
11. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
12. The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
13. Slipforming of the parapets is not allowed.



SECTION THRU PILE SUPPORTED STUB ABUTMENT

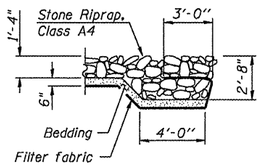
(Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures.

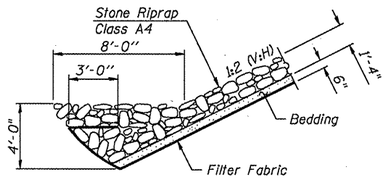
Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.	-	194	194
Stone Riprap, Class A4	Sq. Yd.	-	1972	1972
Filter Fabric	Sq. Yd.	-	1972	1972
Protective Coat	Sq. Yd.	2538	-	2538
Removal of Existing Structures	Each	1	-	1
Structure Excavation	Cu. Yd.	-	655	655
Concrete Structures	Cu. Yd.	-	301.8	301.8
Concrete Superstructure	Cu. Yd.	699.8	-	699.8
Bridge Deck Grooving	Sq. Yd.	1992	-	1992
Concrete Encasement	Cu. Yd.	-	12.6	12.6
Furnishing and Erecting Structural Steel	Lump Sum	1	-	1
Stud Shear Connectors	Each	3600	-	3600
Reinforcement Bars	Pound	-	20760	20760
Reinforcement Bars, Epoxy Coated	Pound	154840	45990	200830
Bar Splicers	Each	-	386	386
Furnishing Steel Piles HP12x53	Foot	-	1445	1445
Driving Piles	Foot	-	1445	1445
Test Pile Steel HP12x53	Each	-	2	2
Pile Shoes	Each	-	36	36
Name Plates	Each	1	-	1
Drilled Shaft in Soil	Cu. Yd.	-	73.5	73.5
Drilled Shaft in Rock	Cu. Yd.	-	34.7	34.7
Preformed Joint Strip Seal	Foot	86	-	86
Elastomeric Bearing Assembly, Type II	Each	-	12	12
Anchor Bolts, 1"	Each	-	24	24
Anchor Bolts, 1¼"	Each	-	24	24
Concrete Sealer	Sq. Ft.	-	784	784
Geocomposite Wall Drain	Sq. Yd.	-	83	83
Pipe Underdrains for Structures 4"	Foot	-	128	128
Drainage Scuppers, DS-11	Each	4	-	4
Temporary Soil Retention System	Sq. Ft.	-	1129	1129
Geotextile Retaining Wall	Sq. Ft.	-	300	300



SECTION A-A



STONE RIPRAP ANCHOR DETAIL

See Sheet 1 of 29 for location of of Section A-A and Anchor Detail.

STATION 436+68.66
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 317 SEC. (10B-1)R
LOADING HS20
STR. NO. 005-0500

NAME PLATE

See Std. 515001

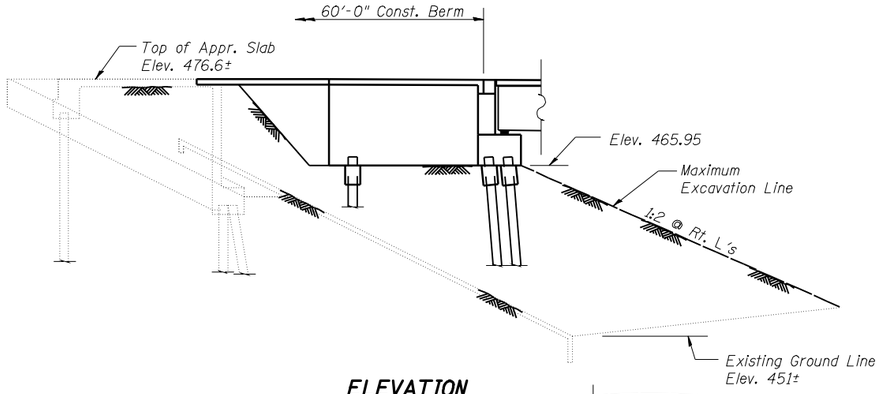
GENERAL NOTES AND DETAILS
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois
Designed By: AGB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

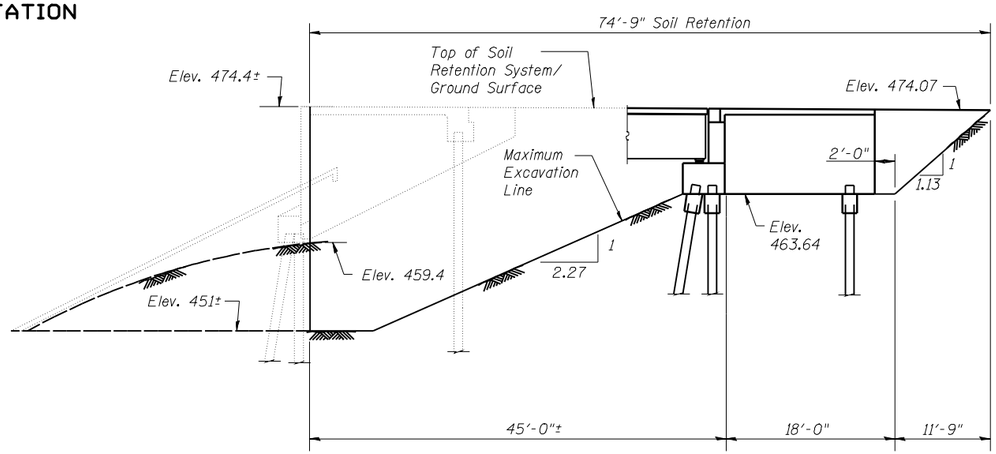
SHEET NO. 2
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	120
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

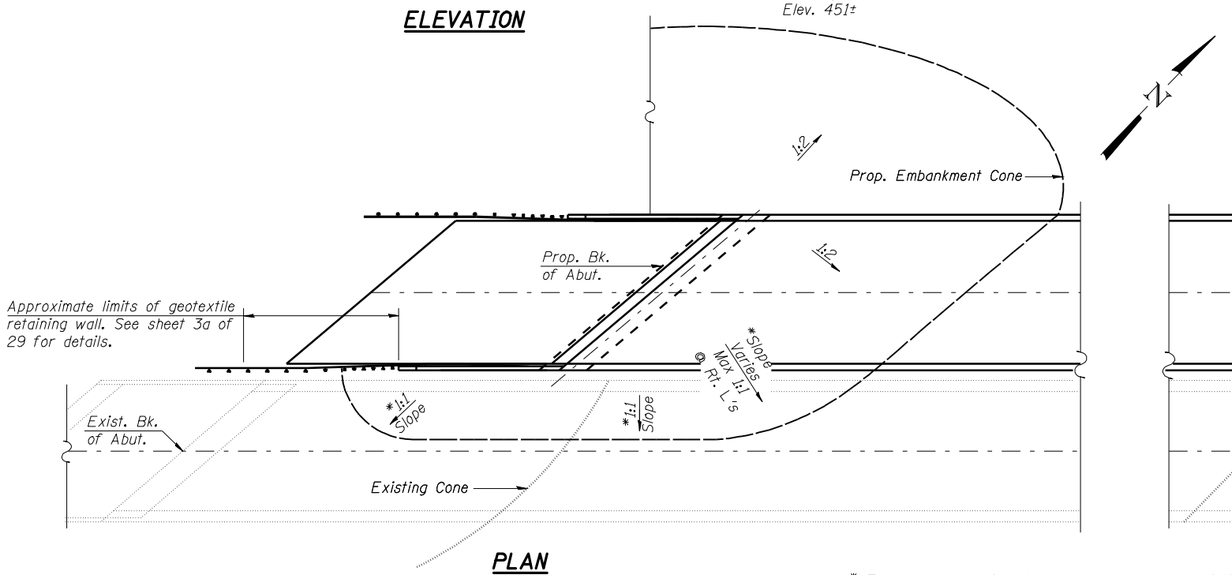


ELEVATION



Dimensions measured along ℄ proposed roadway.

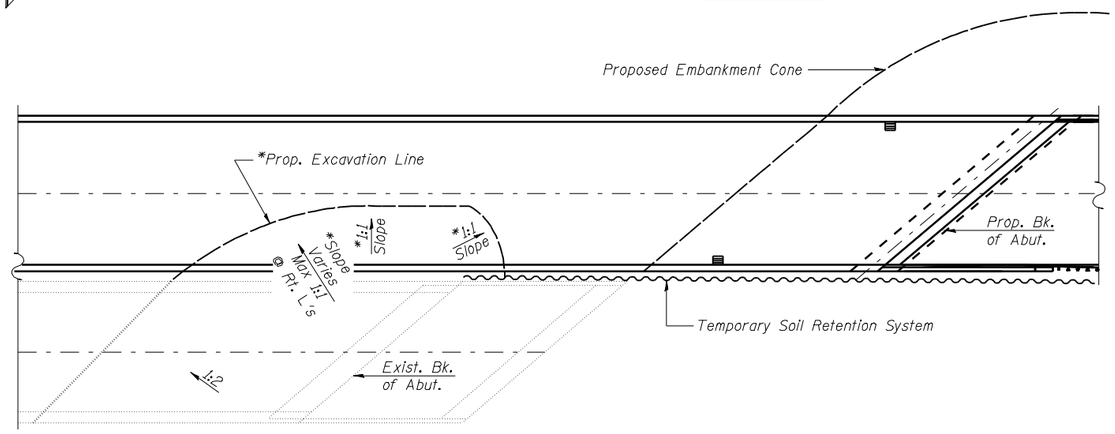
ELEVATION



PLAN

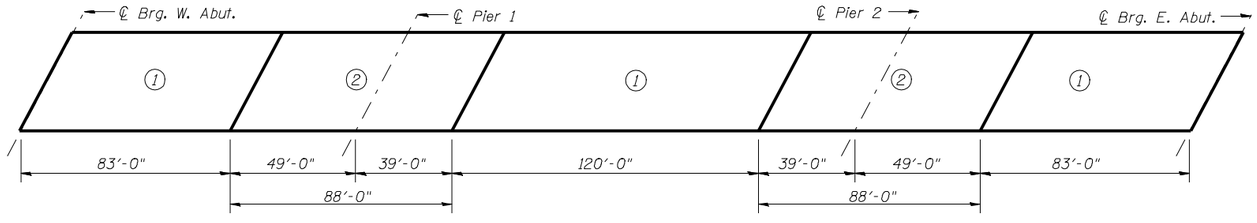
MINIMUM EMBANKMENT AT WEST ABUTMENT

* Embankment required between proposed and existing structures prior to removal of existing structure.



PLAN

TEMPORARY SOIL RETENTION SYSTEM FOR EXCAVATION AT EAST ABUTMENT



DECK POURING SEQUENCE

(1) - First Deck Pour
(2) - Second Deck Pour

Notes:
1. When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
   1) At least 72 hours shall have elapsed from the end of the previous pour.
   2) The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.
2. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

CONSTRUCTION DETAILS-1
STRUCTURE NO. 005-0500

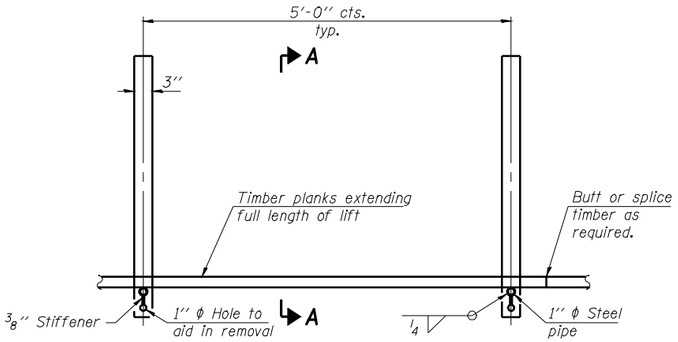
LIN ENGINEERING,LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Dates: 06/2009 | Files: 005-0500.DGN

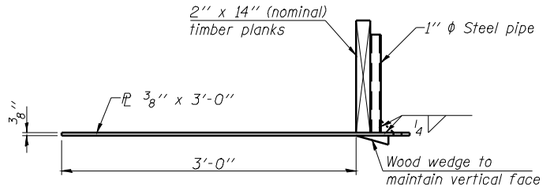
SHEET NO. 3
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	121
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



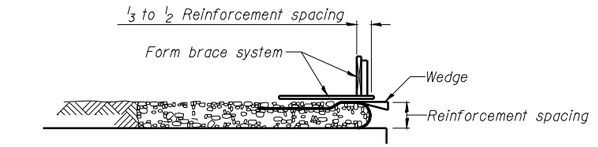
PLAN



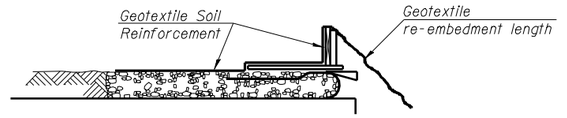
SECTION A-A

TEMPORARY GEOTEXTILE FORM BRACE DETAIL

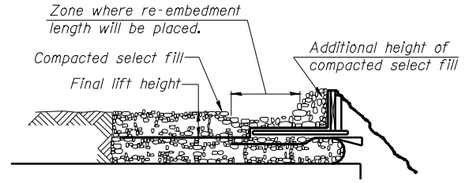
Note:
This is a suggested detail, the Contractor is responsible for the design of the form brace system to be used.



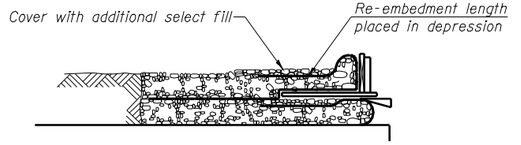
1. *Place form brace system on completed reinforcement level; back from the finished fabric face a distance of 1/3 to 1/2 the geotextile reinforcement spacing.*



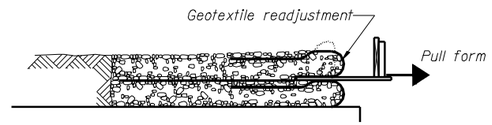
2. *Position fabric so that the required geotextile re-embedment length extends over the top of the form brace and the design reinforcement width is placed with no slack against the previous level.*



3. *Compact select fill material in lifts to final lift height, create (±3'') depression in zone where re-embedment length will be located and place additional height of compacted select fill against form brace.*



4. *Fold geotextile re-embedment length back over form brace into zone where depression was made in select fill and place additional select fill (±3'') to embed geotextile and bring to final lift height.*



5. *Pull form brace outward allowing geotextile face to slightly readjust to form tight round face level with plan reinforcement spacing.*

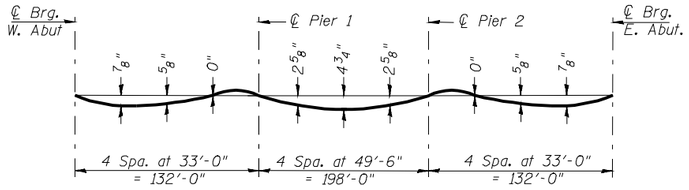
TEMPORARY GEOTEXTILE WALL CONSTRUCTION SEQUENCE

Note:
The geotextile soil reinforcement shall have a minimum allowable tensile strength (T min.) of 37 lb./in. as determined by the procedure described in the Special Provision. The computations supporting the determination of (T min.) shall be submitted to the engineer for approval.

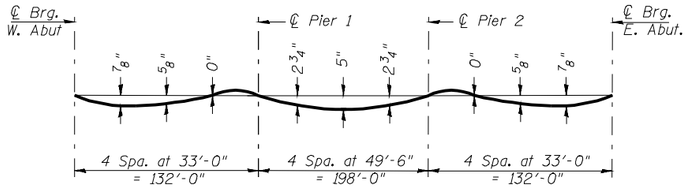
CONSTRUCTION DETAILS-2
STRUCTURE NO. 005-0500

LIN ENGINEERING,LTD. Consulting Engineers Chatham, Illinois	SHEET NO. 3A	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
Designed By: ADB · Checked By: MTH · Drawn By: AJF	29 SHEETS	317	(10B-1)R	BROWN/SCHUYLER	196 / 122
Date: 06/2009 · Files: 005-0500.DGN				CONTRACT NO. 72432	
			ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INTERIOR GIRDER

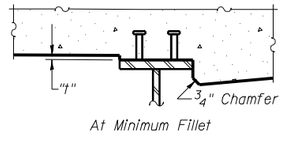


EXTERIOR GIRDER

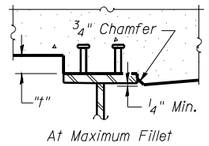
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 5 and 6 of 29.



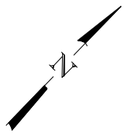
At Minimum Fillet

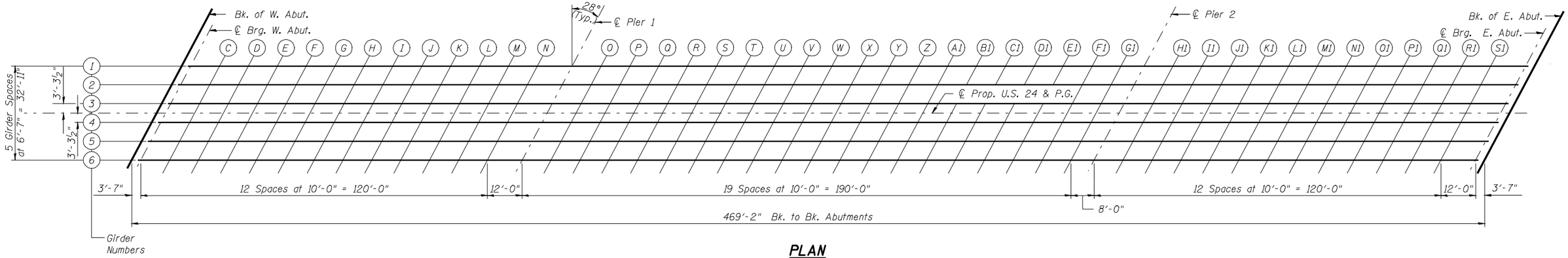


At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 5 and 6 of 29, minus slab thickness, equals the fillet heights "t" above top flange of girders.

FILLET HEIGHTS





PLAN

DECK ELEVATIONS-1
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD. Consulting Engineers, Chatham, Illinois	SHEET NO. 4	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Designed By: ADB · Checked By: MTH · Drawn By: AJF	29 SHEETS	317	(10B-1)R	BROWN/SCHUYLER	196	123
Dates: 06/2009 · Files: 005-0500.DGN				CONTRACT NO. 72432		
			ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER 1

Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	434+42.83	-16.46	476.51	476.51
℄ Brg. W. Abut.	434+46.41	-16.46	476.49	476.49
C	434+56.41	-16.46	476.44	476.46
D	434+66.41	-16.46	476.39	476.44
E	434+76.41	-16.46	476.34	476.41
F	434+86.41	-16.46	476.29	476.37
G	434+96.41	-16.46	476.24	476.31
H	435+06.41	-16.46	476.19	476.25
I	435+16.41	-16.46	476.14	476.19
J	435+26.41	-16.46	476.09	476.11
K	435+36.41	-16.46	476.04	476.05
L	435+46.41	-16.46	475.99	475.98
M	435+56.41	-16.46	475.94	475.92
N	435+66.41	-16.46	475.89	475.87
℄ Pier 1	435+78.41	-16.46	475.83	475.83
O	435+88.41	-16.46	475.78	475.81
P	435+98.41	-16.46	475.73	475.80
Q	436+08.41	-16.46	475.68	475.80
R	436+18.41	-16.46	475.63	475.80
S	436+28.41	-16.46	475.58	475.81
T	436+38.41	-16.46	475.53	475.82
U	436+48.41	-16.46	475.48	475.82
V	436+58.41	-16.46	475.43	475.81
W	436+68.41	-16.46	475.38	475.78
X	436+78.41	-16.46	475.33	475.74
Y	436+88.41	-16.46	475.28	475.68
Z	436+98.41	-16.46	475.23	475.60
A1	437+08.41	-16.46	475.18	475.51
B1	437+18.41	-16.46	475.13	475.41
C1	437+28.41	-16.46	475.08	475.30
D1	437+38.41	-16.46	475.03	475.19
E1	437+48.41	-16.46	474.98	475.09
F1	437+58.41	-16.46	474.93	474.99
G1	437+68.41	-16.46	474.88	474.90
℄ Pier 2	437+76.41	-16.46	474.84	474.84
H1	437+86.41	-16.46	474.79	474.77
I1	437+96.41	-16.46	474.74	474.72
J1	438+06.41	-16.46	474.69	474.68
K1	438+16.41	-16.46	474.64	474.64
L1	438+26.41	-16.46	474.59	474.61
M1	438+36.41	-16.46	474.54	474.58
N1	438+46.41	-16.46	474.49	474.55
O1	438+56.41	-16.46	474.44	474.51
P1	438+66.41	-16.46	474.39	474.47
Q1	438+76.41	-16.46	474.34	474.41
R1	438+86.41	-16.46	474.29	474.35
S1	438+96.41	-16.46	474.24	474.27
℄ Brg. E. Abut.	439+08.41	-16.46	474.18	474.18
Bk. of E. Abut.	439+11.99	-16.46	474.16	474.16

GIRDER 2

Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	434+39.32	-9.88	476.65	476.65
℄ Brg. W. Abut.	434+42.91	-9.88	476.63	476.63
C	434+52.91	-9.88	476.58	476.61
D	434+62.91	-9.88	476.53	476.58
E	434+72.91	-9.88	476.48	476.55
F	434+82.91	-9.88	476.43	476.51
G	434+92.91	-9.88	476.38	476.45
H	435+02.91	-9.88	476.33	476.39
I	435+12.91	-9.88	476.28	476.33
J	435+22.91	-9.88	476.23	476.26
K	435+32.91	-9.88	476.18	476.19
L	435+42.91	-9.88	476.13	476.12
M	435+52.91	-9.88	476.08	476.07
N	435+62.91	-9.88	476.03	476.02
℄ Pier 1	435+74.91	-9.88	475.97	475.97
O	435+84.91	-9.88	475.92	475.95
P	435+94.91	-9.88	475.87	475.94
Q	436+04.91	-9.88	475.82	475.94
R	436+14.91	-9.88	475.77	475.94
S	436+24.91	-9.88	475.72	475.95
T	436+34.91	-9.88	475.67	475.95
U	436+44.91	-9.88	475.62	475.95
V	436+54.91	-9.88	475.57	475.94
W	436+64.91	-9.88	475.52	475.91
X	436+74.91	-9.88	475.47	475.87
Y	436+84.91	-9.88	475.42	475.81
Z	436+94.91	-9.88	475.37	475.73
A1	437+04.91	-9.88	475.32	475.64
B1	437+14.91	-9.88	475.27	475.54
C1	437+24.91	-9.88	475.22	475.43
D1	437+34.91	-9.88	475.17	475.33
E1	437+44.91	-9.88	475.12	475.23
F1	437+54.91	-9.88	475.07	475.13
G1	437+64.91	-9.88	475.02	475.04
℄ Pier 2	437+72.91	-9.88	474.98	474.98
H1	437+82.91	-9.88	474.93	474.92
I1	437+92.91	-9.88	474.88	474.86
J1	438+02.91	-9.88	474.83	474.82
K1	438+12.91	-9.88	474.78	474.79
L1	438+22.91	-9.88	474.73	474.75
M1	438+32.91	-9.88	474.68	474.72
N1	438+42.91	-9.88	474.63	474.69
O1	438+52.91	-9.88	474.58	474.65
P1	438+62.91	-9.88	474.53	474.61
Q1	438+72.91	-9.88	474.48	474.55
R1	438+82.91	-9.88	474.43	474.49
S1	438+92.91	-9.88	474.38	474.41
℄ Brg. E. Abut.	439+04.91	-9.88	474.32	474.32
Bk. of E. Abut.	439+08.49	-9.88	474.30	474.30

GIRDER 3

Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	434+35.82	-3.29	476.77	476.77
℄ Brg. W. Abut.	434+39.41	-3.29	476.75	476.75
C	434+49.41	-3.29	476.70	476.73
D	434+59.41	-3.29	476.65	476.70
E	434+69.41	-3.29	476.60	476.67
F	434+79.41	-3.29	476.55	476.63
G	434+89.41	-3.29	476.50	476.57
H	434+99.41	-3.29	476.45	476.51
I	435+09.41	-3.29	476.40	476.45
J	435+19.41	-3.29	476.35	476.38
K	435+29.41	-3.29	476.30	476.31
L	435+39.41	-3.29	476.25	476.24
M	435+49.41	-3.29	476.20	476.19
N	435+59.41	-3.29	476.15	476.14
℄ Pier 1	435+71.41	-3.29	476.09	476.09
O	435+81.41	-3.29	476.04	476.07
P	435+91.41	-3.29	475.99	476.06
Q	436+01.41	-3.29	475.94	476.06
R	436+11.41	-3.29	475.89	476.06
S	436+21.41	-3.29	475.84	476.07
T	436+31.41	-3.29	475.79	476.07
U	436+41.41	-3.29	475.74	476.07
V	436+51.41	-3.29	475.69	476.06
W	436+61.41	-3.29	475.64	476.03
X	436+71.41	-3.29	475.59	475.99
Y	436+81.41	-3.29	475.54	475.93
Z	436+91.41	-3.29	475.49	475.85
A1	437+01.41	-3.29	475.44	475.76
B1	437+11.41	-3.29	475.39	475.66
C1	437+21.41	-3.29	475.34	475.55
D1	437+31.41	-3.29	475.29	475.45
E1	437+41.41	-3.29	475.24	475.35
F1	437+51.41	-3.29	475.19	475.25
G1	437+61.41	-3.29	475.14	475.16
℄ Pier 2	437+69.41	-3.29	475.10	475.10
H1	437+79.41	-3.29	475.05	475.04
I1	437+89.41	-3.29	475.00	474.98
J1	437+99.41	-3.29	474.95	474.94
K1	438+09.41	-3.29	474.90	474.91
L1	438+19.41	-3.29	474.85	474.87
M1	438+29.41	-3.29	474.80	474.84
N1	438+39.41	-3.29	474.75	474.81
O1	438+49.41	-3.29	474.70	474.77
P1	438+59.41	-3.29	474.65	474.73
Q1	438+69.41	-3.29	474.60	474.67
R1	438+79.41	-3.29	474.55	474.61
S1	438+89.41	-3.29	474.50	474.53
℄ Brg. E. Abut.	439+01.41	-3.29	474.44	474.44
Bk. of E. Abut.	439+04.99	-3.29	474.42	474.42

℄ PROP. U.S. 24 & P.G.

Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	434+34.07	0.00	476.83	476.83
℄ Brg. W. Abut.	434+37.66	0.00	476.81	476.81
C	434+47.66	0.00	476.76	476.79
D	434+57.66	0.00	476.71	476.76
E	434+67.66	0.00	476.66	476.73
F	434+77.66	0.00	476.61	476.69
G	434+87.66	0.00	476.56	476.64
H	434+97.66	0.00	476.51	476.57
I	435+07.66	0.00	476.46	476.51
J	435+17.66	0.00	476.41	476.44
K	435+27.66	0.00	476.36	476.37
L	435+37.66	0.00	476.31	476.30
M	435+47.66	0.00	476.26	476.25
N	435+57.66	0.00	476.21	476.20
℄ Pier 1	435+69.66	0.00	476.15	476.15
O	435+79.66	0.00	476.10	476.13
P	435+89.66	0.00	476.05	476.12
Q	435+99.66	0.00	476.00	476.12
R	436+09.66	0.00	475.95	476.12
S	436+19.66	0.00	475.90	476.13
T	436+29.66	0.00	475.85	476.13
U	436+39.66	0.00	475.80	476.13
V	436+49.66	0.00	475.75	476.12
W	436+59.66	0.00	475.70	476.09
X	436+69.66	0.00	475.65	476.05
Y	436+79.66	0.00	475.60	475.99
Z	436+89.66	0.00	475.55	475.91
A1	436+99.66	0.00	475.50	475.82
B1	437+09.66	0.00	475.45	475.72
C1	437+19.66	0.00	475.40	475.61
D1	437+29.66	0.00	475.35	475.51
E1	437+39.66	0.00	475.30	475.41
F1	437+49.66	0.00	475.25	475.31
G1	437+59.66	0.00	475.20	475.22
℄ Pier 2	437+67.66	0.00	475.16	475.16
H1	437+77.66	0.00	475.11	475.10
I1	437+87.66	0.00	475.06	475.05
J1	437+97.66	0.00	475.01	475.00
K1	438+07.66	0.00	474.96	474.97
L1	438+17.66	0.00	474.91	474.93
M1	438+27.66	0.00	474.86	474.90
N1	438+37.66	0.00	474.81	474.87
O1	438+47.66	0.00	474.76	474.83
P1	438+57.66	0.00	474.71	474.79
Q1	438+67.66	0.00	474.66	474.73
R1	438+77.66	0.00	474.61	474.67
S1	438+87.66	0.00	474.56	474.59
℄ Brg. E. Abut.	438+99.66	0.00	474.50	474.50
Bk. of E. Abut.	439+03.24	0.00	474.48	474.48

DECK ELEVATIONS-2
STRUCTURE NO. 005-0500

LIN ENGINEERING,LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

SHEET NO. 5
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	124
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER 4

Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	434+32.32	3.29	476.79	476.79
℄ Brg. W. Abut.	434+35.91	3.29	476.77	476.77
C	434+45.91	3.29	476.72	476.74
D	434+55.91	3.29	476.67	476.72
E	434+65.91	3.29	476.62	476.69
F	434+75.91	3.29	476.57	476.64
G	434+85.91	3.29	476.52	476.59
H	434+95.91	3.29	476.47	476.53
I	435+05.91	3.29	476.42	476.46
J	435+15.91	3.29	476.37	476.39
K	435+25.91	3.29	476.32	476.33
L	435+35.91	3.29	476.27	476.26
M	435+45.91	3.29	476.22	476.20
N	435+55.91	3.29	476.17	476.15
℄ Pier 1	435+67.91	3.29	476.11	476.11
O	435+77.91	3.29	476.06	476.09
P	435+87.91	3.29	476.01	476.08
Q	435+97.91	3.29	475.96	476.07
R	436+07.91	3.29	475.91	476.08
S	436+17.91	3.29	475.86	476.08
T	436+27.91	3.29	475.81	476.09
U	436+37.91	3.29	475.76	476.09
V	436+47.91	3.29	475.71	476.08
W	436+57.91	3.29	475.66	476.05
X	436+67.91	3.29	475.61	476.00
Y	436+77.91	3.29	475.56	475.94
Z	436+87.91	3.29	475.51	475.87
A1	436+97.91	3.29	475.46	475.78
B1	437+07.91	3.29	475.41	475.68
C1	437+17.91	3.29	475.36	475.57
D1	437+27.91	3.29	475.31	475.46
E1	437+37.91	3.29	475.26	475.36
F1	437+47.91	3.29	475.21	475.27
G1	437+57.91	3.29	475.16	475.18
℄ Pier 2	437+65.91	3.29	475.12	475.12
H1	437+75.91	3.29	475.07	475.05
I1	437+85.91	3.29	475.02	475.00
J1	437+95.91	3.29	474.97	474.96
K1	438+05.91	3.29	474.92	474.92
L1	438+15.91	3.29	474.87	474.89
M1	438+25.91	3.29	474.82	474.86
N1	438+35.91	3.29	474.77	474.83
O1	438+45.91	3.29	474.72	474.79
P1	438+55.91	3.29	474.67	474.74
Q1	438+65.91	3.29	474.62	474.69
R1	438+75.91	3.29	474.57	474.63
S1	438+85.91	3.29	474.52	474.55
℄ Brg. E. Abut.	438+97.91	3.29	474.46	474.46
Bk. of E. Abut.	439+01.49	3.29	474.44	474.44

GIRDER 5

Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	434+28.82	9.88	476.70	476.70
℄ Brg. W. Abut.	434+32.41	9.88	476.68	476.68
C	434+42.41	9.88	476.63	476.66
D	434+52.41	9.88	476.58	476.64
E	434+62.41	9.88	476.53	476.60
F	434+72.41	9.88	476.48	476.56
G	434+82.41	9.88	476.43	476.51
H	434+92.41	9.88	476.38	476.45
I	435+02.41	9.88	476.33	476.38
J	435+12.41	9.88	476.28	476.31
K	435+22.41	9.88	476.23	476.24
L	435+32.41	9.88	476.18	476.18
M	435+42.41	9.88	476.13	476.12
N	435+52.41	9.88	476.08	476.07
℄ Pier 1	435+64.41	9.88	476.02	476.02
O	435+74.41	9.88	475.97	476.00
P	435+84.41	9.88	475.92	475.99
Q	435+94.41	9.88	475.87	475.99
R	436+04.41	9.88	475.82	475.99
S	436+14.41	9.88	475.77	476.00
T	436+24.41	9.88	475.72	476.01
U	436+34.41	9.88	475.67	476.00
V	436+44.41	9.88	475.62	475.99
W	436+54.41	9.88	475.57	475.96
X	436+64.41	9.88	475.52	475.92
Y	436+74.41	9.88	475.47	475.86
Z	436+84.41	9.88	475.42	475.78
A1	436+94.41	9.88	475.37	475.70
B1	437+04.41	9.88	475.32	475.60
C1	437+14.41	9.88	475.27	475.49
D1	437+24.41	9.88	475.22	475.38
E1	437+34.41	9.88	475.17	475.28
F1	437+44.41	9.88	475.12	475.18
G1	437+54.41	9.88	475.07	475.10
℄ Pier 2	437+62.41	9.88	475.03	475.03
H1	437+72.41	9.88	474.98	474.97
I1	437+82.41	9.88	474.93	474.92
J1	437+92.41	9.88	474.88	474.87
K1	438+02.41	9.88	474.83	474.84
L1	438+12.41	9.88	474.78	474.81
M1	438+22.41	9.88	474.73	474.78
N1	438+32.41	9.88	474.68	474.74
O1	438+42.41	9.88	474.63	474.71
P1	438+52.41	9.88	474.58	474.66
Q1	438+62.41	9.88	474.53	474.60
R1	438+72.41	9.88	474.48	474.54
S1	438+82.41	9.88	474.43	474.47
℄ Brg. E. Abut.	438+94.41	9.88	474.37	474.37
Bk. of E. Abut.	438+97.99	9.88	474.36	474.36

GIRDER 6

Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	434+25.32	16.46	476.59	476.59
℄ Brg. W. Abut.	434+28.91	16.46	476.58	476.58
C	434+38.91	16.46	476.53	476.55
D	434+48.91	16.46	476.48	476.53
E	434+58.91	16.46	476.43	476.50
F	434+68.91	16.46	476.38	476.45
G	434+78.91	16.46	476.33	476.40
H	434+88.91	16.46	476.28	476.34
I	434+98.91	16.46	476.23	476.27
J	435+08.91	16.46	476.18	476.20
K	435+18.91	16.46	476.13	476.13
L	435+28.91	16.46	476.08	476.07
M	435+38.91	16.46	476.03	476.01
N	435+48.91	16.46	475.98	475.96
℄ Pier 1	435+60.91	16.46	475.92	475.92
O	435+70.91	16.46	475.87	475.90
P	435+80.91	16.46	475.82	475.89
Q	435+90.91	16.46	475.77	475.89
R	436+00.91	16.46	475.72	475.89
S	436+10.91	16.46	475.67	475.90
T	436+20.91	16.46	475.62	475.91
U	436+30.91	16.46	475.57	475.91
V	436+40.91	16.46	475.52	475.90
W	436+50.91	16.46	475.47	475.87
X	436+60.91	16.46	475.42	475.83
Y	436+70.91	16.46	475.37	475.77
Z	436+80.91	16.46	475.32	475.69
A1	436+90.91	16.46	475.27	475.60
B1	437+00.91	16.46	475.22	475.50
C1	437+10.91	16.46	475.17	475.39
D1	437+20.91	16.46	475.12	475.28
E1	437+30.91	16.46	475.07	475.18
F1	437+40.91	16.46	475.02	475.08
G1	437+50.91	16.46	474.97	474.99
℄ Pier 2	437+58.91	16.46	474.93	474.93
H1	437+68.91	16.46	474.88	474.86
I1	437+78.91	16.46	474.83	474.81
J1	437+88.91	16.46	474.78	474.77
K1	437+98.91	16.46	474.73	474.73
L1	438+08.91	16.46	474.68	474.70
M1	438+18.91	16.46	474.63	474.67
N1	438+28.91	16.46	474.58	474.64
O1	438+38.91	16.46	474.53	474.60
P1	438+48.91	16.46	474.48	474.55
Q1	438+58.91	16.46	474.43	474.50
R1	438+68.91	16.46	474.38	474.43
S1	438+78.91	16.46	474.33	474.36
℄ Brg. E. Abut.	438+90.91	16.46	474.27	474.27
Bk. of E. Abut.	438+94.49	16.46	474.25	474.25

DECK ELEVATIONS-3
STRUCTURE NO. 005-0500

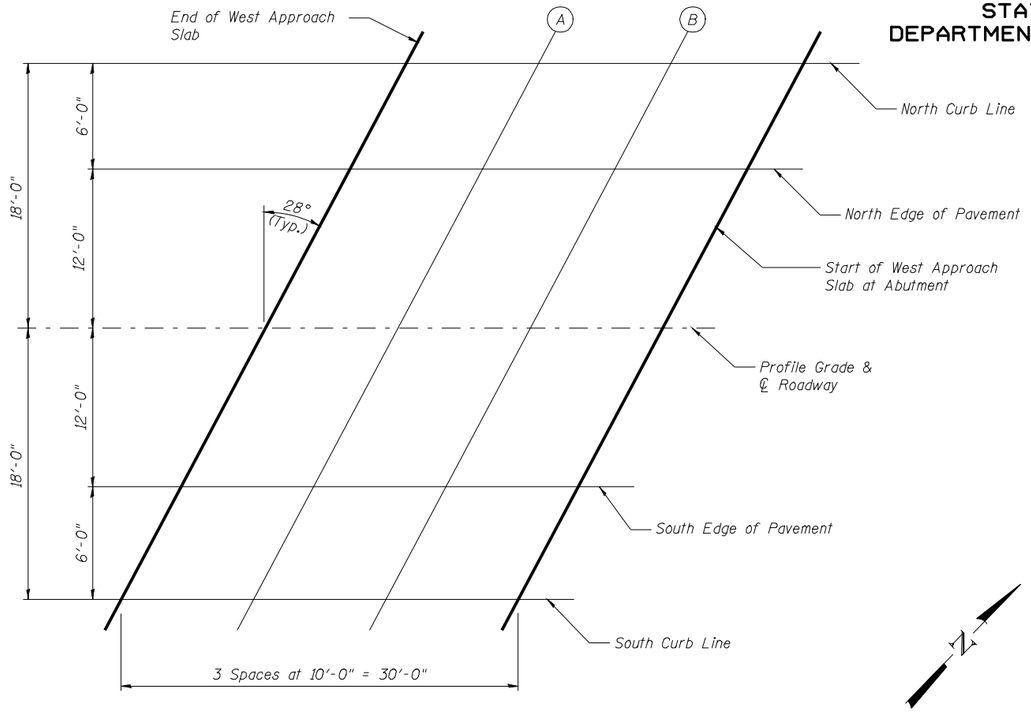
LIN ENGINEERING,LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

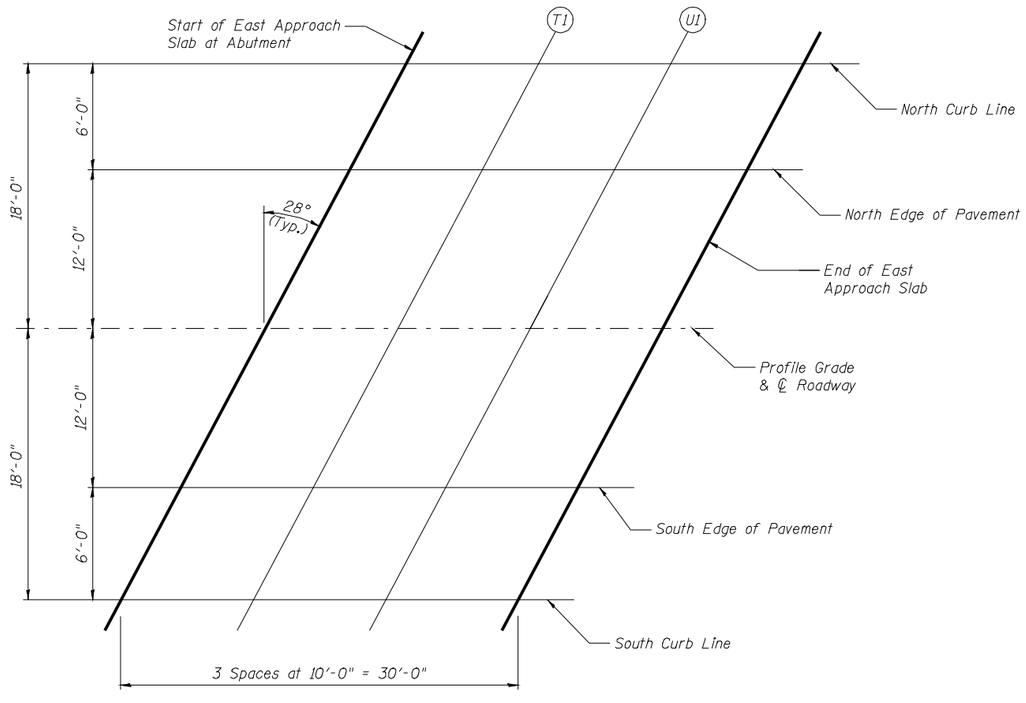
SHEET NO. 6
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	125
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN-WEST APPROACH



PLAN-EAST APPROACH

NORTH CURB LINE

Location	Station	Offset (ft)	Theoretical Grade Elevations
End W. Appr. Slab	434+14.21	-18.00	476.62
A	434+24.21	-18.00	476.57
B	434+34.21	-18.00	476.52
Start W. Appr. Slab	434+44.21	-18.00	476.47
Start E. Appr. Slab	439+12.25	-18.00	474.13
T1	439+22.25	-18.00	474.08
U1	439+32.25	-18.00	474.03
End E. Appr. Slab	439+42.25	-18.00	473.98

NORTH EDGE OF PAVEMENT

Location	Station	Offset (ft)	Theoretical Grade Elevations
End W. Appr. Slab	434+11.02	-12.00	476.76
A	434+21.02	-12.00	476.71
B	434+31.02	-12.00	476.66
Start W. Appr. Slab	434+41.02	-12.00	476.61
Start E. Appr. Slab	439+09.05	-12.00	474.27
T1	439+19.05	-12.00	474.22
U1	439+29.05	-12.00	474.17
End E. Appr. Slab	439+39.05	-12.00	474.12

PROFILE GRADE & ℄ ROADWAY

Location	Station	Offset (ft)	Theoretical Grade Elevations
End W. Appr. Slab	434+04.64	0.00	476.98
A	434+14.64	0.00	476.93
B	434+24.64	0.00	476.88
Start W. Appr. Slab	434+34.64	0.00	476.83
Start E. Appr. Slab	439+02.67	0.00	474.49
T1	439+12.67	0.00	474.44
U1	439+22.67	0.00	474.39
End E. Appr. Slab	439+32.67	0.00	474.34

SOUTH EDGE OF PAVEMENT

Location	Station	Offset (ft)	Theoretical Grade Elevations
End W. Appr. Slab	433+98.26	12.00	476.82
A	434+08.26	12.00	476.77
B	434+18.26	12.00	476.72
Start W. Appr. Slab	434+28.26	12.00	476.67
Start E. Appr. Slab	438+96.29	12.00	474.33
T1	439+06.29	12.00	474.28
U1	439+16.29	12.00	474.23
End E. Appr. Slab	439+26.29	12.00	474.18

SOUTH CURB LINE

Location	Station	Offset (ft)	Theoretical Grade Elevations
End W. Appr. Slab	433+95.07	18.00	476.71
A	434+05.07	18.00	476.66
B	434+15.07	18.00	476.61
Start W. Appr. Slab	434+25.07	18.00	476.56
Start E. Appr. Slab	438+93.10	18.00	474.22
T1	439+03.10	18.00	474.17
U1	439+13.10	18.00	474.12
End E. Appr. Slab	439+23.10	18.00	474.07

APPROACH SLAB ELEVATIONS
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

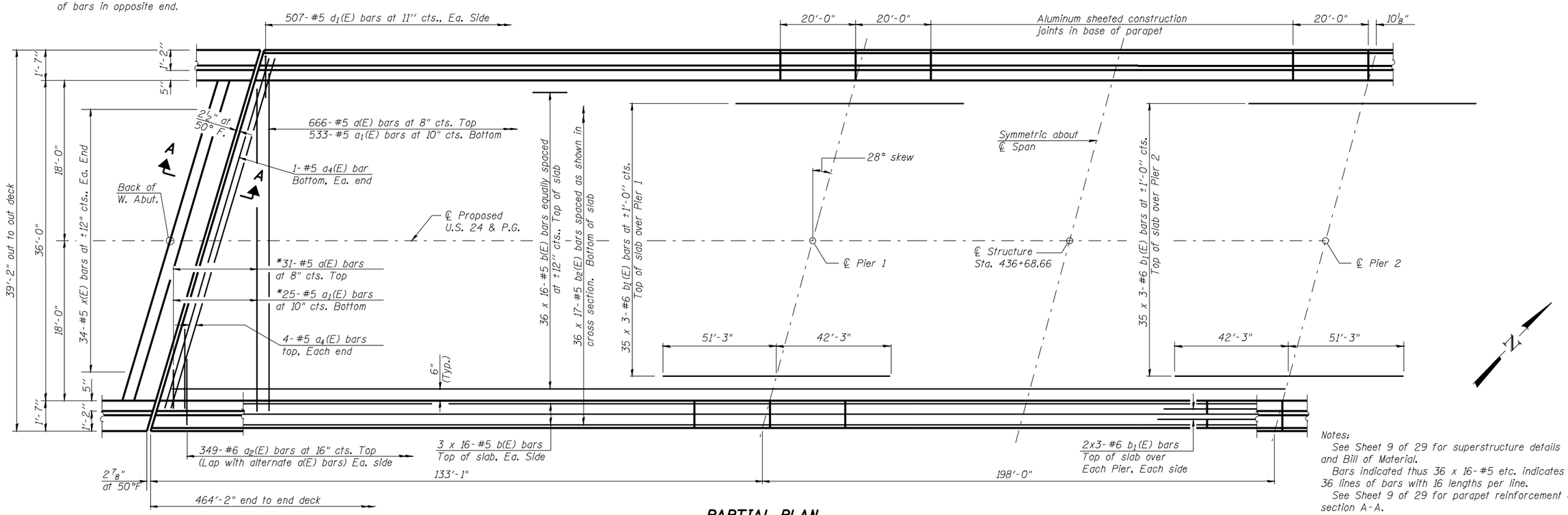
Designed By: ADB | Checked By: MTH | Drawn By: AJF
Dates: 06/2009 | Files: 005-0500.DGN

SHEET NO. 7
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	126
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

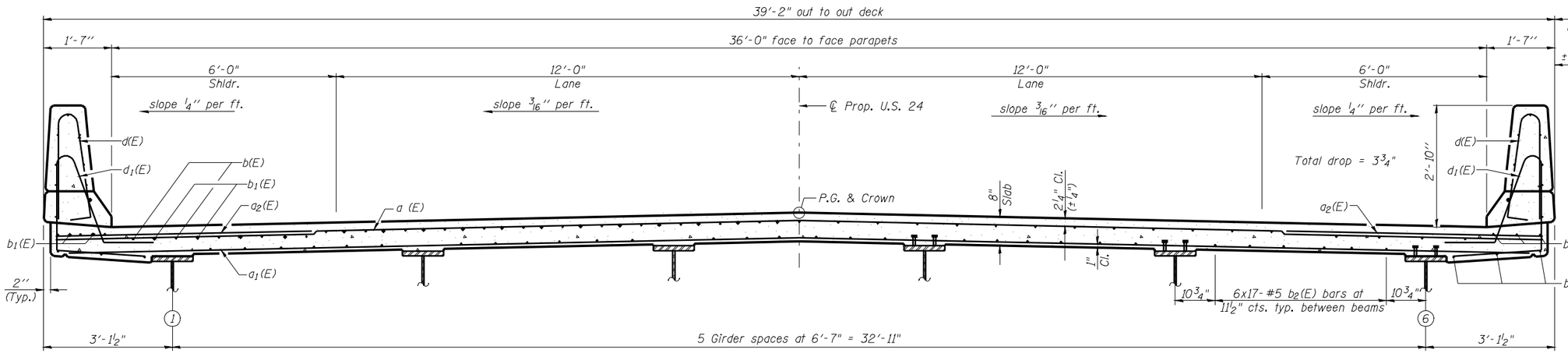
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

*Order d(E) & a_1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



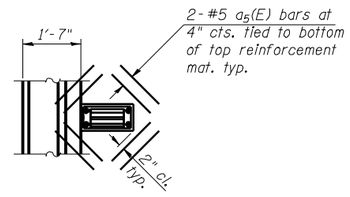
Notes:
See Sheet 9 of 29 for superstructure details and Bill of Material.
Bars indicated thus 36 x 16-#5 etc. indicates 36 lines of bars with 16 lengths per line.
See Sheet 9 of 29 for parapet reinforcement and section A-A.
Cut longitudinal reinforcement to clear drainage scuppers.

PARTIAL PLAN



MIN. BAR LAP

#5 bar = 1'-8"
#6 bar = 2'-0



SCUPPER REINFORCEMENT

See sheet 1 of 29 for location of scuppers.

NEAR PIER **NEAR MIDSPAN**

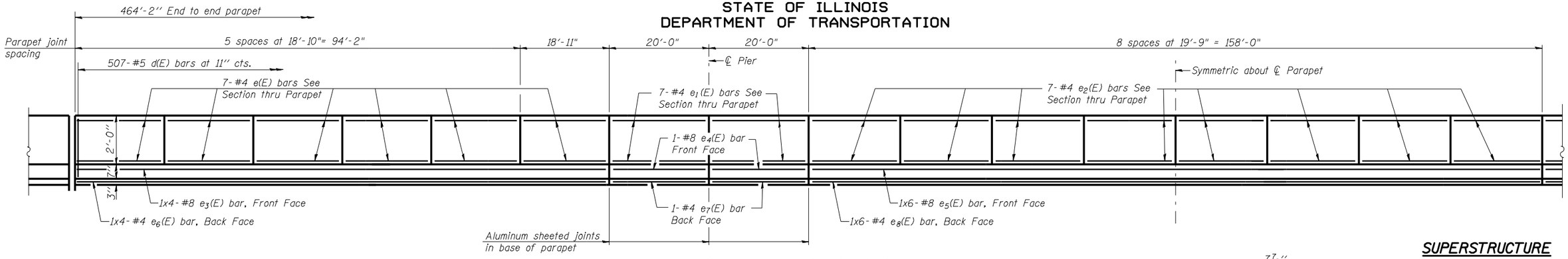
CROSS SECTION

(Looking East)

SUPERSTRUCTURE
STRUCTURE NO. 005-0500

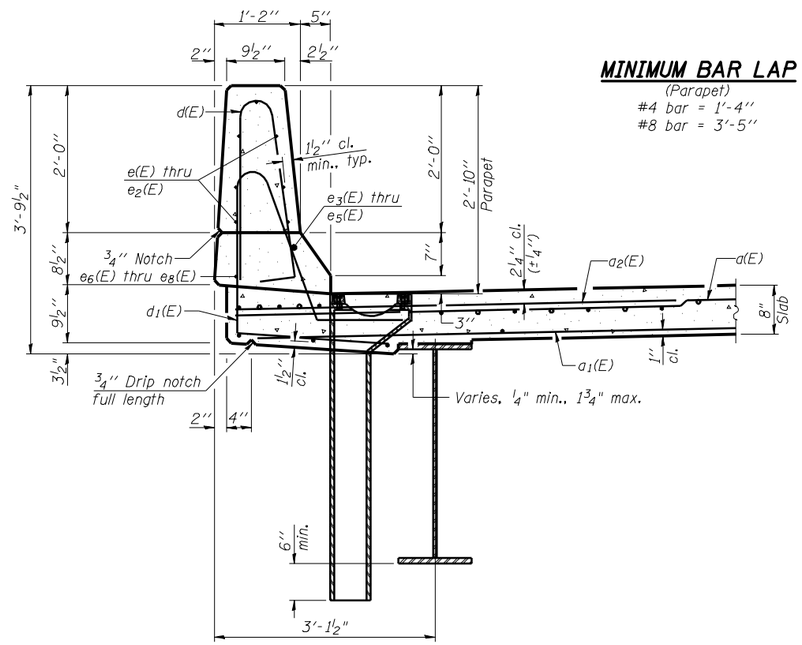
LIN ENGINEERING, LTD. Consulting Engineers Chatham, Illinois	SHEET NO. 8	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Designed By: ADB Checked By: MTH Drawn By: AJF	29 SHEETS	317	(10B-1)R	BROWN/SCHUYLER	196	127
Dates: 06/2009 Files: 005-0500.DGN				CONTRACT NO. 72432		
				ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



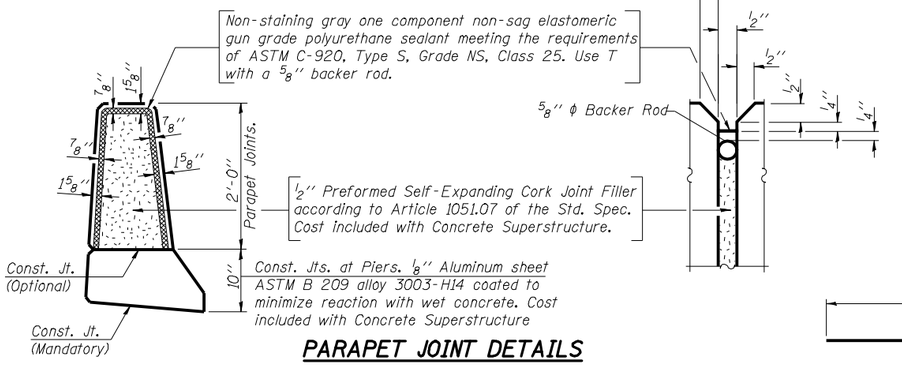
INSIDE ELEVATION OF PARAPET

(Dimensions measured along inside face of parapet)

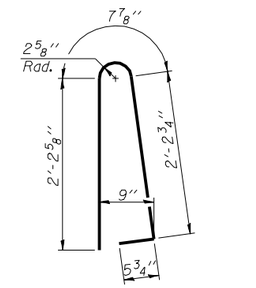


MINIMUM BAR LAP

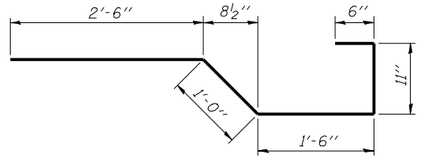
(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"



PARAPET JOINT DETAILS



BAR d(E)

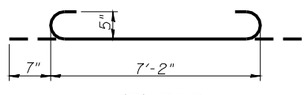


BAR x(E)

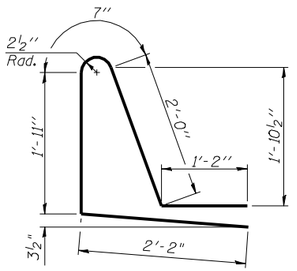
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	697	#5	38'-7"	
d1(E)	558	#5	37'-10"	
d2(E)	698	#6	6'-0"	
d3(E)	30	#5	8'-4"	
d4(E)	10	#5	42'-10"	
d5(E)	32	#5	1'-6"	
b(E)	672	#5	30'-7"	
b1(E)	234	#6	32'-6"	
b2(E)	612	#5	28'-11"	
d(E)	1014	#5	5'-7"	
d1(E)	1014	#5	7'-10"	
e(E)	168	#4	18'-6"	
e1(E)	56	#4	19'-8"	
e2(E)	112	#4	19'-5"	
e3(E)	16	#8	30'-10"	
e4(E)	8	#8	19'-8"	
e5(E)	12	#8	29'-2"	
e6(E)	16	#4	29'-3"	
e7(E)	8	#4	19'-8"	
e8(E)	12	#4	27'-5"	
x(E)	68	#5	6'-5"	
Reinforcement Bars, Epoxy Coated		Pound	130660	
Concrete Superstructure		Cu. Yds.	595.7	

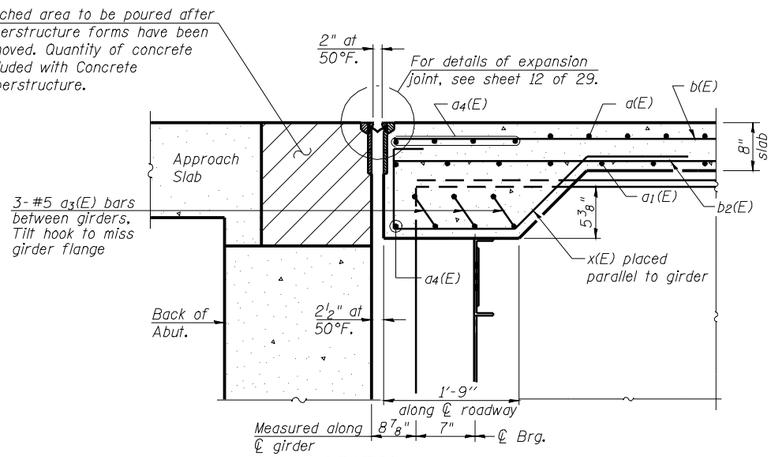
Bars indicated thus 1 x 6 -#8 etc. indicates 1 line of bars with 6 lengths per line.



d3(E) BAR



BAR d1(E)



SECTION A-A

SECTION THRU PARAPET

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

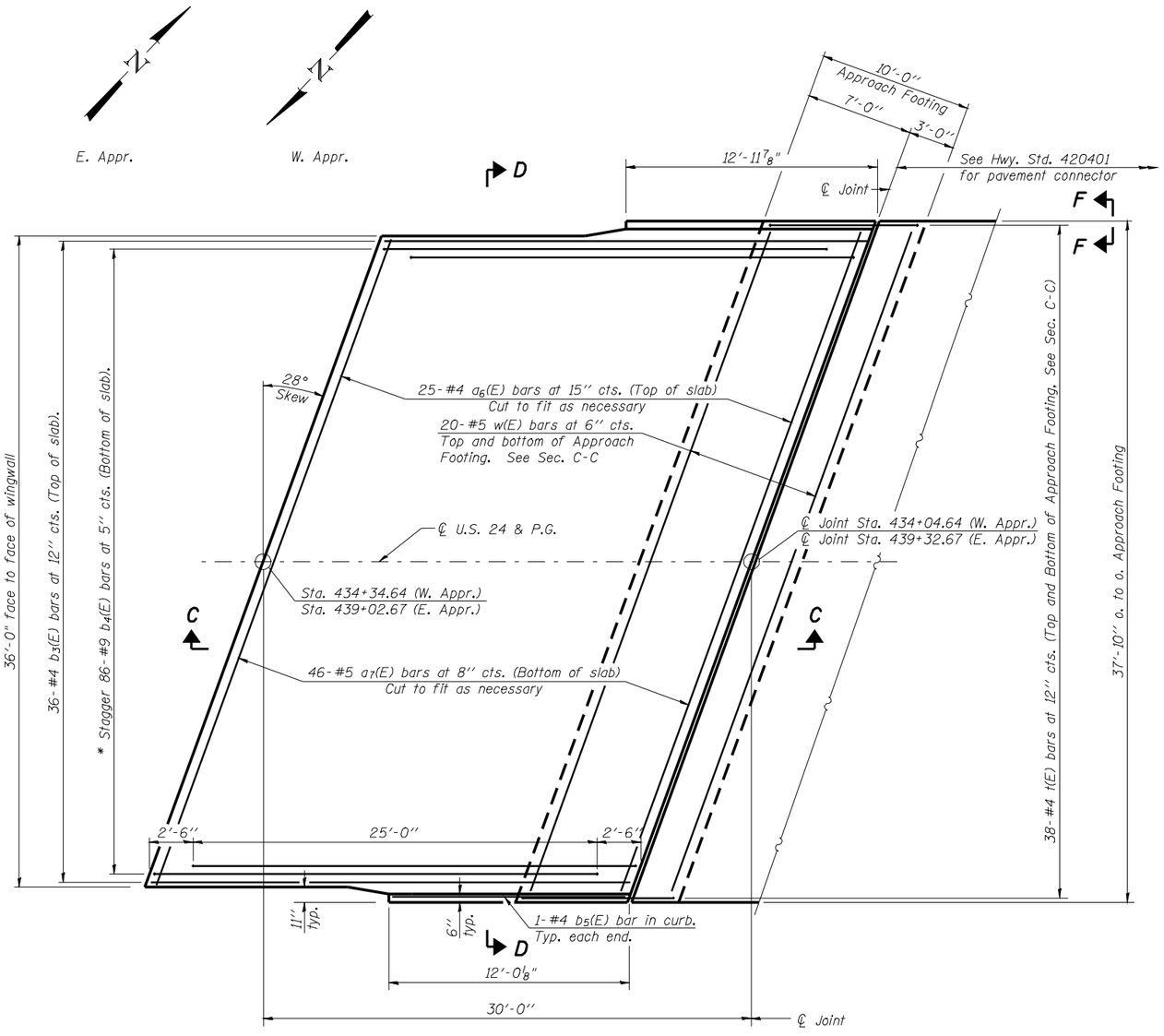
Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | Files: 005-0500.DGN

SHEET NO. 9
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	128
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

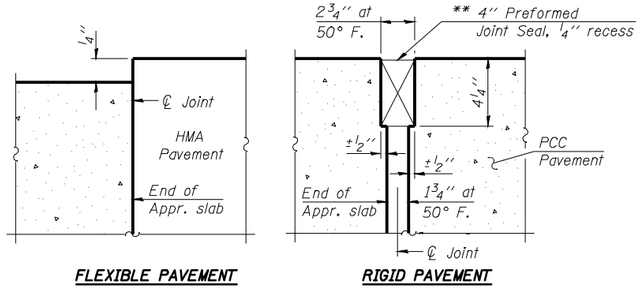
Notes:
See sheet 11 of 29 for Sections C-C & D-D.
a_6(E) and a_7(E) bar spacings measured along ℄ Rdwy.
See sheet 18 thru 21 of 29 for Wingwall details.



PLAN

* Tilt #9 b_4(E) bars as required to maintain clearance.

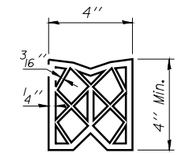
** Cost included with Concrete Superstructure.



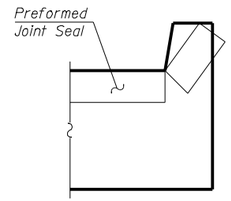
FLEXIBLE PAVEMENT

RIGID PAVEMENT

DETAIL A



PREFORMED JOINT SEAL



VIEW F-F

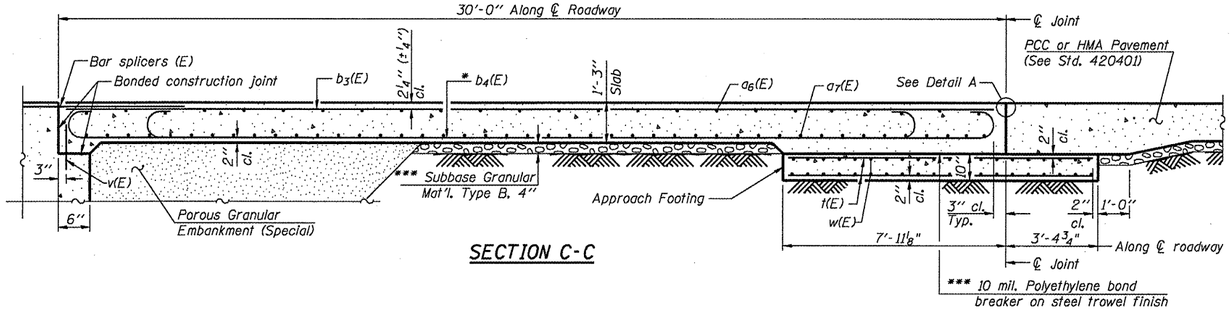
Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

BRIDGE APPROACH SLAB DETAILS-1

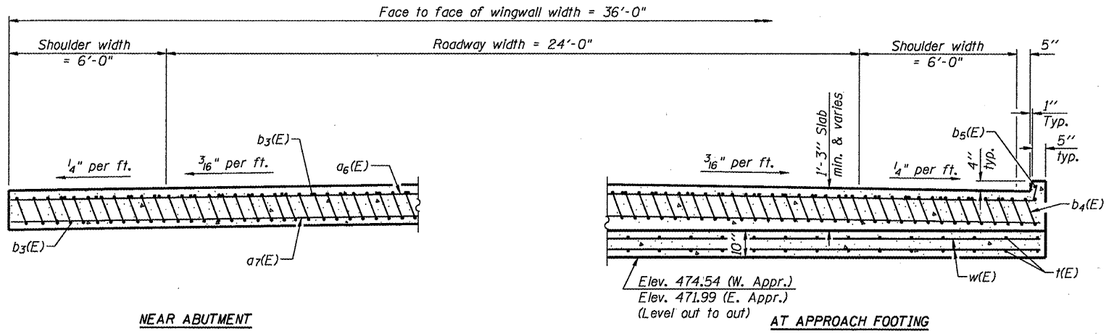
STRUCTURE NO. 005-0500

LIN ENGINEERING,LTD. Consulting Engineers Chatham, Illinois	SHEET NO.10	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
Designed By: ADB · Checked By: MTH · Drawn By: AJF	29 SHEETS	317	(10B-1)R	BROWN/SCHUYLER	196 / 129
Date: 06/2009 · Files: 005-0500.DGN				CONTRACT NO. 72432	
				ILLINOIS	FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C



NEAR ABUTMENT

AT APPROACH FOOTING

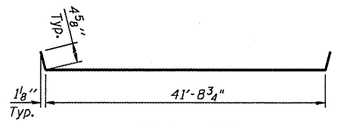
SECTION D-D

(See Plan for dimensions not shown)

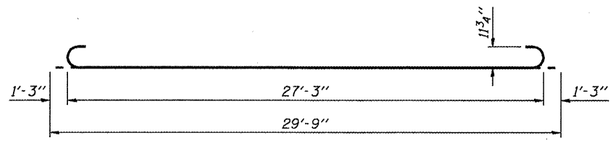
Notes:
See sheet 10 of 29 for Detail A.
Approach slab concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 19 of 29 and sheet 21 of 29.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 24 of 29.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 29.

* Tilt #9 b4(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.



BAR a6(E)



BAR b4(E)

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a6(E)	50	#4	43'-1"	
a7(E)	92	#5	40'-5"	
b3(E)	72	#4	29'-8"	
b4(E)	172	#9	29'-9"	
b5(E)	4	#4	13'-0"	
t(E)	152	#4	11'-0"	
w(E)	80	#5	42'-6"	
Concrete Superstructure			Cu. Yd.	104.1
Concrete Structures			Cu. Yd.	26.4
Reinforcement Bars, Epoxy Coated			Pound	28840

BRIDGE APPROACH SLAB DETAILS-2
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

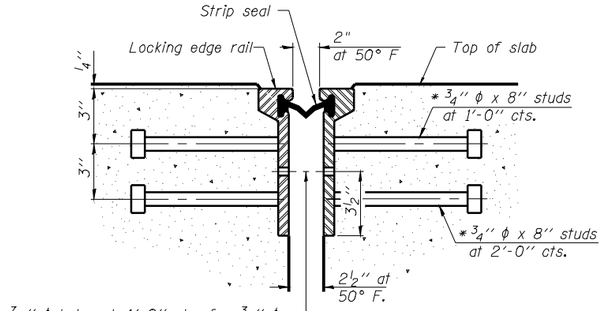
Designed By ADB | Checked By WTH | Drawn By AJF
Date 06/2009 | File 005-0500.DGN

SHEET NO. 11
29 SHEETS

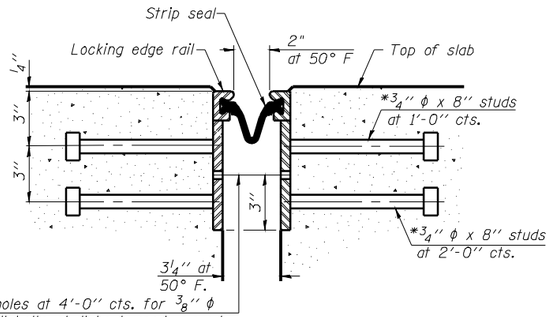
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	130
		CONTRACT NO. 72432		
		ILLINOIS FED. AID PROJECT		

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

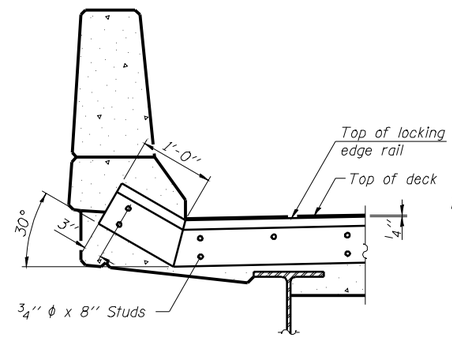
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

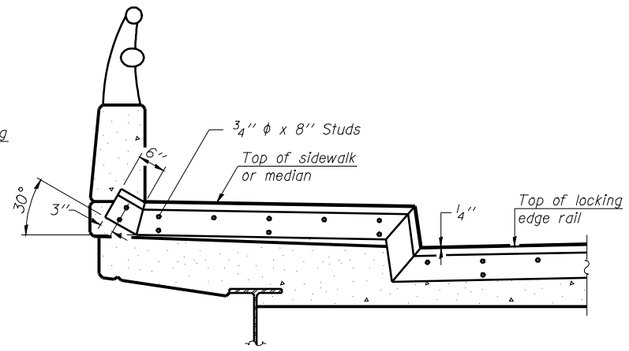


7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



AT PARAPET

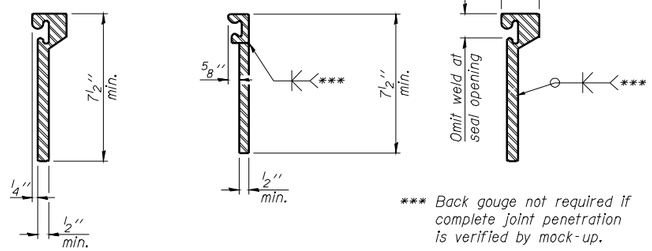
See Section A-A for end treatment of skews > 30°.



AT SIDEWALK OR MEDIAN

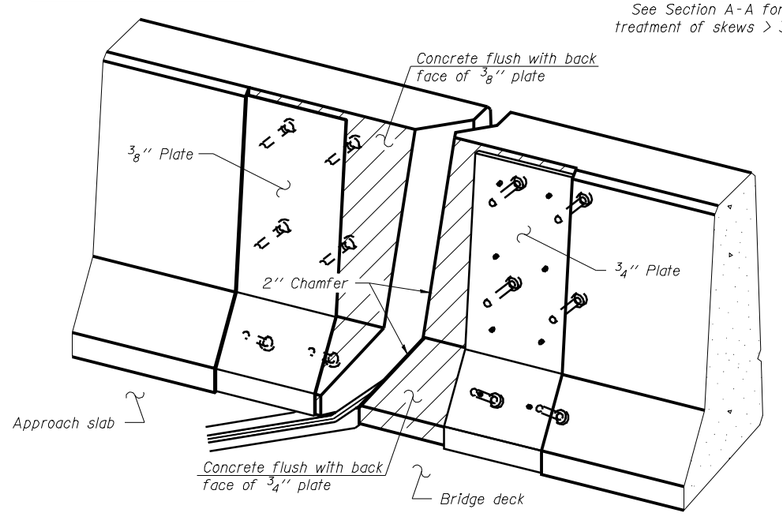
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

SECTION THRU ROLLED RAIL JOINT



*** Back gouge not required if complete joint penetration is verified by mock-up.

SECTION THRU WELDED RAIL JOINT



TYPICAL END TREATMENTS

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

ROLLED EXTRUDED RAIL

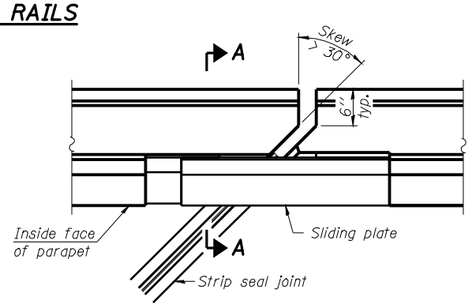
WELDED RAIL

LOCKING EDGE RAIL SPLICE

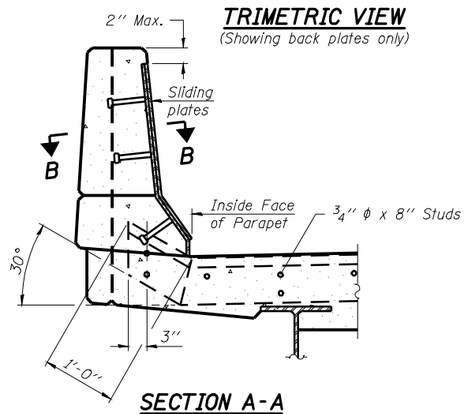
The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS



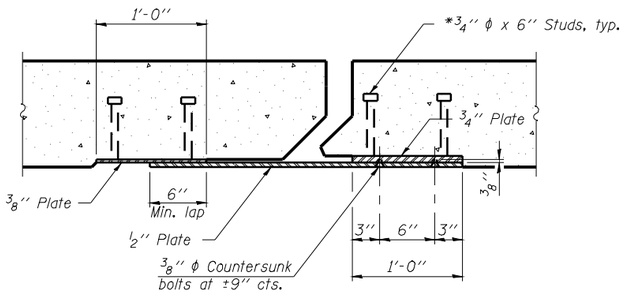
PLAN



SECTION A-A

TRIMETRIC VIEW

(Showing back plates only)



SECTION B-B

POINT BLOCK DETAILS

(for skews > 30°)

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	86

PREFORMED JOINT STRIP SEAL STRUCTURE NO. 005-0500

EJ-SSJ

11-1-09

LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

SHEET NO. 12
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	131
		CONTRACT NO. 72432		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

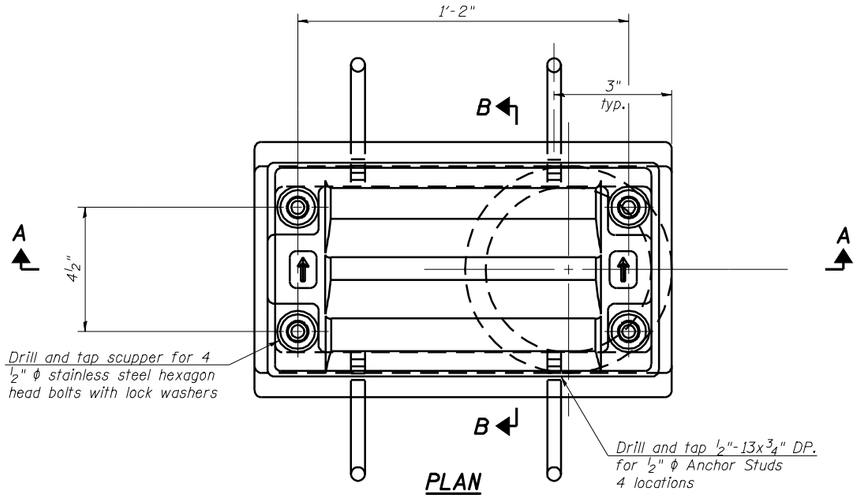
SHEET INTENTIONALLY LEFT BLANK

STRUCTURE NO. 005-0500

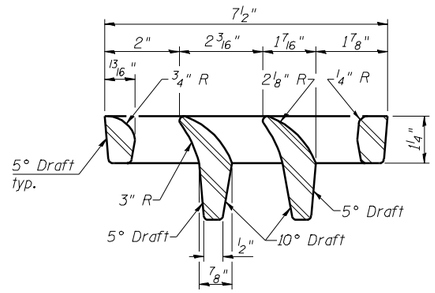
LIN ENGINEERING,LTD. Consulting Engineers Chatham, Illinois	SHEET NO. 13	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		317	(10B-1)R	BROWN/SCHUYLER	196	132
	29 SHEETS			CONTRACT NO. 72432		
			ILLINOIS	FED. AID PROJECT		

Designed By: AOB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

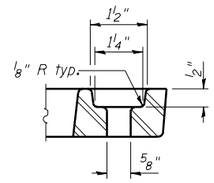
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



VANE GRATE DETAIL



BOLT HOLE DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

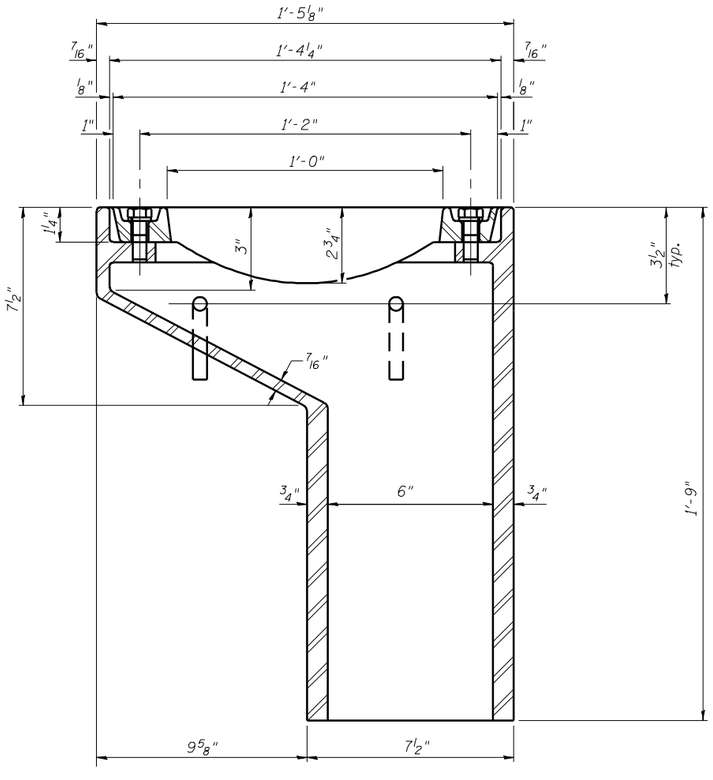
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

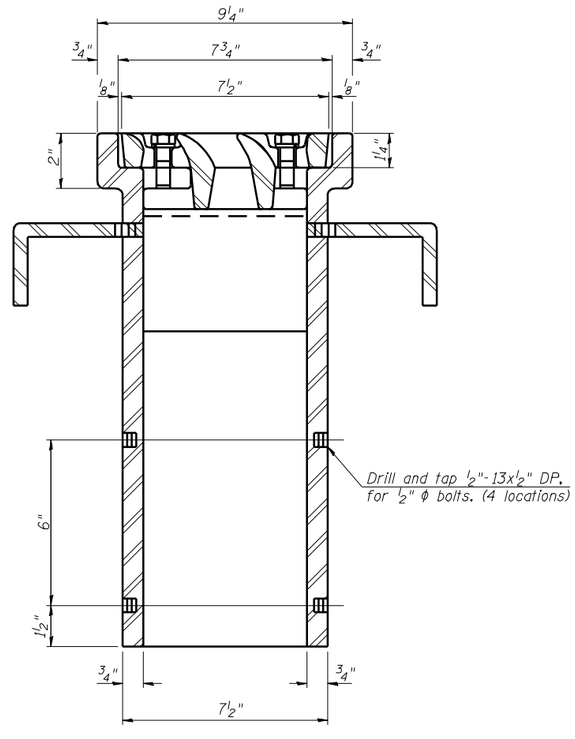
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

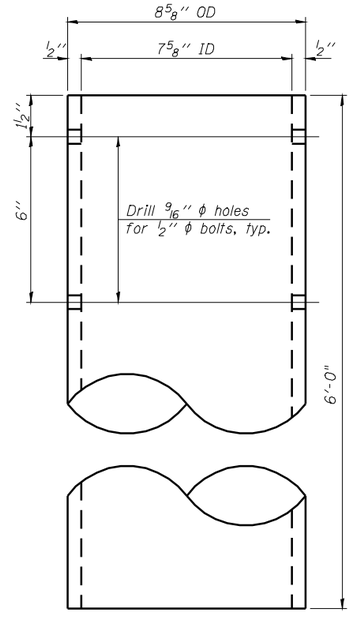


SECTION A-A

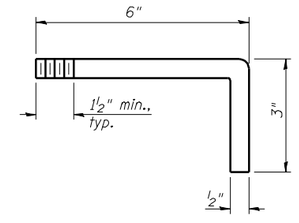
See sheet of for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

Item	Unit	Total
Drainage Scuppers, DS-11	Each	4

DRAINAGE SCUPPER, DS-11
STRUCTURE NO. 005-0500

LIN ENGINEERING,LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | Files: 005-0500.DGN

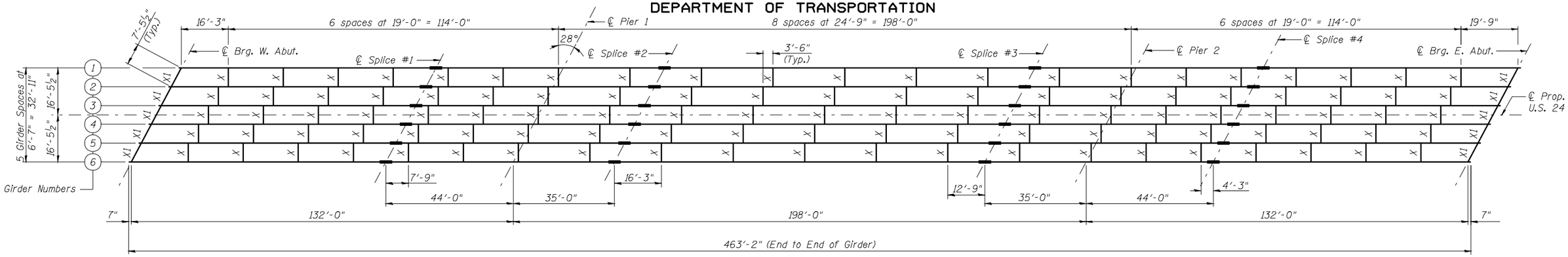
SHEET NO. 14
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	133
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

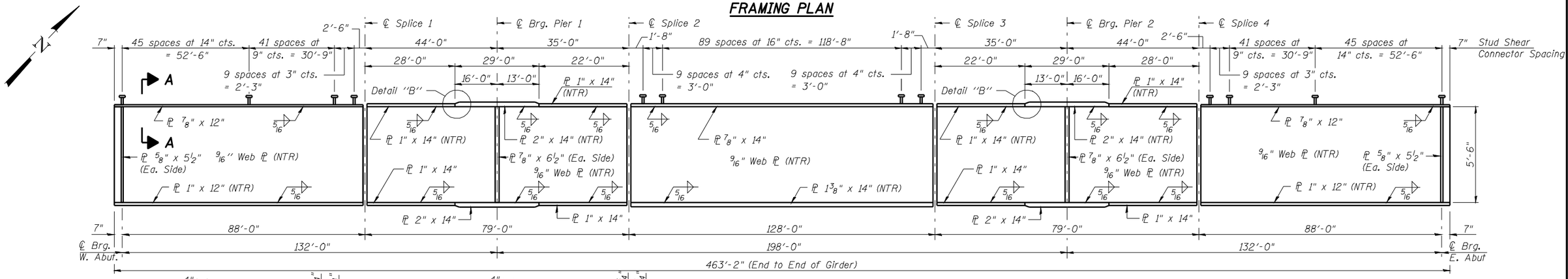
DS-11

11-1-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

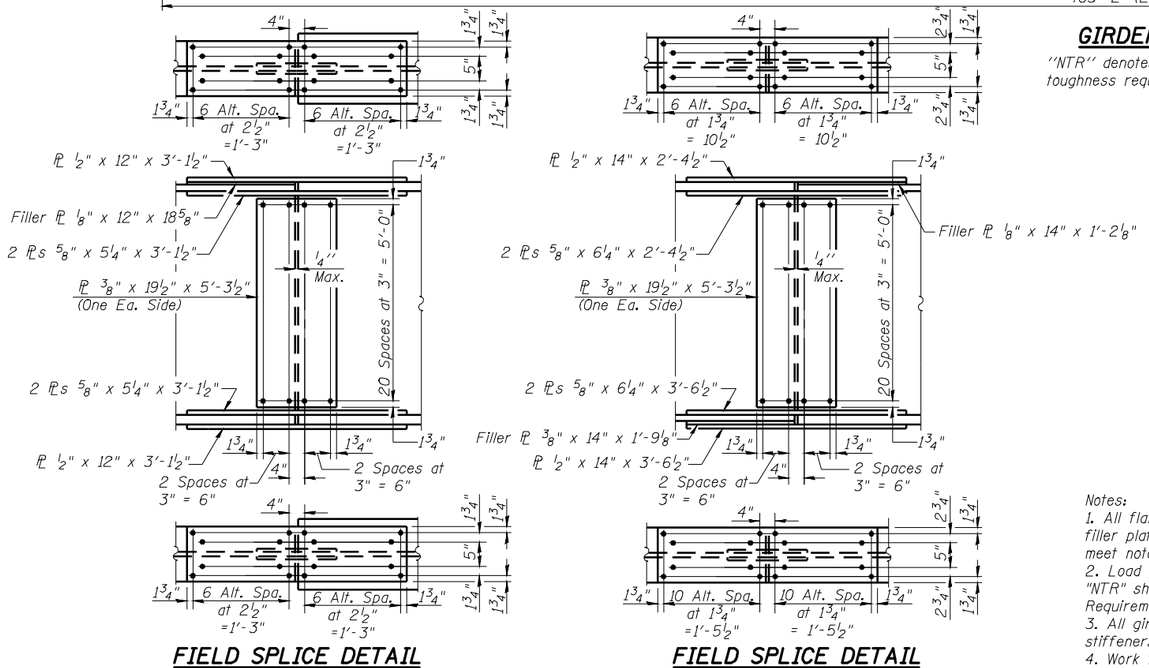


FRAMING PLAN



GIRDER ELEVATION

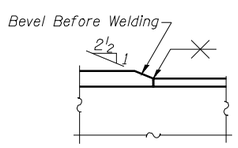
"NTR" denotes plates to which notch toughness requirements are applicable.



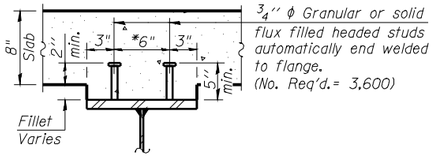
FIELD SPLICE DETAIL
(Splice #1 shown, Splice #4 similar)

FIELD SPLICE DETAIL
(Splice #2 shown, Splice #3 similar)

Notes:
1. All flange and web splice plates, except filler plates, shall be M270 Grade 50 and meet notch toughness requirements.
2. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
3. All girder flanges, webs and bearing stiffeners shall be M270 Grade 50.
4. Work this sheet with sheet 16 of 29.

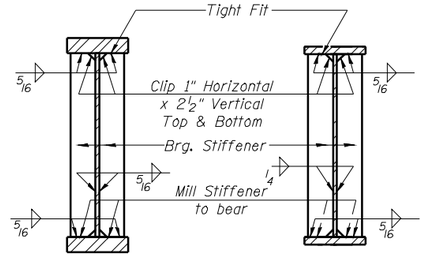


DETAIL "B"



SECTION A-A

*8" on 14" top flange



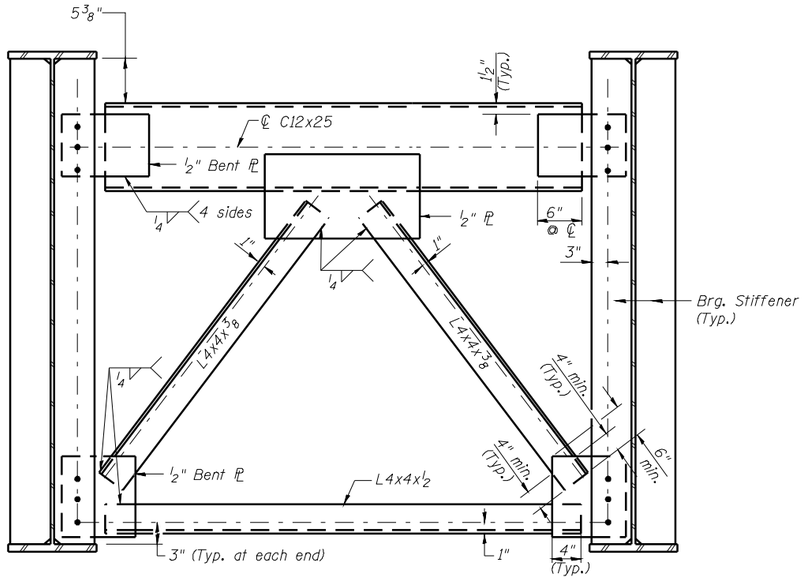
SECTION AT PIER

SECTION AT ABUTMENT

FRAMING PLAN AND STEEL DETAILS
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD. Consulting Engineers, Chatham, Illinois	SHEET NO. 15	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
Designed By: ADB · Checked By: MTH · Drawn By: AJF	29 SHEETS	317	(10B-1)R	BROWN/SCHUYLER	196 / 134
Dates: 06/2009 · Files: 005-0500.DGN				CONTRACT NO. 72432	
			ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



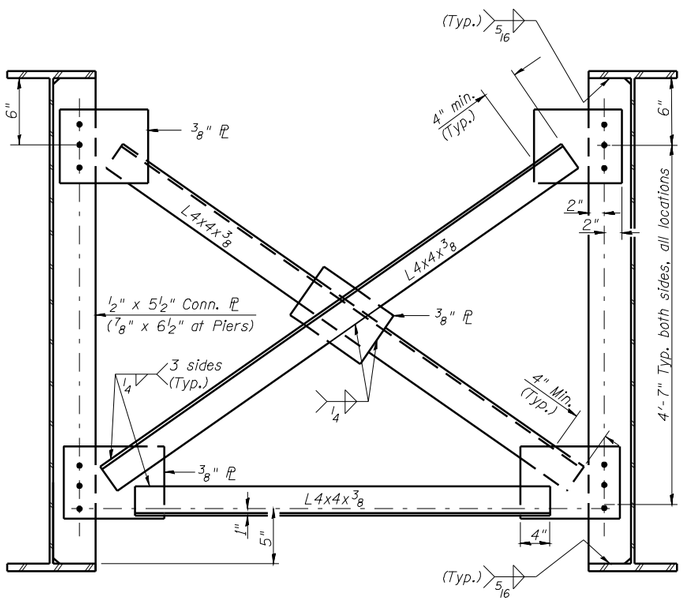
* TOP OF WEB ELEVATIONS

Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6
℄ Brg. W. Abut.	475.68	475.82	475.94	475.96	475.88	475.77
℄ Splice 1	475.15	475.29	475.41	475.43	475.35	475.24
℄ Brg. Pier 1	474.93	475.07	475.19	475.21	475.13	475.02
℄ Splice 2	474.94	475.08	475.20	475.22	475.13	475.02
℄ Splice 3	474.30	474.44	474.56	474.58	474.49	474.38
℄ Brg. Pier 2	473.94	474.08	474.20	474.22	474.14	474.03
℄ Splice 4	473.72	473.86	473.98	474.00	473.92	473.81
℄ Brg. E. Abut.	473.37	473.51	473.63	473.65	473.57	473.46

*For Fabrication Only

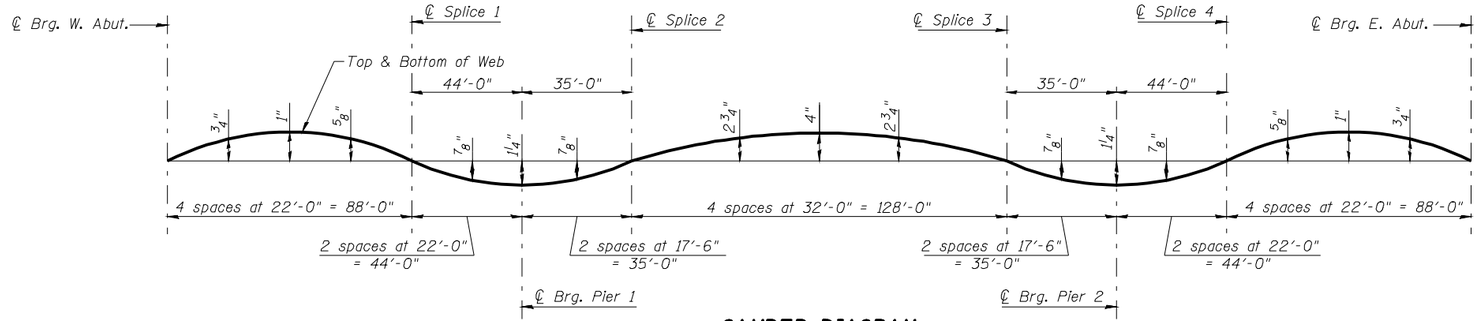
END CROSS FRAME-X1

(10 required)



INTERIOR CROSS FRAME-X

(105 required)



CAMBER DIAGRAM

Notes:
1. $^{15}/_{16}$"ϕ holes for $^{3}/_{4}$" ϕ bolts in cross frames.
2. Two hardened washers required for each set of oversized holes.
3. Place cross frame channel flanges and outstanding angle legs outward from abutment backwall.
4. All cross frames shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.
5. Work this sheet with sheet 15 of 29.

MISCELLANEOUS STEEL DETAILS
STRUCTURE NO. 005-0500

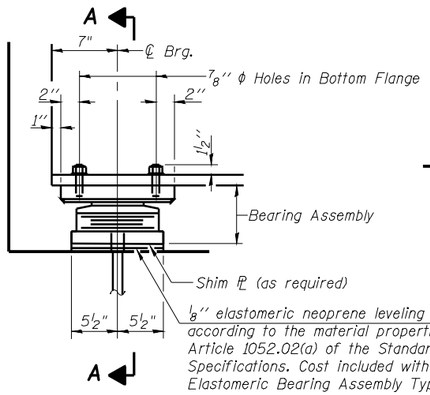
LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | Files: 005-0500.DGN

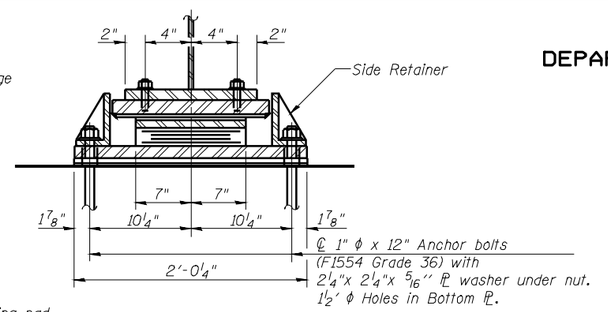
SHEET NO. 16
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	135
		CONTRACT NO. 72432		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

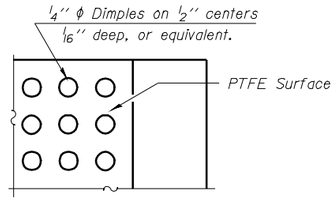


ELEVATION AT ABUT.

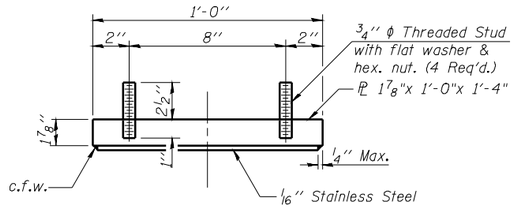


SECTION A-A

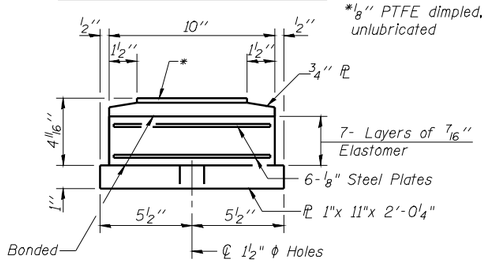
TYPE II ELASTOMERIC EXP. BRG.



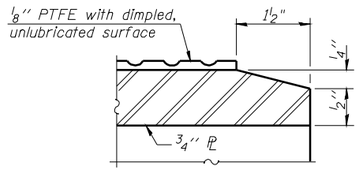
PLAN-PTFE SURFACE



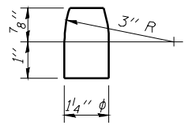
TOP BEARING ASSEMBLY



*1/8" PTFE dimpled, unlubricated

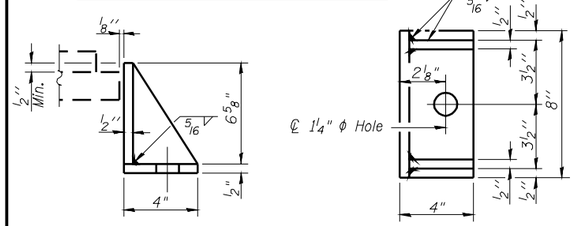


SECTION THRU PTFE



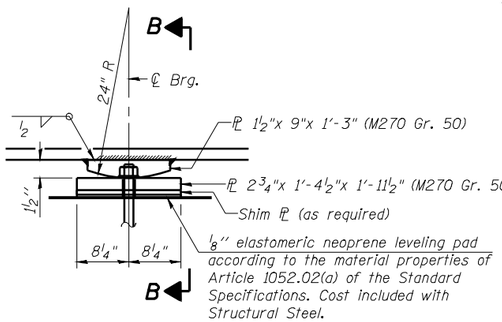
PINTLE

BOTTOM BEARING ASSEMBLY

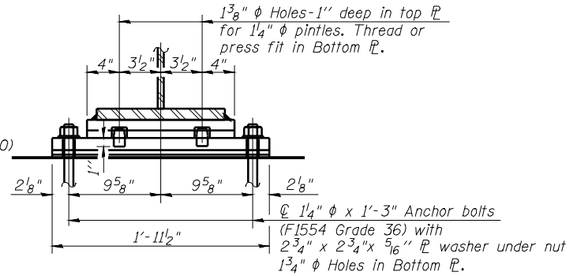


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ELEVATION AT PIER



SECTION B-B

FIXED BEARING

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12
Anchor Bolts, 1"	Each	24
Anchor Bolts, 1 1/4"	Each	24

INTERIOR GIRDER MOMENT TABLE					
			0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
	I_s	(in^4)	38641	78231	48191
	$I_c(n)$	(in^4)	89911	-	110831
	$I_c(3n)$	(in^4)	65297	-	79628
	S_s	(in^3)	1166	2235	1560
	$S_c(n)$	(in^3)	1646	-	2118
	$S_c(3n)$	(in^3)	1472	-	1911
	ℓ	(k/')	0.904	1.485	0.942
	M_ℓ	('k)	749	4164	1728
	s_ℓ	(k/')	0.450	-	0.450
	$M_{s\ell}$	('k)	436	-	938
	M_L	('k)	1055	1378	1528
	M_{IM}	('k)	205	238	237
	$\frac{5}{3}[M_L + I]$	('k)	2100	2693	2942
	M_a	('k)	4271	8914	7290
*	M_u	('k)	8054	-	10199
	f_s ℓ non-comp	(ksi)	7.71	22.36	13.29
	f_s ℓ (comp)	(ksi)	3.55	-	5.89
	f_s $\frac{5}{3}[M_L + M_I]$	(ksi)	15.31	14.46	16.67
	f_s (Overload)	(ksi)	26.57	36.82	35.85
**	f_s (Total)	(ksi)	-	47.87	-
	VR	(k)	47.5	-	47.6

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
R_ℓ	(k)	59.1	262.2
R_L	(k)	44.0	89.3
R_I	(k)	8.6	9.8
R_{Total}	(k)	111.7	361.3

*Compact section
**Braced non-compact and partially braced section

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total and Overload) due to non-composite dead loads (in.^{4} and in.^{3}).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total and Overload) due to short-term composite live loads (in.^{4} and in.^{3}).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total and Overload) due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

Z: Plastic Section Modulus of the steel section in non-composite areas (in.^{3}).

ℓ: Un-factored non-composite dead load (kips/ft.).

M_ℓ: Un-factored moment due to non-composite dead load (kip-ft.).

s_ℓ: Un-factored long-term composite (superimposed) dead load (kips/ft.)

$M_{s\ell}$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L: Un-factored live load moment (kip-ft.).

M_I: Un-factored moment due to impact (kip-ft.).

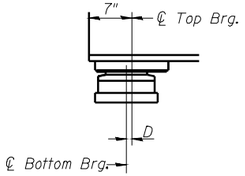
M_a: Factored design moment (kip-ft.).
$1.3\ [M_\ell + M_{s\ell} + \frac{5}{3}(M_L + M_I)]$

M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

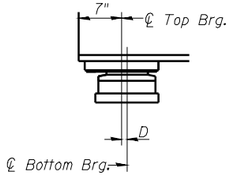
f_s (Overload): Sum of stresses as computed from the moments below (ksi).
$M_\ell + M_{s\ell} + \frac{5}{3}(M_L + M_I)$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.3\ [M_\ell + M_{s\ell} + \frac{5}{3}(M_L + M_I)]$

VR: Maximum L + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).



BELOW 50°F.
(Move bott. brg. away from fixed brg.)



ABOVE 50°F.
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

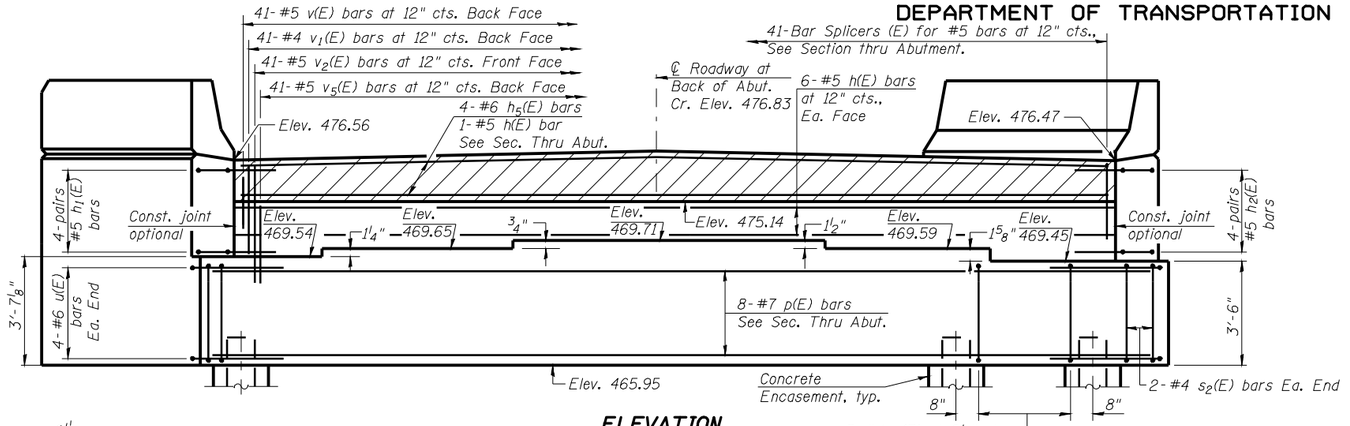
The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

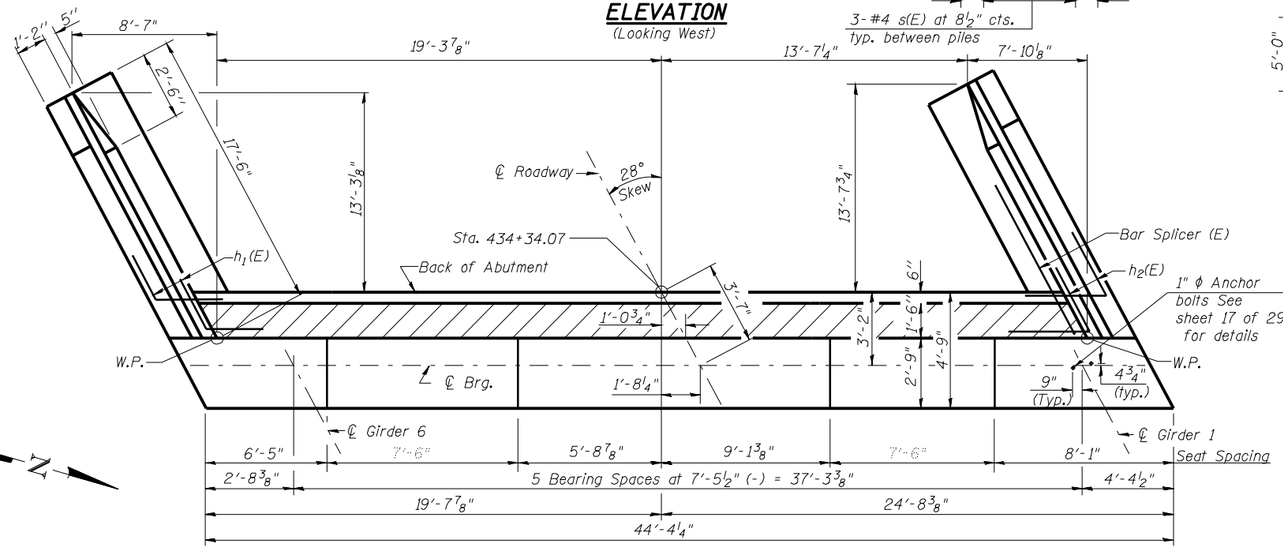
BEARING DETAILS
STRUCTURE NO. 005-0500

LIN ENGINEERING,LTD. Consulting Engineers Chatham, Illinois	SHEET NO. 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
Designed By: ADB Checked By: MTH Drawn By: AJF	29 SHEETS	317	(10B-1)R	BROWN/SCHUYLER	196 / 136
Dates: 06/2009 Files: 005-0500.DGN				CONTRACT NO. 72432	
			ILLINOIS	FED. AID PROJECT	

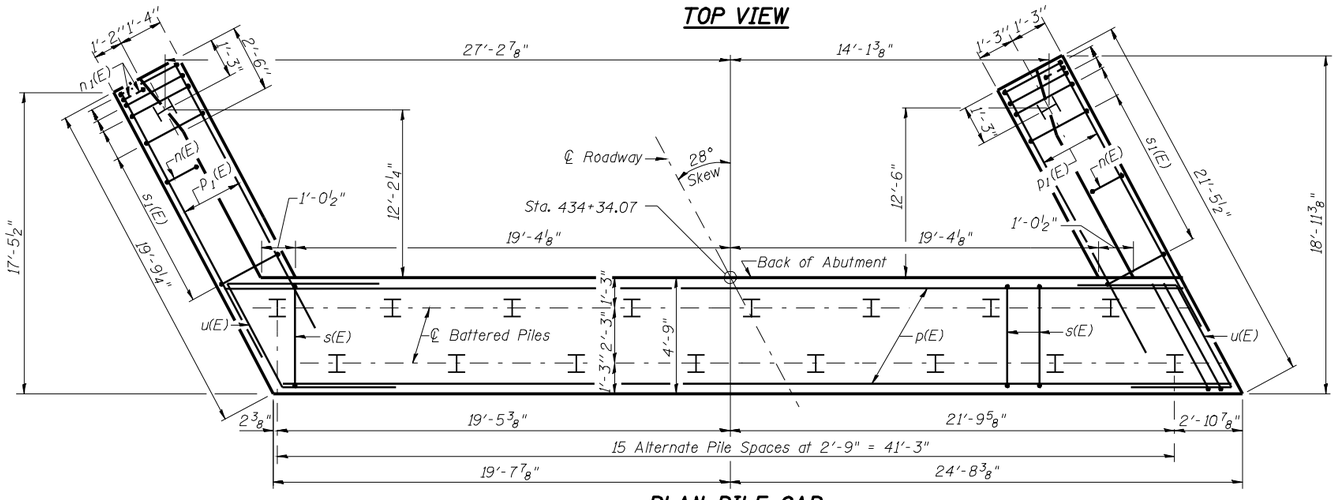
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



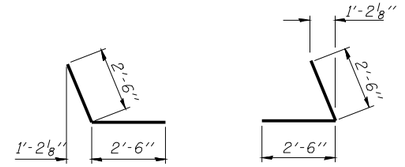
ELEVATION
(Looking West)



TOP VIEW

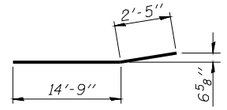


PLAN-PILE CAP

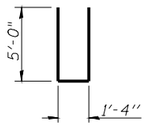


BAR h1(E)

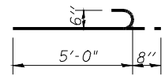
BAR h2(E)



BAR h4(E)



BAR n(E)



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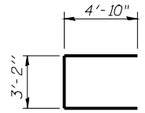
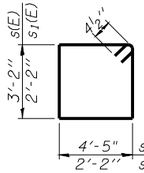
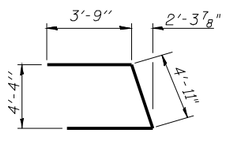


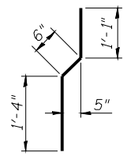
BAR s2(E)



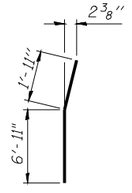
BARS s(E) & s1(E)



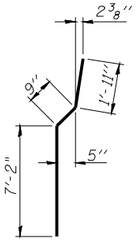
BAR u(E)



BAR v1(E)



BAR v3(E)



BAR v4(E)

WEST ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	13	#5	40'-5"	
h1(E)	8	#5	5'-0"	
h2(E)	8	#5	5'-0"	
h3(E)	28	#4	18'-0"	
h4(E)	20	#4	17'-2"	
h5(E)	4	#6	40'-5"	
n(E)	30	#6	11'-4"	
n1(E)	12	#6	5'-8"	
p(E)	8	#7	44'-0"	
p1(E)	12	#7	19'-0"	
s(E)	45	#4	15'-11"	
s1(E)	38	#4	9'-5"	
s2(E)	4	#4	12'-10"	
u(E)	8	#6	12'-5"	
v(E)	41	#5	7'-9"	
v1(E)	41	#4	2'-11"	
v2(E)	41	#5	9'-0"	
v3(E)	6	#6	8'-10"	
v4(E)	30	#6	9'-10"	
v5(E)	41	#5	3'-4"	
v6(E)	38	#6	9'-2"	
Structure Excavation		Cu. Yd.	280	
Concrete Structures		Cu. Yd.	66.0	
Reinforcement Bars, Epoxy Coated		Pound	6130	
Furnishing Steel Piles HP 12x53		Foot	1071	
Driving Piles		Foot	1071	
Test Pile Steel HP 12x53		Each	1	
Pile shoes		Each	18	
Concrete Encasement		Cu. Yd.	6.3	
Concrete Sealer		Sq. Ft.	392	

For details of Bar Splicers, see sheet 24 of 29.
For details of piles and Concrete Encasement, see sheet 25 of 29.
For drainage details see Sheet 2 of 29.
Work this sheet with sheet 19 of 29.
Piles shall be driven through 18" diameter precored holes extending to Elev. 448.50 according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

PILE DATA

Type: Steel HP 12x53 with pile shoes
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 116 kips
Est. Length: 63 ft.
No. Production Piles: 17
No. Test Piles: 1

WEST ABUTMENT
STRUCTURE NO. 005-0500

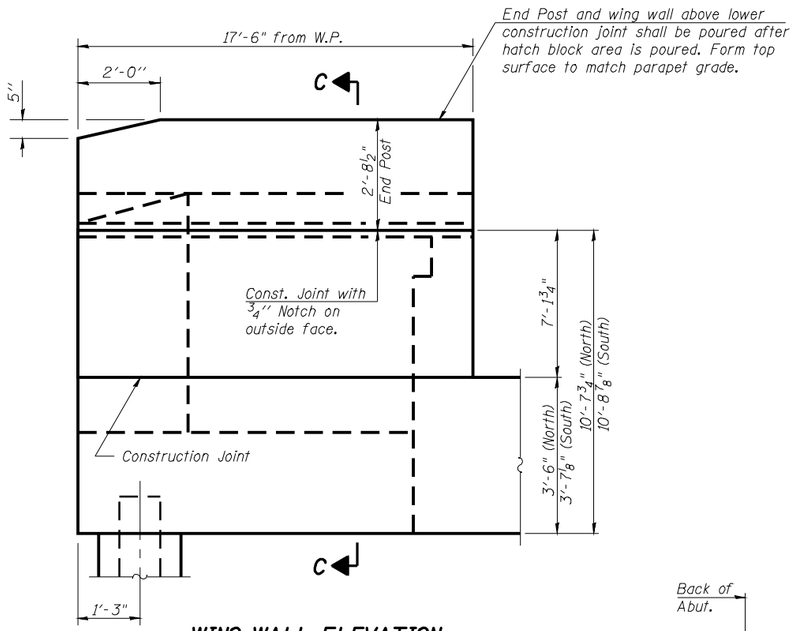
LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Dates: 06/2009 | Files: 005-0500.DGN

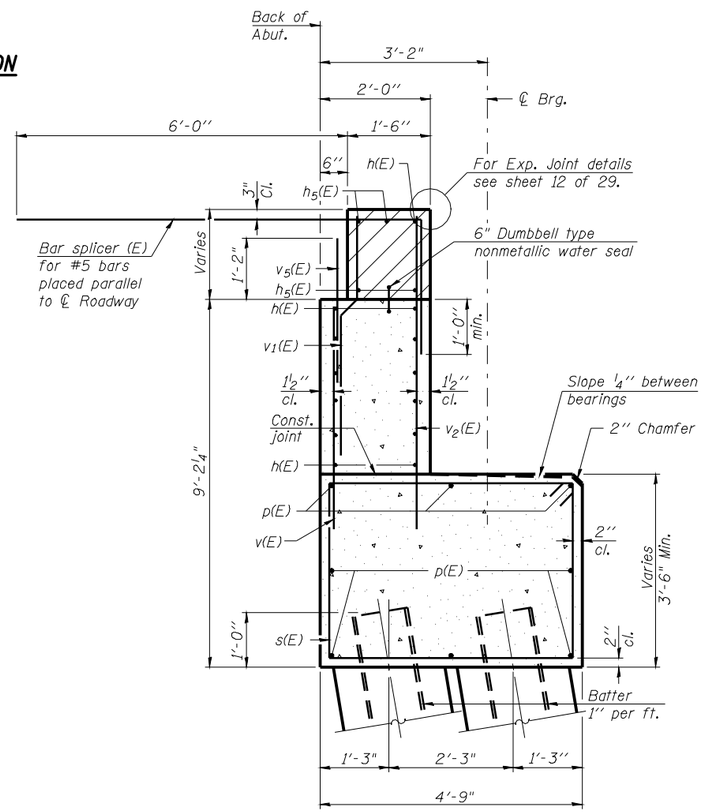
SHEET NO. 18
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	137
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

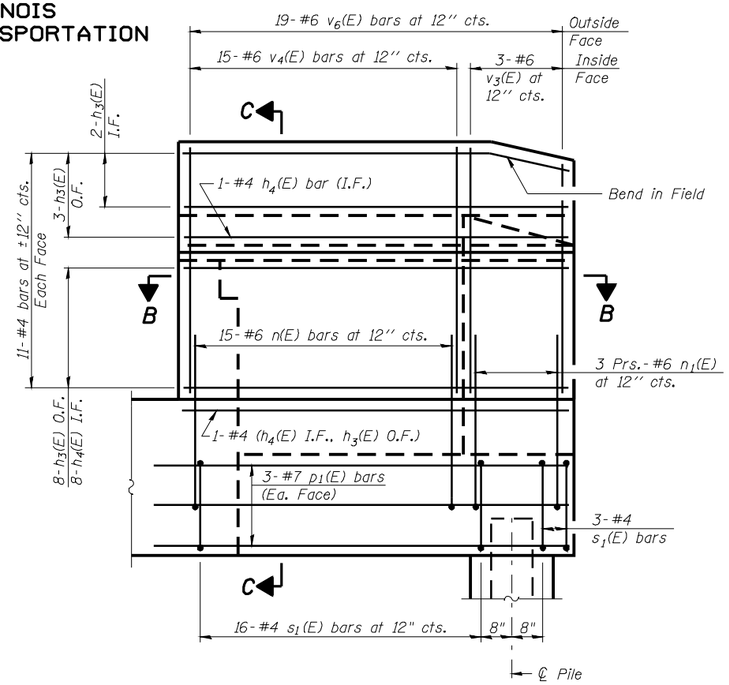
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



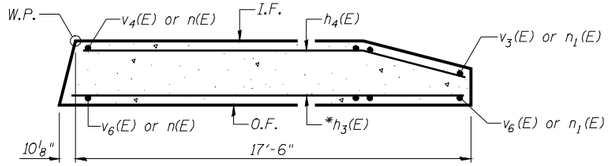
WING WALL ELEVATION
Showing Dimensions



SEC. THRU ABUT.
(At Rt. L's to Abut.)

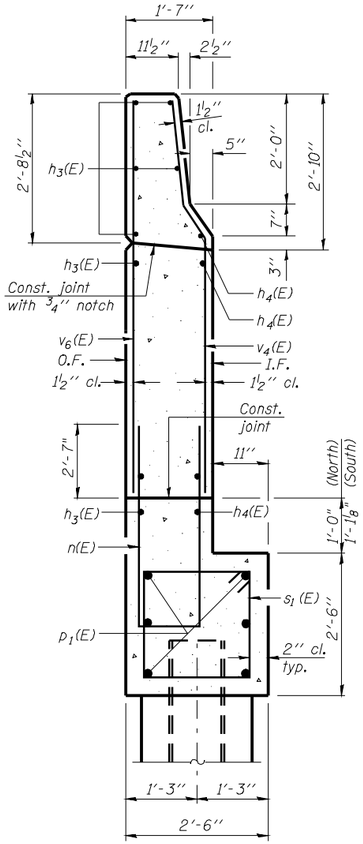


WING WALL ELEVATION
Showing Reinforcement



SECTION B-B
(North Wing shown, South similar)

**Cut to fit at South wall*



SECTION C-C

Notes:
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Quantity of concrete in end post included with Concrete Superstructure on sheet 9 of 29.
For Concrete Encasement details, see sheet 25 of 29.
Work this sheet with sheet 18 of 29.

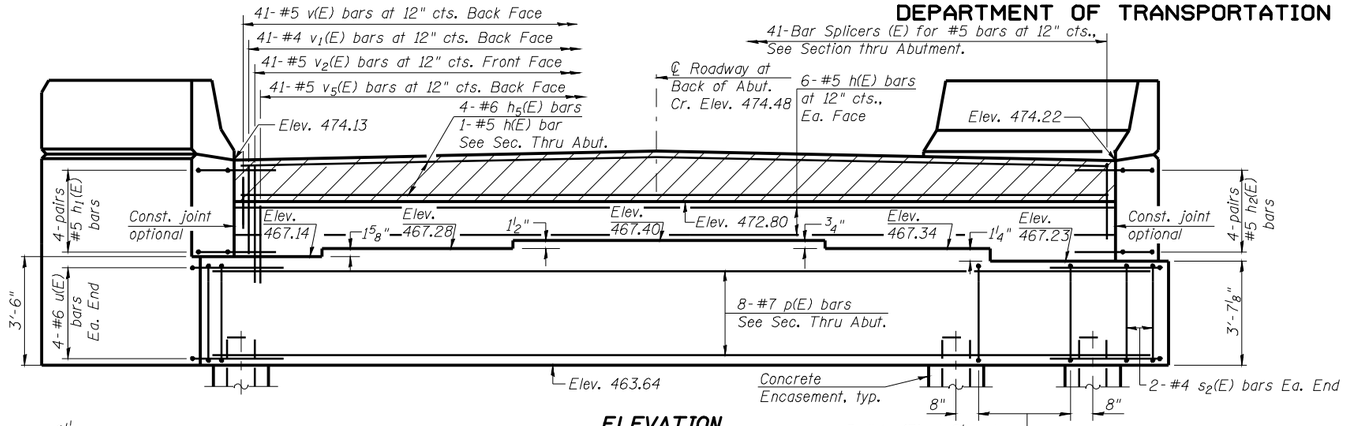
WEST ABUTMENT DETAILS
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois
Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

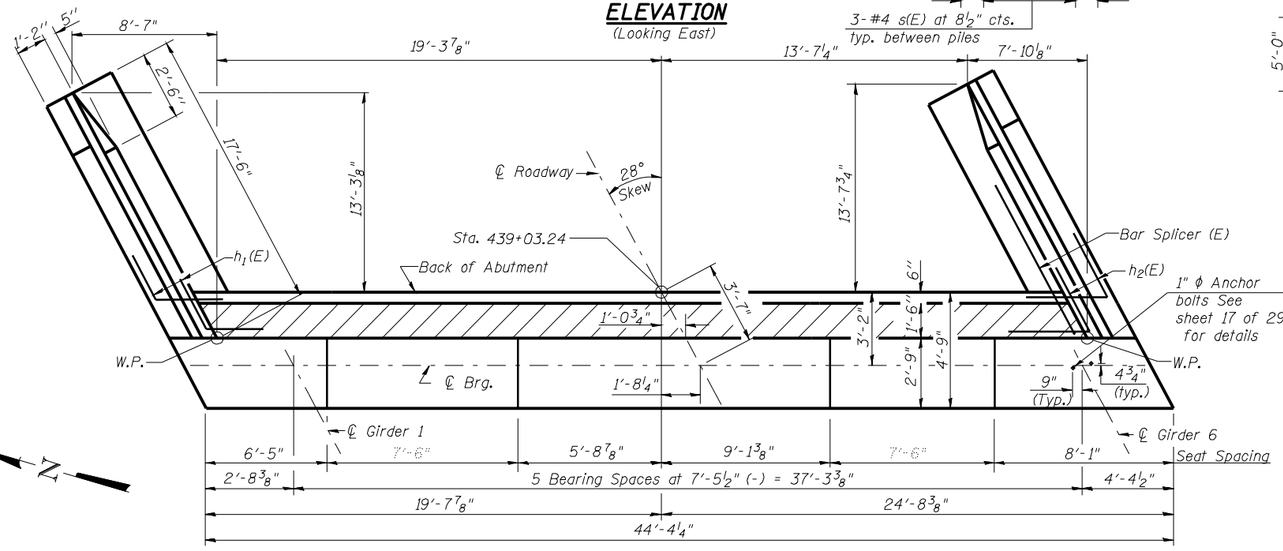
SHEET NO. 19
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	138
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

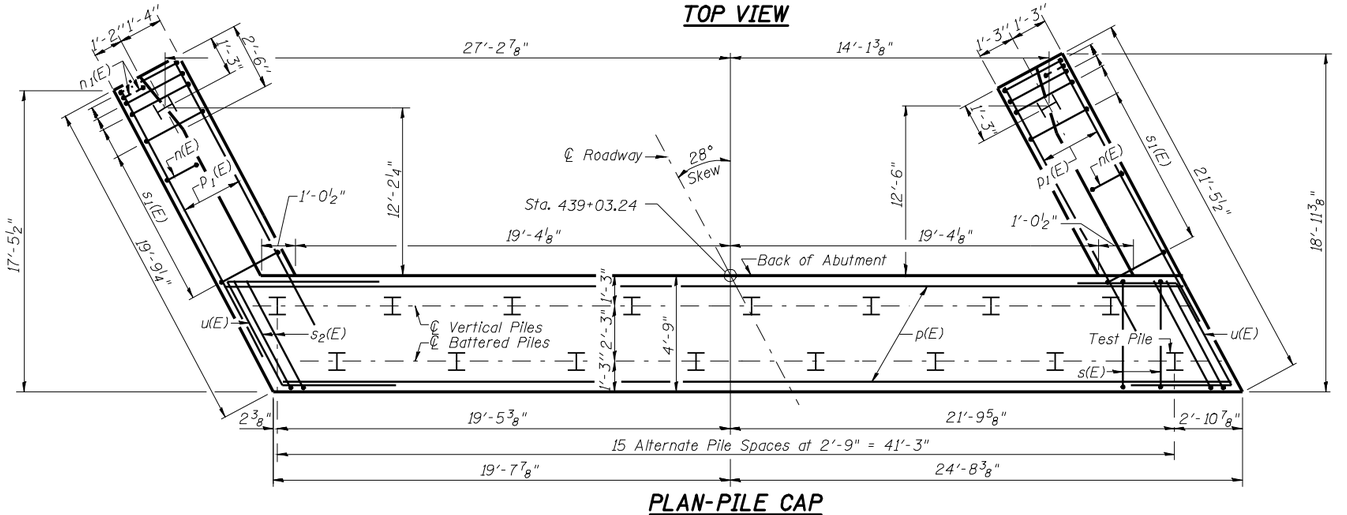
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



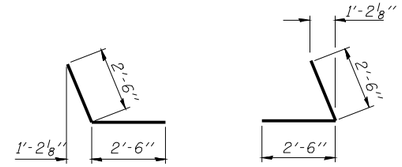
ELEVATION
(Looking East)



TOP VIEW

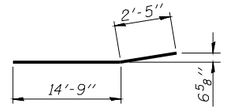


PLAN-PILE CAP

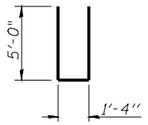


BAR h1(E)

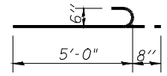
BAR h2(E)



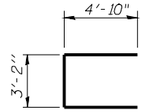
BAR h4(E)



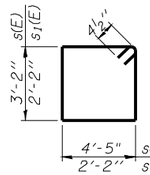
BAR n(E)



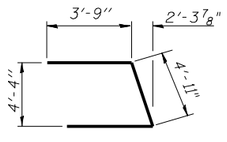
BAR n1(E)



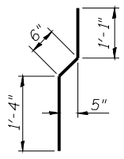
BAR s2(E)



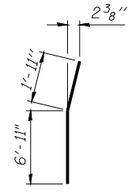
BARS s(E) & s1(E)



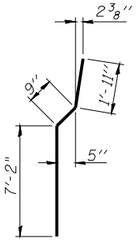
BAR u(E)



BAR v1(E)



BAR v3(E)



BAR v4(E)

PILE DATA

Type: Steel HP 12x53 with pile shoes
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 22 ft.
No. Production Piles: 17
No. Test Piles: 1

EAST ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	13	#5	40'-5"	
h1(E)	8	#5	5'-0"	
h2(E)	8	#5	5'-0"	
h3(E)	28	#4	18'-0"	
h4(E)	20	#4	17'-2"	
h5(E)	4	#6	40'-5"	
n(E)	30	#6	11'-4"	
n1(E)	12	#6	5'-8"	
p(E)	8	#7	44'-0"	
p1(E)	12	#7	19'-0"	
s(E)	45	#4	15'-11"	
s1(E)	38	#4	9'-5"	
s2(E)	4	#4	12'-10"	
u(E)	8	#6	12'-5"	
v(E)	41	#5	7'-9"	
v1(E)	41	#4	2'-11"	
v2(E)	41	#5	9'-0"	
v3(E)	6	#6	8'-10"	
v4(E)	30	#6	9'-10"	
v5(E)	41	#5	3'-4"	
v6(E)	38	#6	9'-2"	
Structure Excavation		Cu. Yd.	280	
Concrete Structures		Cu. Yd.	66.0	
Reinforcement Bars, Epoxy Coated		Pound	6130	
Furnishing Steel Piles HP 12x53		Foot	374	
Driving Piles		Foot	374	
Test Pile Steel HP 12x53		Each	1	
Pile shoes		Each	18	
Concrete Encasement		Cu. Yd.	6.3	
Concrete Sealer		Sq. Ft.	392	

For details of Bar Splicers, see sheet 24 of 29.
For details of piles and Concrete Encasement, see sheet 25 of 29.
For drainage details see Sheet 2 of 29.
Work this sheet with sheet 21 of 29.

EAST ABUTMENT
STRUCTURE NO. 005-0500

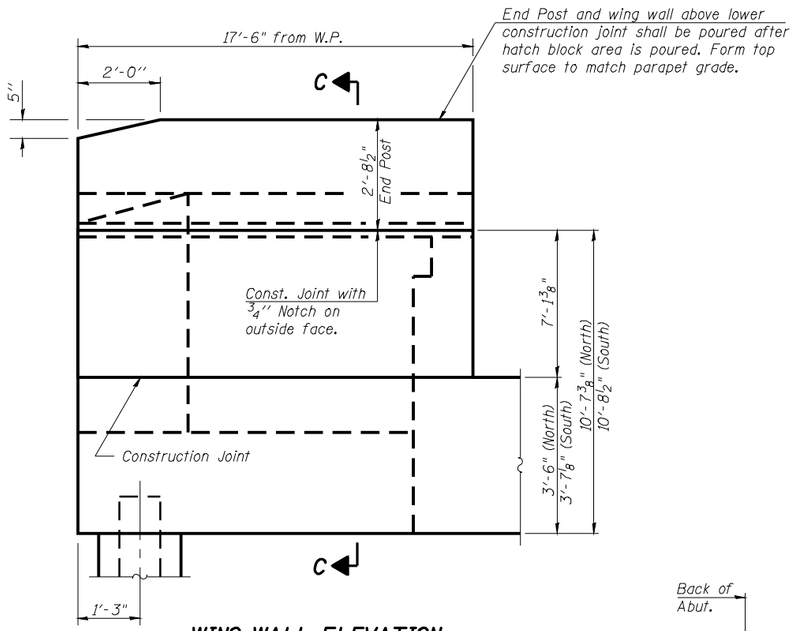
LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

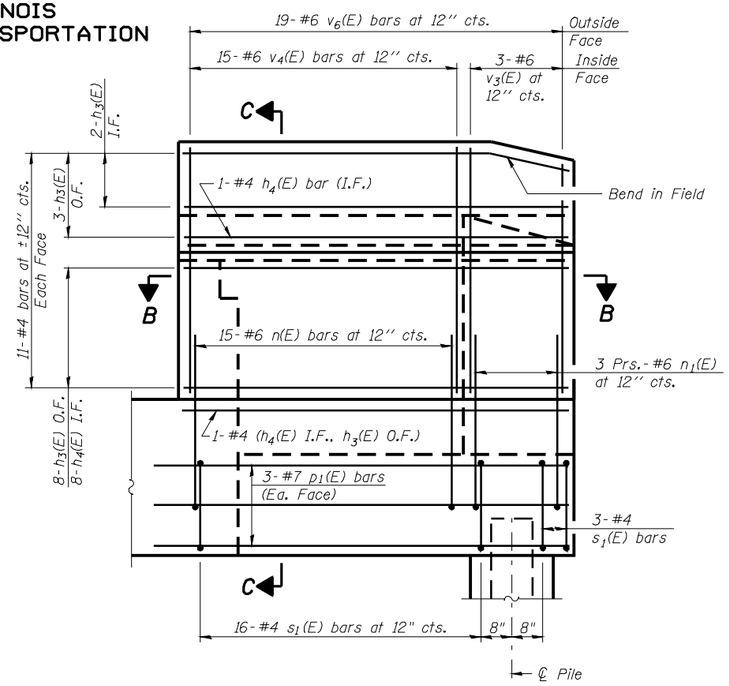
SHEET NO. 20
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	139
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

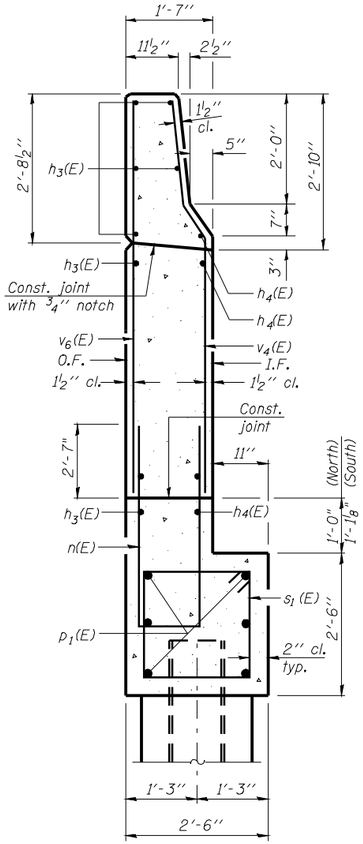
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

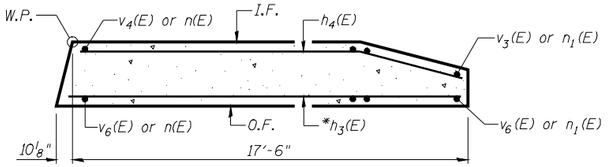


WING WALL ELEVATION
Showing Dimensions



WING WALL ELEVATION
Showing Reinforcement

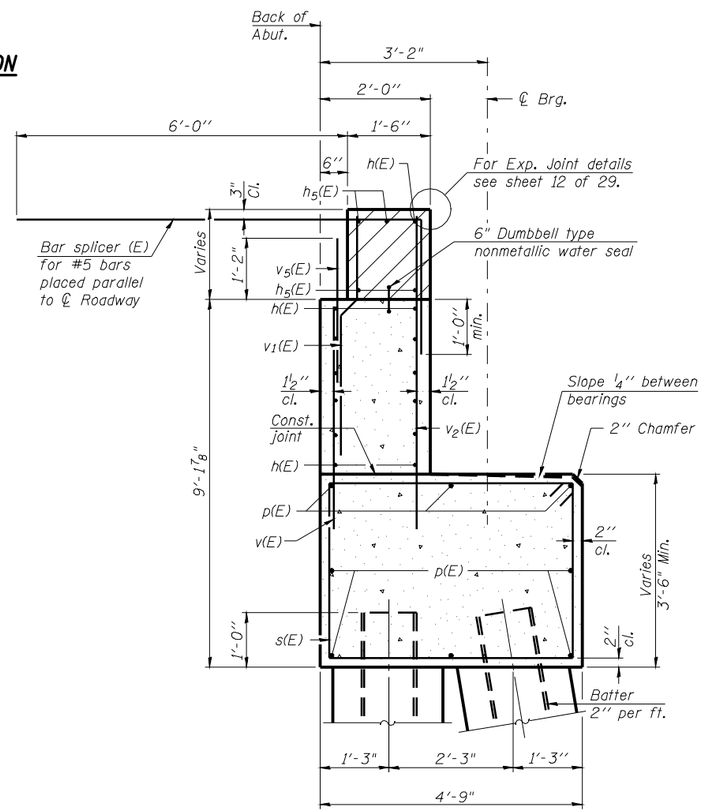




SECTION B-B
(South Wing shown. North similar)

*Cut to fit at North wall

SECTION C-C



SEC. THRU ABUT.
(At Rt. L's to Abut.)

Notes:
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Quantity of concrete in end post included with Concrete Superstructure on sheet 9 of 29.
For Concrete Encasement details, see sheet 25 of 29.
Work this sheet with sheet 20 of 29.

EAST ABUTMENT DETAILS
STRUCTURE NO. 005-0500

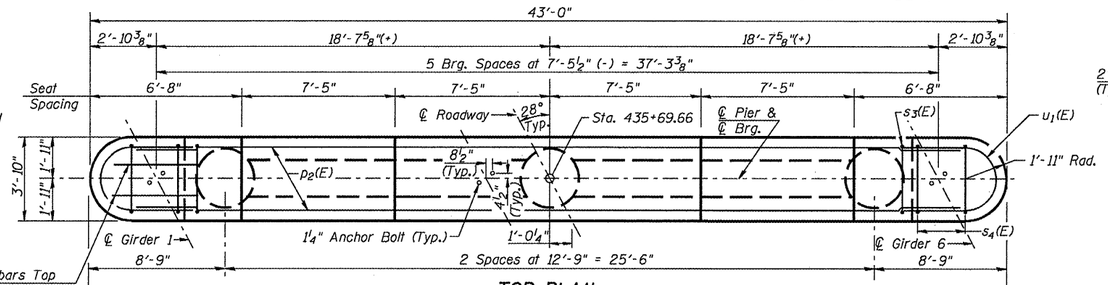
LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois
Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

SHEET NO. 21
29 SHEETS

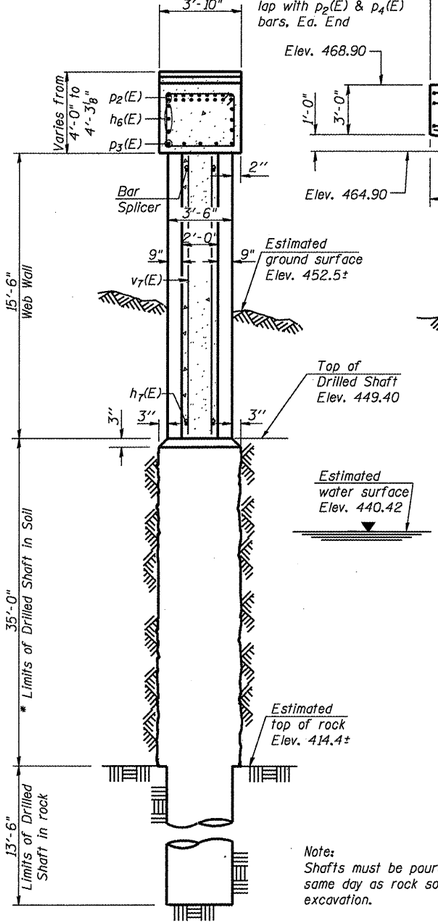
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	140
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

* If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



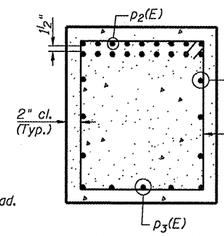
TOP PLAN



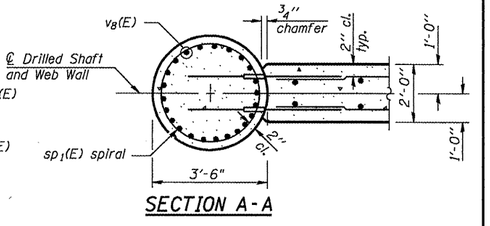
SECTION C-C

Note:
Shafts must be poured the same day as rock socket excavation.

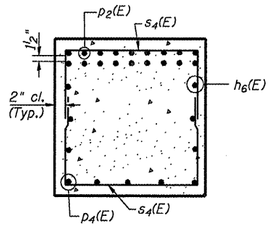
ELEVATION
(Looking East)



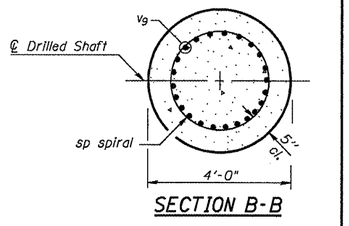
SECTION D-D



SECTION A-A



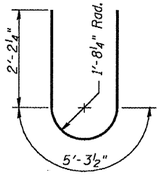
SECTION E-E



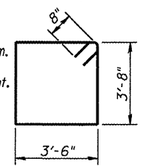
SECTION B-B

MIN. BAR LAP

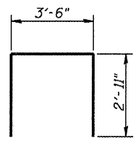
#5 bar = 2'-2"
#6 bar = 2'-7"



BAR u_1(E)



BAR s_3(E)



BAR s_4(E)

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h_6(E)	6	#5	39'-2"	——
	h_7(E)	64	#5	8'-11"	——
	p_2(E)	18	#10	39'-2"	——
	p_3(E)	5	#9	30'-0"	——
	p_4(E)	10	#9	6'-5"	——
	p_5(E)	20	#6	5'-6"	——
	s_3(E)	29	#6	15'-8"	□
	s_4(E)	40	#6	9'-4"	U
**	sp	3	#5	48'-3"	∧∧∧
**	sp_1(E)	3	#5	15'-8"	∧∧∧
	u_1(E)	8	#5	9'-8"	⊃
	v_7(E)	40	#5	15'-2"	——
	v_8(E)	69	#8	18'-0"	——
	v_9	69	#8	48'-3"	——
	v_{10}(E)	69	#8	9'-0"	——
	Structure Excavation			Cu. Yd.	24
	Concrete Structures			Cu. Yd.	63.8
	Reinforcement Bars			Pound	11850
	Reinforcement Bars, Epoxy Coated			Pound	13350
	Drilled Shaft in Soil			Cu. Yd.	48.9
	Drilled Shaft in Rock			Cu. Yd.	14.4

Cast steps monolithically with cap.
Space cap reinforcement to miss anchor bolts.
Minimum lap for spirals = 2'-2"
** Length is height of spiral.
See sheet 24 of 29 for Bar Splicer Details.

PIER 1 DETAILS
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

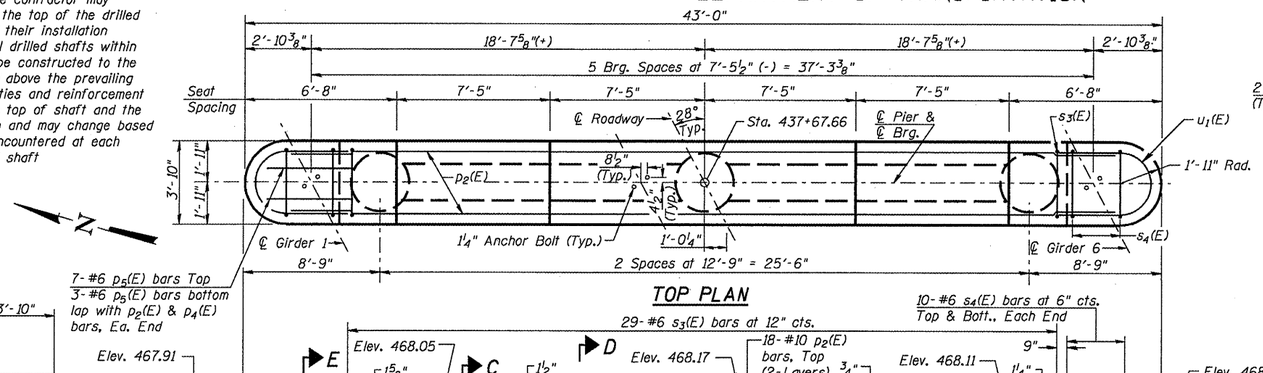
Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

SHEET NO. 22
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	141
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

* If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.

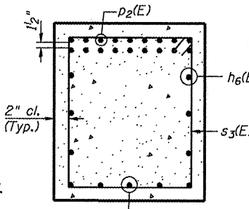
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



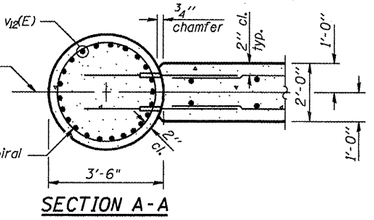
SECTION C-C

Note:
Shafts must be poured the same day as rock socket excavation.

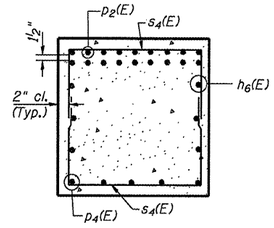
ELEVATION
(Looking East)



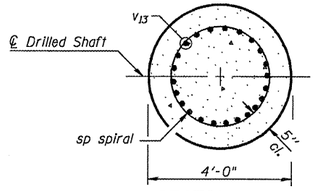
SECTION D-D



SECTION A-A



SECTION E-E



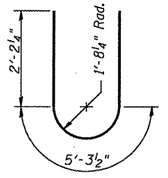
SECTION B-B

MIN. BAR LAP

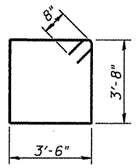
#5 bar = 2'-2"
#6 bar = 2'-7"

BILL OF MATERIAL

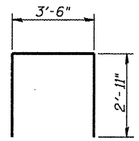
Bar	No.	Size	Length	Shape
$h_6(E)$	6	#5	39'-2"	——
$h_7(E)$	88	#5	8'-11"	——
$p_2(E)$	18	#10	39'-2"	——
$p_3(E)$	5	#9	30'-0"	——
$p_4(E)$	10	#9	6'-5"	——
$p_5(E)$	20	#6	5'-6"	——
$s_3(E)$	29	#6	15'-8"	□
$s_4(E)$	40	#6	9'-4"	⊔
** sp	3	#5	36'-3"	∧∧∧
** $sp_1(E)$	3	#5	22'-2"	∧∧∧
$u_1(E)$	8	#5	9'-8"	⊃
$v_{10}(E)$	69	#8	9'-0"	——
$v_{11}(E)$	40	#5	21'-8"	——
$v_{12}(E)$	69	#8	24'-6"	——
v_{13}	69	#8	36'-3"	——
Structure Excavation		Cu. Yd.	71	
Concrete Structures		Cu. Yd.	79.6	
Reinforcement Bars		Pound	8910	
Reinforcement Bars, Epoxy Coated		Pound	15720	
Drilled Shaft in Soil		Cu. Yd.	24.6	
Drilled Shaft in Rock		Cu. Yd.	20.3	



BAR $u_1(E)$



BAR $s_3(E)$



BAR $s_4(E)$

Cast steps monolithically with cap.
Space cap reinforcement to miss anchor bolts.
Minimum lap for spirals = 2'-2"
** Length is height of spiral.
See sheet 24 of 29 for Bar Splicer Details.

PIER 2 DETAILS
STRUCTURE NO. 005-0500

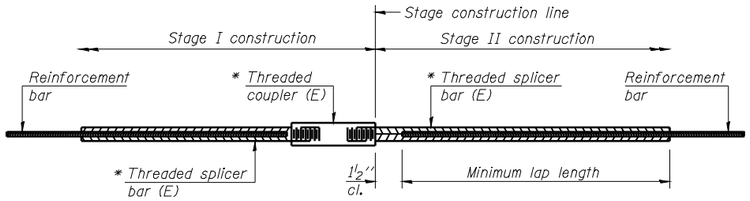
LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

SHEET NO. 23
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	142
		CONTRACT NO. 72432		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

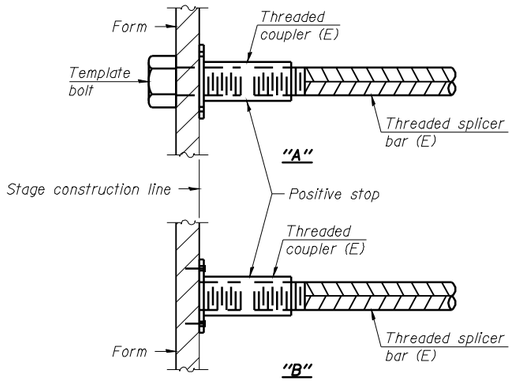
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

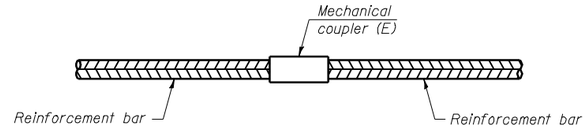
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Pier 1	#5	128	Table 3
Pier 2	#5	176	Table 3



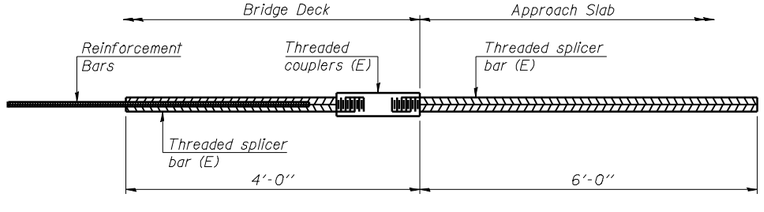
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



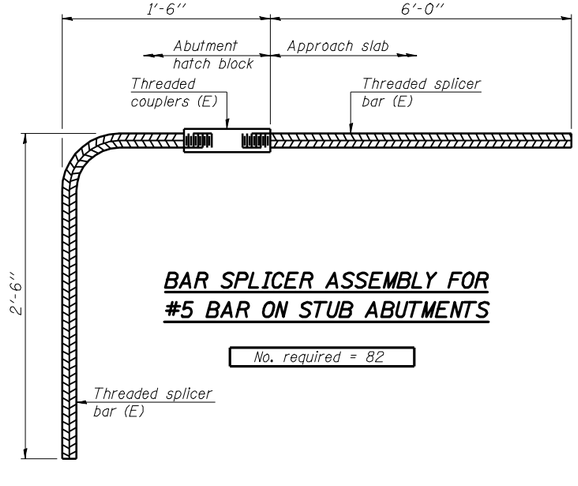
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 82

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See special provision for Mechanical Splicers.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 005-0500

LIN ENGINEERING,LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

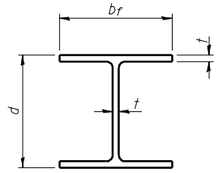
SHEET NO. 24
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	143
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

BSD-1

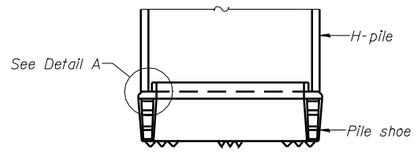
11-1-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

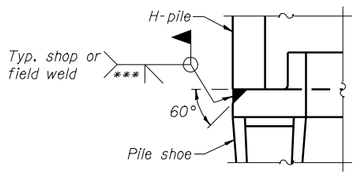


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

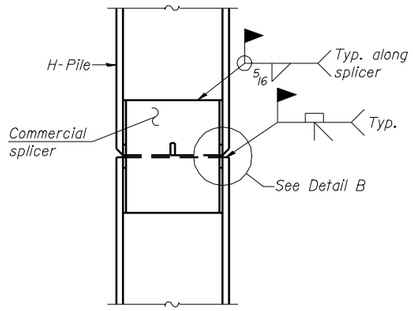


ELEVATION

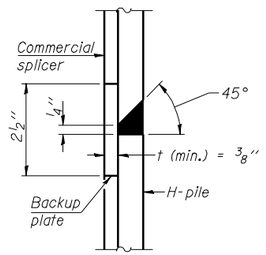


DETAIL A

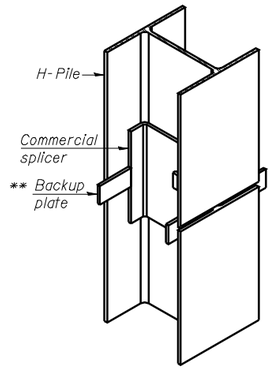
H-PILE SHOE ATTACHMENT



ELEVATION

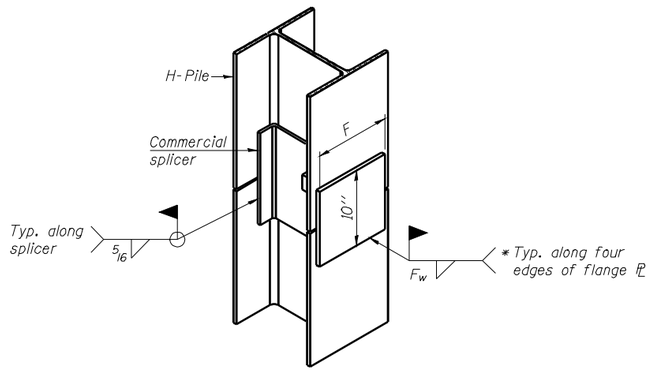


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



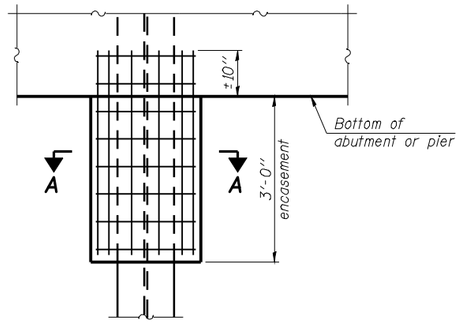
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

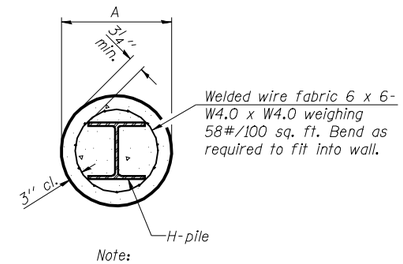
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



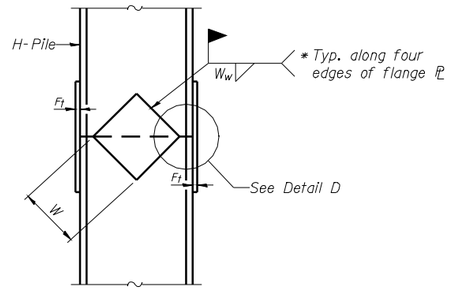
ELEVATION



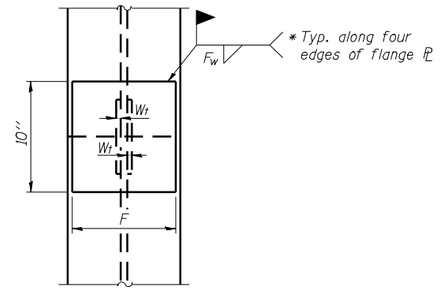
SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.

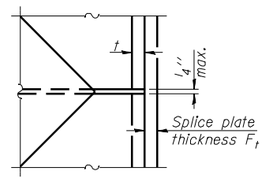
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_f	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

WELDED PLATE FIELD SPLICE

HP PILE DETAILS
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | Files: 005-0500.DGN

SHEET NO. 25
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	144
		CONTRACT NO. 72432		
		ILLINOIS FED. AID PROJECT		

F-HP

11-1-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation
Division of Highways
District 6

SOIL BORING LOG

Page 1 of 2

Date 4/23/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 over the Lamoine River LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 005-0001 Ex / 005-0500 Pr
Station 436+67

BORING NO. 3 W. Abut
Station 434+43
Offset 20.0ft Lt
Ground Surface Elev. 451.5 ft

Surface Water Elev. 436.1 ft
Stream Bed Elev. 431.2 ft

Groundwater Elev.:
▽ First Encounter 442.5 ft
▼ Upon Completion Washed ft
▼ After 22 Days Hrs. 445.0 ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown and Grey Moist SILTY CLAY LOAM			1		
			2	0.9	22
			2	B	
			0		
Grey V. Moist			1	0.3	26
		-5	2	B	
	446.00				
Grey Moist SILTY CLAY ▼			0		
			1	0.6	29
			2	B	
▽			0		
Brown and Light Grey V. Moist Free Water			0	0.2	22
		-10	1	B	
Moist			1		
			2	0.6	27
			2	B	
			0		
Grey and Light Brown			2	1.0	25
		-15	3	B	
			1		
			2	1.0	23
			3	B	
	432.50		0		
Brn Med Clean SAND			0		
W.O.H.		-20	0		

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brn Med Clean SAND (continued)			0		
W.O.H.			0		
			0		
			1		
w/Some Medium Grained GRAVEL Washed			1		
		-25	0		
			2		
Grey Fine Grained SAND w/Grey V. Moist Silty Clay Loam Seams Washed			1		
		-30	3		
			1		
Washed			2		
		-35	2		
	415.50				
Brown Medium Grained Angular L.S. GRAVEL			12		
			25		
	411.50	-40	75		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILS\GINT FILES\BROWN\005-0500 US 24 OVER LAMOINE RIVER.GPJ Data Template D6TEMPLT.GDT Date Printed 2/25/09
Latitude 40 Deg 01.569 N Longitude 90 Deg 37.978 W Datum NAD83 Job Number D96-535-00

Illinois Department of Transportation
Division of Highways
District 6

SOIL BORING LOG

Page 2 of 2

Date 4/23/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 over the Lamoine River LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 005-0001 Ex / 005-0500 Pr
Station 436+67

BORING NO. 3 W. Abut
Station 434+43
Offset 20.0ft Lt
Ground Surface Elev. 451.5 ft

Surface Water Elev. 436.1 ft
Stream Bed Elev. 431.2 ft

Groundwater Elev.:
▽ First Encounter 442.5 ft
▼ Upon Completion Washed ft
▼ After 22 Days Hrs. 445.0 ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Interpreted Brown Weathered Argillicious LIMESTONE			/4"		
	408.50				
Grey Moderately Indurated Clayey SHALE w/Calcareous Seams			4		
			46		
		-45	54		
			/3"		
	405.50				
Auger Refusal at 46'					
Boring Completed					
		-50			
		-55			
		-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILS\GINT FILES\BROWN\005-0500 US 24 OVER LAMOINE RIVER.GPJ Data Template D6TEMPLT.GDT Date Printed 2/25/09
Latitude 40 Deg 01.569 N Longitude 90 Deg 37.978 W Datum NAD83 Job Number D96-535-00

SOIL BORINGS (1 OF 4)

STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

Designed By: ADB | Checked By: MTH | Drawn By: AJF
Date: 06/2009 | File: 005-0500.DGN

SHEET NO. 26
29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(10B-1)R	BROWN/SCHUYLER	196	145
		CONTRACT NO. 72432		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG

Illinois Department of Transportation
Division of Highways
District 6

Date 4/19/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 over the Lamoine River LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 005-0001 Ex / 005-0500 Pr
Station 436+67

BORING NO. 4 Pier 1
Station 435+68
Offset 0.0ft
Ground Surface Elev. 452.9 ft

Surface Water Elev. 436.1 ft
Stream Bed Elev. 431.2 ft

Groundwater Elev.:
▽ First Encounter 433.4 ft
▼ Upon Completion Washed ft
▼ After 26 Days Hrs. Collapse ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Light Brownish Grey Moist SILTY CLAY LOAM with Thin Medium Sand Seams			0		
			1	0.5	23
			2	B	
			1		
		-5	1	0.5	28
			2	B	
			1		
			2	0.7	25
			1	S-12	
			0		
Very Moist		-10	1	0.2	24
	442.40		2	B	
Light Brown Moist SILTY CLAY			1		
			2	0.8	21
			3	B	
			0		
Wet		-15	1	0.2	25
			1	B	
			0		
			0	0.1	27
	434.40		1	B	
Grey & Lt. Brn Wet SILTY CLAY LOAM w/Med. Sand Seams ▽			0		
Free Water		-20	0	0.2	25
Grey & Lt. Brn Wet SILTY CLAY LOAM w/Med. Sand Seams (continued)			0	B	
			0		
Very Moist with Fine to Medium Sand Seam (Washed)			1	0.6	25
			2	B	
			0		
Light Grey to Brown & Grey Moist SILTY CLAY LOAM		-25	1	0.5	25
	426.90		1	B	
Brown Medium SAND to Coarse SAND with some Pea Gravel			3		
			4		
			6		
			1		
Brown Dirty Coarse SAND to SANDY GRAVEL (Washed)		-30	2		
	421.40		3		
Grey Moist SANDY CLAY LOAM with Small to Medium Gravel Clasts (Washed)			3		
			11		8
	419.40		22		
Olive Grey & Grey Moist SILTY CLAY (Till – Disturbed) (Washed)			9		
		-35	4	1.8	18
	414.40		6	B	
Drilled Very Hard Borehole continued with rock coring.		-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H – Sampler Advanced By Weight of Hammer, W.O.P – Advanced by Weight of Pipe, B.S. – Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILS\GINT FILES\BROWN\005-0500 US 24 OVER LAMOINE RIVER.GPJ Data Template D6TEMPLT.GDT Date Printed 2/25/09
Latitude 40 Deg 01.581N Longitude 90 Deg 37.956W Datum NAD83 Job Number D96-535-00

ROCK CORE LOG

Illinois Department of Transportation
Division of Highways
District 6

Date 4/19/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 over the Lamoine River LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown CORING METHOD Water

STRUCT. NO. 005-0001 Ex / 005-0500 Pr
Station 436+67

CORING BARREL TYPE & SIZE NQ2WL
Core Diameter 1.99 in
Top of Rock Elev. 414.40 ft
Begin Core Elev. 413.90 ft

BORING NO. 4 Pier 1
Station 435+68
Offset 0.0ft
Ground Surface Elev. 452.9 ft

Description	Elev.	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Grey Poorly Indurated Clayey SHALE Closed Joints 2"-12" Spacing			1	88	86		
		-40					
							12.2
			2	100	100		
		-45					15.8
	407.10						
Grey Moderately Indurated Fossiliferous Argilliceous LIMESTONE Interbedded with Dark Grey Well Indurated Calcareeous Shale Seams Open Joints Spaced 1' to 3' Filled with Soft Clay							278
			3	100	100		1016
		-50					
							373
	400.60						
Dark Grey Well Indurated Fossiliferous Calcareous SHALE No Jointing			4	100	100		
		-55					209
	396.50						
Grey Well Indurated Fossiliferous Argilliceous LIMESTONE Interbedded with Dark Grey Fossiliferous Calcareous Shale Seams Open Joints Spaced 1' to 3'	394.70						535

Color pictures of the cores Y
Cores will be stored for examination until 5 Yrs After Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run

BBS, form 138 (Rev. 8-99)

ROCK CORE 005-0500 US 24 OVER LAMOINE RIVER.GPJ D6TEMPLT.GDT 2/25/09

SOIL BORINGS (2 OF 4)

STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD. Consulting Engineers Chatham, Illinois	SHEET NO. 27 29 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Designed By: ADB Checked By: MTH Drawn By: AJF		317	(10B-1)R	BROWN/SCHUYLER	196	146
Date: 06/2009 File: 005-0500.DGN				CONTRACT NO. 72432		
			ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
District 6

SOIL BORING LOG

Page 1 of 2

Date 4/18/07

ROUTE	FAP 317 (US 24)	DESCRIPTION	US 24 over the Lamoine River	LOGGED BY	M. Tappan
SECTION	10(B-1)R	LOCATION	NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM		
COUNTY	Brown	DRILLING METHOD	HSA	HAMMER TYPE	140 # Auto

STRUCT. NO.	005-0001 Ex 005-0500 Pr
Station	436+67
BORING NO.	5 Pier 2
Station	437+70
Offset	0.0ft
Ground Surface Elev.	452.3 ft

Surface Water Elev.	436.1	ft
Stream Bed Elev.	431.2	ft
Groundwater Elev.:		
▽ First Encounter	435.3	ft
▼ Upon Completion	Cored	ft
▼ After 27 Days Hrs.	441.3	ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown and Grey Moist SILTY CLAY LOAM			0 2 2	 0.8 S-12	 18
with Loam Seams		-5	1 3 2	 0.6 B	 25
			1 1 1	 0.4 B	 23
Wet		-10	0 1 1	 0.2 B	 29
	▼441.30				
Grey and Brown Wet LOAM			0 0 1	 0.0 Slump	 27
	438.80				
Greyish Brown Wet SILTY CLAY LOAM		-15	0 0 1	 0.3 B	 23
	435.80				
Greyish Brown Very Moist SILTY CLAY ▽ Free Water			0 1 1	 0.4 B	 23
		-20	0 0	 0.4	 24
Greyish Brown Very Moist SILTY CLAY (continued)			0	B	
Brown and Grey			0 0 1	 0.5 B	 25
Moist		-25	0 2 2	 0.5 B	 21
Dark Grey			1 2 3	 1.5 B	 20
	424.30				
Grey Moist Clayey Shale Drilled Hard Borehole continued with rock coring.		-30 -35 -40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILS\GINT FILES\BROWN\005-0500 US 24 OVER LAMOINE RIVER.GPJ Data Template D6TEMPLT.GDT Date Printed 2/25/09
Latitude 40 Deg 01.608 N Longitude 90 Deg 37.927 W Datum NAD83 Job Number D96-535-00

Illinois Department of Transportation
Division of Highways
District 6

ROCK CORE LOG

Page 2 of 2

Date 4/18/07

ROUTE	FAP 317 (US 24)	DESCRIPTION	US 24 over the Lamoine River	LOGGED BY	M. Tappan
SECTION	10(B-1)R	LOCATION	NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM		
COUNTY	Brown	CORING METHOD	Water		

STRUCT. NO.	005-0001 Ex 005-0500 Pr
Station	436+67
BORING NO.	5 Pier 2
Station	437+70
Offset	0.0ft
Ground Surface Elev.	452.3 ft

CORING BARREL TYPE & SIZE	NQ2WL	
Core Diameter	1.99	in
Top of Rock Elev.	424.30	ft
Begin Core Elev.	423.30	ft

Description	Elev.	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Dark Grey Very Well Indurated Calcareous SHALE with Some Sandy Calcareous Shale Seams No Jointing		-30	1	98	98		113
	418.00						
Dark Grey Very Well Indurated Clay SHALE No Jointing		-35	2	100	100		60.4 32.9
0.5" Open Joint Filled with Soft Clayey Shale		-40	3	83	88		19.9
	408.20			100	79		
Dark Grey Poorly Indurated Clayey SHALE Closed Jointing Spaced 2" to 12"	407.70						15.2
Dark Grey Well Indurated Fossiliferous Calcareous SHALE Open Joints Spaced 2" to 12"		-45					
	405.90						
Dark Grey to Grey Well Indurated Fossiliferous Argilliceous LIMESTONE Interbedded with Grey Calcareous Seams Closed Joints Spaced 1' to 3'							
	404.10						294

Color pictures of the cores Y
Cores will be stored for examination until 5 Yrs After Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run

BBS, form 138 (Rev. 8-99)

ROCK CORE 005-0500 US 24 OVER LAMOINE RIVER.GPJ D6TEMPLT.GDT 2/25/09

SOIL BORINGS (3 OF 4)

STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD. Consulting Engineers Chatham, Illinois	SHEET NO. 28 29 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Designed By: ADB / Checked By: MTH / Drawn By: AJF Date: 06/2009 / File: 005-0500.DGN		317	(10B-1)R	BROWN/SCHUYLER	196	147
				CONTRACT NO. 72432		
			ILLINOIS	FED. AID PROJECT		

SOIL BORING LOG

Illinois Department of Transportation
Division of Highways
District 6

Page 1 of 2

Date 4/27/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 over the Lamoine River LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 005-0001 Ex / 005-0500 Pr
Station 436+67

BORING NO. 6 E. Abut
Station 439+00
Offset 9.0ft Lt
Ground Surface Elev. 473.4 ft

Surface Water Elev. 436.1 ft
Stream Bed Elev. 431.2 ft

Groundwater Elev.:
▽ First Encounter 453.9 ft
▼ Upon Completion Cored ft
▼ After 18 Days Hrs. 468.4 ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown and Grey Moist SILTY CLAY (Fill) with Some Broken Limestone and Sandstone Clasts			1 2 4	 1.6 B	 13
Grey and Brown with Shale Clasts ▼		-5	1 2 3	 1.1 B	 29
			1 2 3	 1.4 B	 19
Brown and Grey		-10	1 2 3	 1.7 B	 19
Dark Grey	459.90		0 2 3	 2.7 B	 15
Brown and Grey Moist SILTY CLAY		-15	1 2 3	 1.7 B	 20
Grey and Brown with Poorly Indurated Sandstone Cobble	454.40		2 6 19	 2.2 B	 24
▽		-20	1 2	 0.7	 23
Yellowish Brown and Grey moist Shaley CLAY Residuum Free Water (continued)	451.90		3	B	
Grey and Light Brown Very Weathered Poorly Indurated Clayey SHALE			3 7 10	 3.9 S-10	 22
Tan and Grey		-25	3 10 16	 7.4 S-10	 13
Grey Moist Moderately Indurated			4 16 25	 9.9 S-18	 10
Grey Dry Fissile	443.90		32		
Borehole continued with rock coring.		-30	100/2"		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILS\GINT FILES\BROWN\005-0500 US 24 OVER LAMOINE RIVER.GPJ Data Template D6TEMPLT.GDT Date Printed 2/25/09
Latitude 40 Deg 01.610 N Longitude 90 Deg 37.892 W Datum NAD83 Job Number D96-535-00

ROCK CORE LOG

Illinois Department of Transportation
Division of Highways
District 6

Page 2 of 2

Date 4/27/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 over the Lamoine River LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown CORING METHOD Water

STRUCT. NO. 005-0001 Ex / 005-0500 Pr
Station 436+67

CORING BARREL TYPE & SIZE NQ2WL
Core Diameter 1.98 in
Top of Rock Elev. 443.90 ft
Begin Core Elev. 443.90 ft

BORING NO. 6 E. Abut
Station 439+00
Offset 9.0ft Lt
Ground Surface Elev. 473.4 ft

Description	Elev.	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Grey Well Indurated Calcareous SHALE No Joints	443.90 442.50	-30	1	94	96		225
Brown Poorly Indurated Argilliceous LIMESTONE Open Joints Spaced <2"	442.20						
Grey Very Well Indurated Sandy Argilliceous LIMESTONE Closed Joints Spaced 1' to 3'		-35		100	98		372 439
	434.30	-40					
		-45					

Color pictures of the cores Y
Cores will be stored for examination until 5 Yrs After Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run

BBS, form 138 (Rev. 8-99)

ROCK CORE 005-0500 US 24 OVER LAMOINE RIVER.GPJ D6TEMPLT.GDT 2/25/09

SOIL BORINGS (4 OF 4)
STRUCTURE NO. 005-0500

LIN ENGINEERING, LTD. Consulting Engineers Chatham, Illinois	SHEET NO. 29 / 29 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Designed By: ADB / Checked By: MTH / Drawn By: AJF		317	(10B-1)R	BROWN/SCHUYLER	196	148
Date: 06/2009 / File: 005-0500.DGN				CONTRACT NO. 72432		
				ILLINOIS FED. AID PROJECT		

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	149
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

530 525 520 515 510

EXISTING R-O-W LINE

℄

528.33

1:3

1:3

S17.02

FO

CUT = 3.90 SQ. FT.
FILL = 18.70 SQ. FT

TOPSOIL PLACEMENT = 11.60 SQ. FT.

EXISTING R-O-W LINE

PE

EXISTING 24" CMP

ZERO EARTHWORK RIGHT

418+50.00

℄

EXISTING R-O-W LINE

530.76

FO

EXISTING R-O-W LINE

ZERO EARTHWORK LEFT

CONSTRUCTION BEGINS STA. 418+00

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

418+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

FINAL SURVEY	DATE
	BY
SURVEYED	
PLOTTED	
TRIANGULATE	
NOTE BOOK	AREAS
NO.	AREAS CHECKED

ORIGINAL SURVEY	DATE
	BY
SURVEYED	
PLOTTED	
TRIANGULATE	
NOTE BOOK	AREAS
NO.	AREAS CHECKED

PLOT DATE = Mar-24-2010 10:22:26AM
PLOT TIME = 10:22:26 AM
FILE NAME = #FILE#

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	150
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 77 OF 123

FINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TYPE SCALE	AREAS	AREAS CHECKED	BY	DATE
ORIGINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TYPE SCALE	AREAS	AREAS CHECKED	BY	DATE

PLOT DATE = Mar-24-2010 10:23:03 AM
PLOT TIME = 10:23:03 AM
FILE NAME = $FILE$

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

530 525 520 515 510

PROPOSED R-O-W LINE
EXISTING R-O-W LINE
℄
523.61
514.97
1:3
1:4
FO
CUT = 191.30 SQ. FT.
FILL = 94.10 SQ. FT
TOPSOIL PLACEMENT = 43.70 SQ. FT.
EXISTING R-O-W LINE
508.70
PROPOSED R-O-W LINE

419+50.00

EXISTING R-O-W LINE
℄
525.92
516.00
1:3
1:4
FO
CUT = 86.00 SQ. FT.
FILL = 73.00 SQ. FT
TOPSOIL PLACEMENT = 31.20 SQ. FT.
EXISTING R-O-W LINE
514.39
PROPOSED R-O-W LINE

LEGEND
- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

419+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

CONTRACT NO. 72432

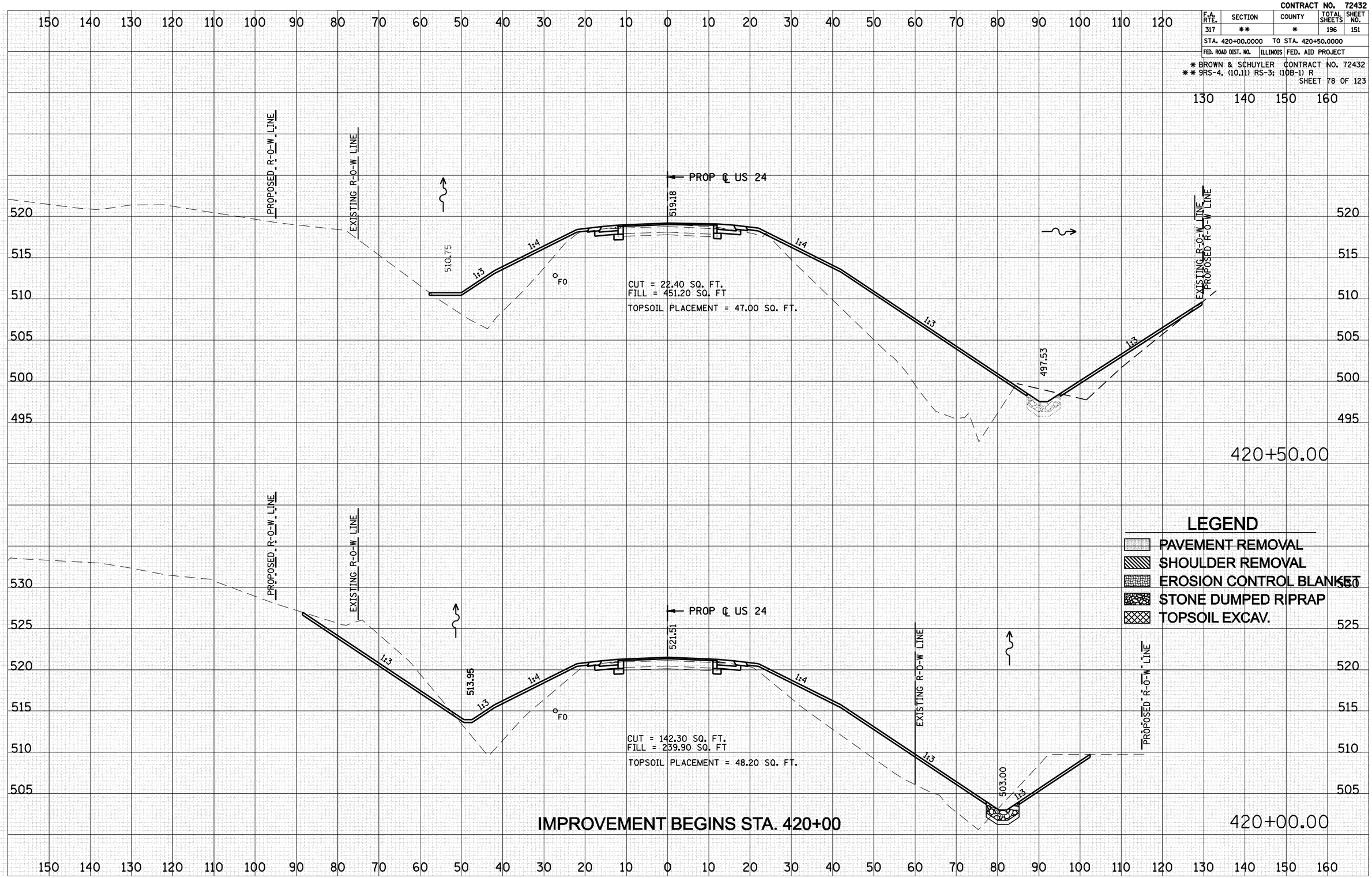
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	151
STA. 420+00.0000	TO STA. 420+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED	CHECKED	AREAS CHECKED
PLOTTED	TYPED	
TRIANGULATE	AREAS	

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED	CHECKED	AREAS CHECKED
PLOTTED	TYPED	
TRIANGULATE	AREAS	

PLOT DATE = Mar-24-2010 10:23:42 AM
PLOT TIME = 10:23:42 AM
FILE NAME = #FILE#



CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	152
STA. 421+00.0000	TO STA. 421+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	BY
	PLOTTED	DATE
	TYPED/CHK'E	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	BY
	PLOTTED	DATE
	TYPED/CHK'E	
	AREAS	
	AREAS CHECKED	

PLOT DATE = Mar-24-2010 10:24:04AM
PLOT TIME = 10:24:10 AM
FILE NAME = #FILE#

PROPOSED R-O-W LINE
EXISTING R-O-W LINE
PROP ℄ US 24
516.84
509.21
1:4
1:3
FO
CUT = 8.80 SQ. FT.
FILL = 218.70 SQ. FT
TOPSOIL PLACEMENT = 29.00 SQ. FT.
421+00.00
517.69
508.70
CUT = 26.30 SQ. FT.
FILL = 507.10 SQ. FT
TOPSOIL PLACEMENT = 50.30 SQ. FT.
5.6%
US ℄= 503.64
51.7' LT.
DS ℄= 503.08
42.5' LT.
PROP. PIPE CULVERT
TYPE 2 RCCP 30" @ 5.6%
MANHOLE TYPE A, 4' DIA
TYPE 8 GRATE
SEE CULVERT DETAIL
4.1%
US ℄= 497.26
59.2' RT.
PROP. PIPE CULVERT
TYPE 2 RCCP 30" @ 4.1%
DS ℄= 495.61
84.2' RT.
CONCRETE FLARED
END SECTION 30"
SEE CULVERT DETAIL
℄=482.72
130.8' RT.
℄=480.28
153' RT.
1:9
STONE DUMPED
RIPRAP, CLASS A4
420+81.94

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

CONTRACT NO. 72432

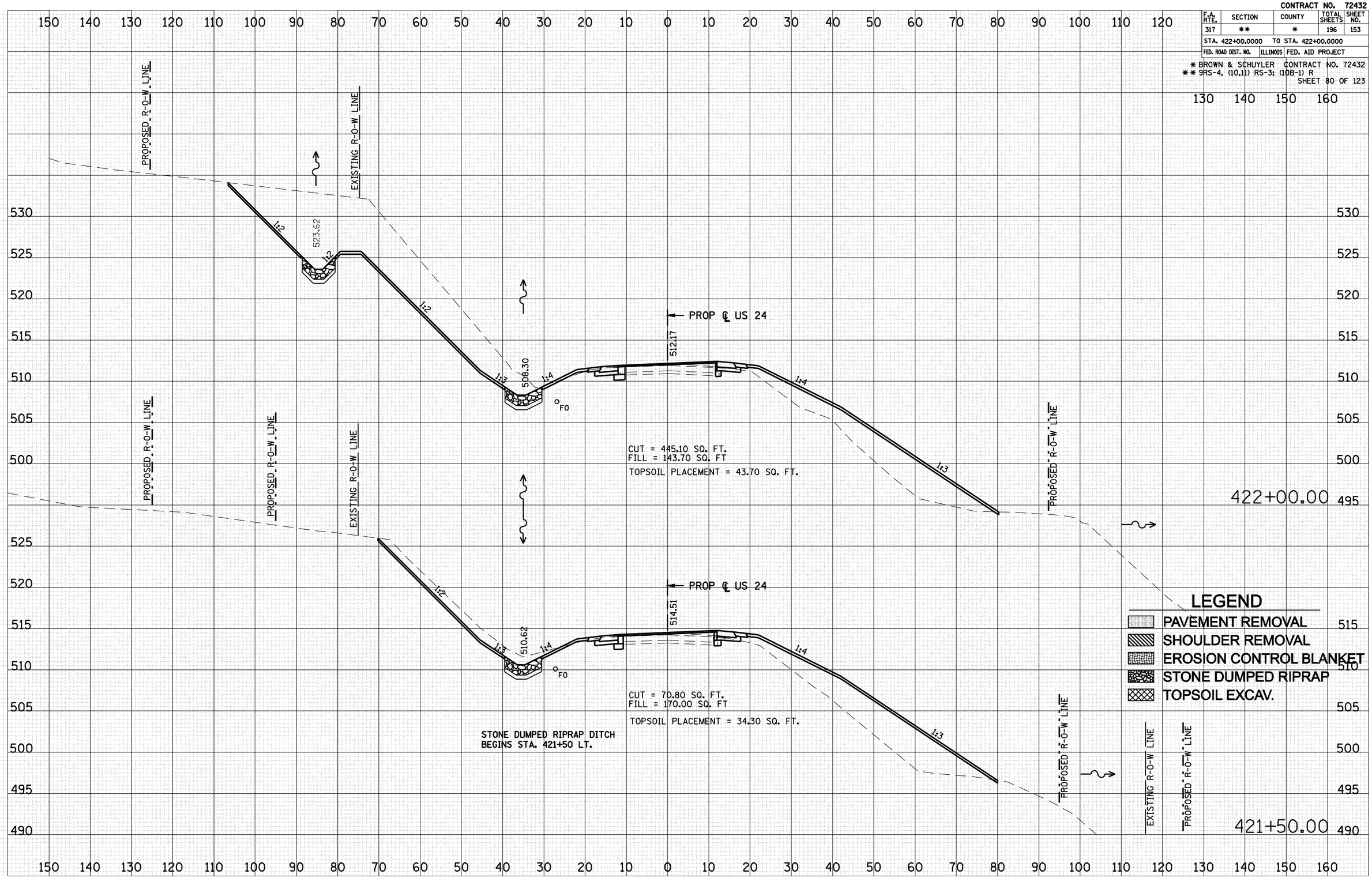
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	153
STA. 422+00.0000	TO STA. 422+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TYPING DATE
	AREAS
	AREAS CHECKED

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TYPING DATE
	AREAS
	AREAS CHECKED

PLOT DATE = Mar-24-2018 18h24m56sAM
PLOT TIME = 18h24m56 AM
FILE NAME = #FILE#



CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	154
STA. 422+50.0000	TO STA. 422+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

SHEET 81 OF 123

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TYPED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TYPED
AREAS
AREAS CHECKED
BY
DATE

PLOT DATE = Mar-24-2010 10:25:32AM
PLOT TIME = 10:25:32 AM
FILE NAME = @FILE@

PROPOSED R-O-W LINE
EXISTING R-O-W LINE
PROPOSED R-O-W LINE
EXISTING R-O-W LINE
PROPOSED R-O-W LINE
PROPOSED R-O-W LINE

518.97
521.29
503.65
505.97
507.51
509.84
502.13

1:2
1:3
1:4

PROP ℄ US 24
PROP ℄ US 24

FO
FO

CUT = 678.15 SQ. FT.
FILL = 9.55 SQ. FT
TOPSOIL PLACEMENT = 39.20 SQ. FT.

CUT = 730.50 SQ. FT.
FILL = 45.00 SQ. FT
TOPSOIL PLACEMENT = 47.50 SQ. FT.

423+00.00
422+50.00

LEGEND
- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	155
STA. 423+50.0000	TO STA. 423+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

SHEET 82 OF 123

	DATE
BY	
SURVEYED	
PLOTTED	
TYPING DATE	
AREAS	
AREAS CHECKED	
FINAL SURVEY NOTE BOOK	
NO.	

	DATE
BY	
SURVEYED	
PLOTTED	
TYPING DATE	
AREAS	
AREAS CHECKED	
ORIGINAL SURVEY NOTE BOOK	
NO.	

PLOT DATE = Mar-24-2010 10:26:08AM
PLOT TIME = 10:26:08 AM
FILE NAME = #FILE#

MAIN ST.

HMA PAVEMENT
FULL DEPTH 13.5"

PROP. PIPE CULVERT
TYPE 2 RCCP 18" X 68'
PRC FLARED END SECTIONS 18"
U/S FL = 500.28
D/S FL = 497.10

498.99

11.2%

PROP ℄ US 24

502.84

497.48

1:4

1:3

EXISTING R-O-W LINE

PROPOSED R-O-W LINE

CUT = 212.30 SQ. FT.
FILL = 0.80 SQ. FT

TOPSOIL EXCAVATION = 31.70 SQ. FT.
TOPSOIL PLACEMENT = 18.70 SQ. FT.

424+00.00

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

1:2

516.64

1:2

1:2

1:3

501.32

1:4

PROP ℄ US 24

505.17

499.80

1:4

1:3

PROPOSED R-O-W LINE

CUT = 621.80 SQ. FT.
FILL = 3.80 SQ. FT

TOPSOIL PLACEMENT = 40.70 SQ. FT.

423+50.00

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	156
STA. 424+50.0000		TO STA. 424+50.0000		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TRIANGULATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TRIANGULATE	
	AREAS	
	AREAS CHECKED	

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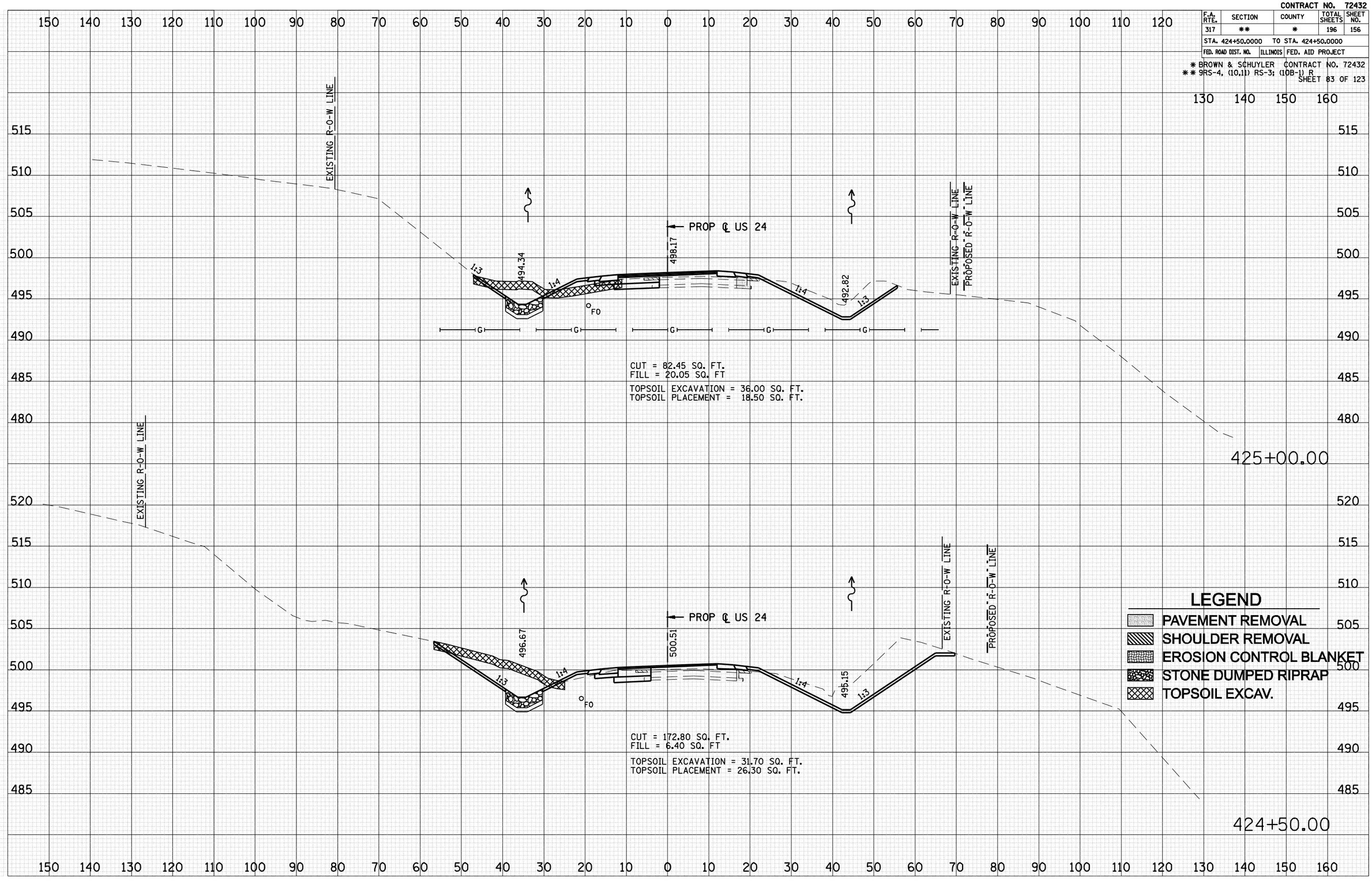

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	157
STA. 425+50.0000	TO STA. 425+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TYPICAL SHEET	AREAS	AREAS CHECKED	BY	DATE

ORIGINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TYPICAL SHEET	AREAS	AREAS CHECKED	BY	DATE

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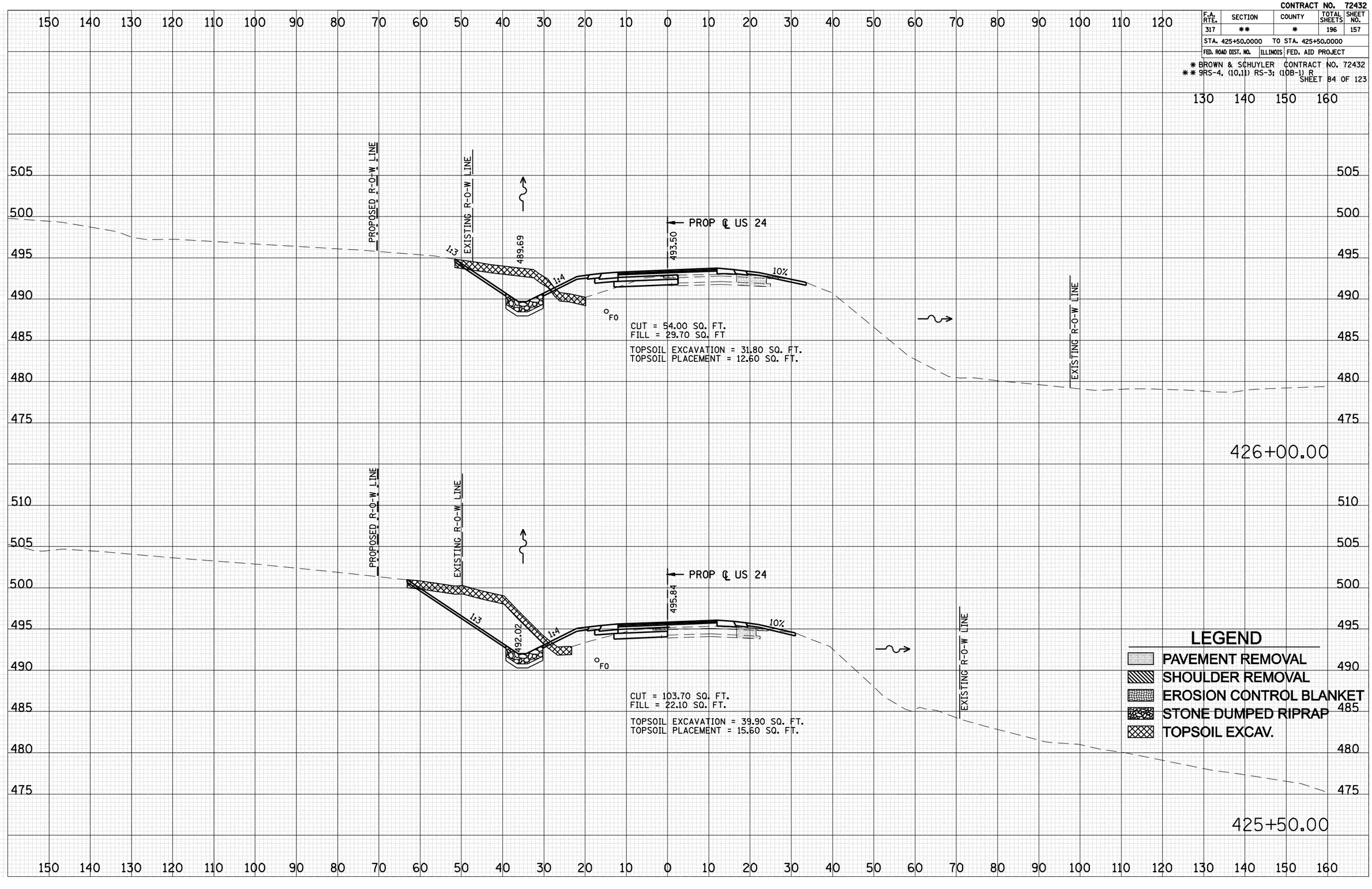


CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	158
STA. 426+00.0000	TO STA. 426+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 85 OF 123

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

490 485 480 475 495 500

F.E.

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

← PROP ℄ US 24

487.75

AGG BASE COURSE TYPE B, 6"

9.0%

4.0%

6%

480.56

FO

PROP. PIPE CULVERT
TYPE 2 CS/A CP 18" X 58
U/S FL = 481.92
D/S FL = 478.07

TOPSOIL EXCAVATION = 20.50 SQ. FT.
TOPSOIL PLACEMENT = 8.95 SQ. FT.

427+36.50

489.18

1:3

1:4

483.03

CUT = 29.10 SQ. FT.
FILL = 88.30 SQ. FT

TOPSOIL EXCAVATION = 43.20 SQ. FT.
TOPSOIL PLACEMENT = 16.80 SQ. FT.

427+00.00

491.26

486.36

CUT = 23.40 SQ. FT.
FILL = 58.60 SQ. FT

TOPSOIL EXCAVATION = 32.80 SQ. FT.
TOPSOIL PLACEMENT = 12.60 SQ. FT.

426+50.00

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

EXISTING R-O-W LINE

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TRIANGULATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TRIANGULATE		
AREAS		
AREAS CHECKED		

BY DATE

PLOT DATE = Mar-24-2010 10:28:01AM
PLOT TIME = 10:28:01 AM
FILE NAME = $FILE$

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	159
STA. 427+00.0000	TO STA. 427+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

490 485 480 475

PROPOSED R-O-W LINE

EXISTING R-O-W

PROP ℄ US 24

485.56

476.35

1:3 1:3 1:4

6%

FO

EXISTING R-O-W LINE

CUT = 25.20 SQ. FT.
FILL = 209.00 SQ. FT.

TOPSOIL EXCAVATION = 55.80 SQ. FT.
TOPSOIL PLACEMENT = 23.50 SQ. FT.

428+00.00

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

495 490 485 480 475

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

PROP ℄ US 24

487.28

478.61

1:3 1:3 1:4

HMA 3.5"
4.0%

AGG BASE COURSE TYPE B, 6"

12.0%

FO

PE

TOPSOIL EXCAVATION = 40.49 SQ. FT.
TOPSOIL PLACEMENT = 13.80 SQ. FT.

427+65.90

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPING DATE				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPING DATE				
AREAS				
AREAS CHECKED				

PLOT DATE = Mar-24-2010 10:28:38AM
PLOT TIME = 10:28:38 AM
FILE NAME = #FILE#

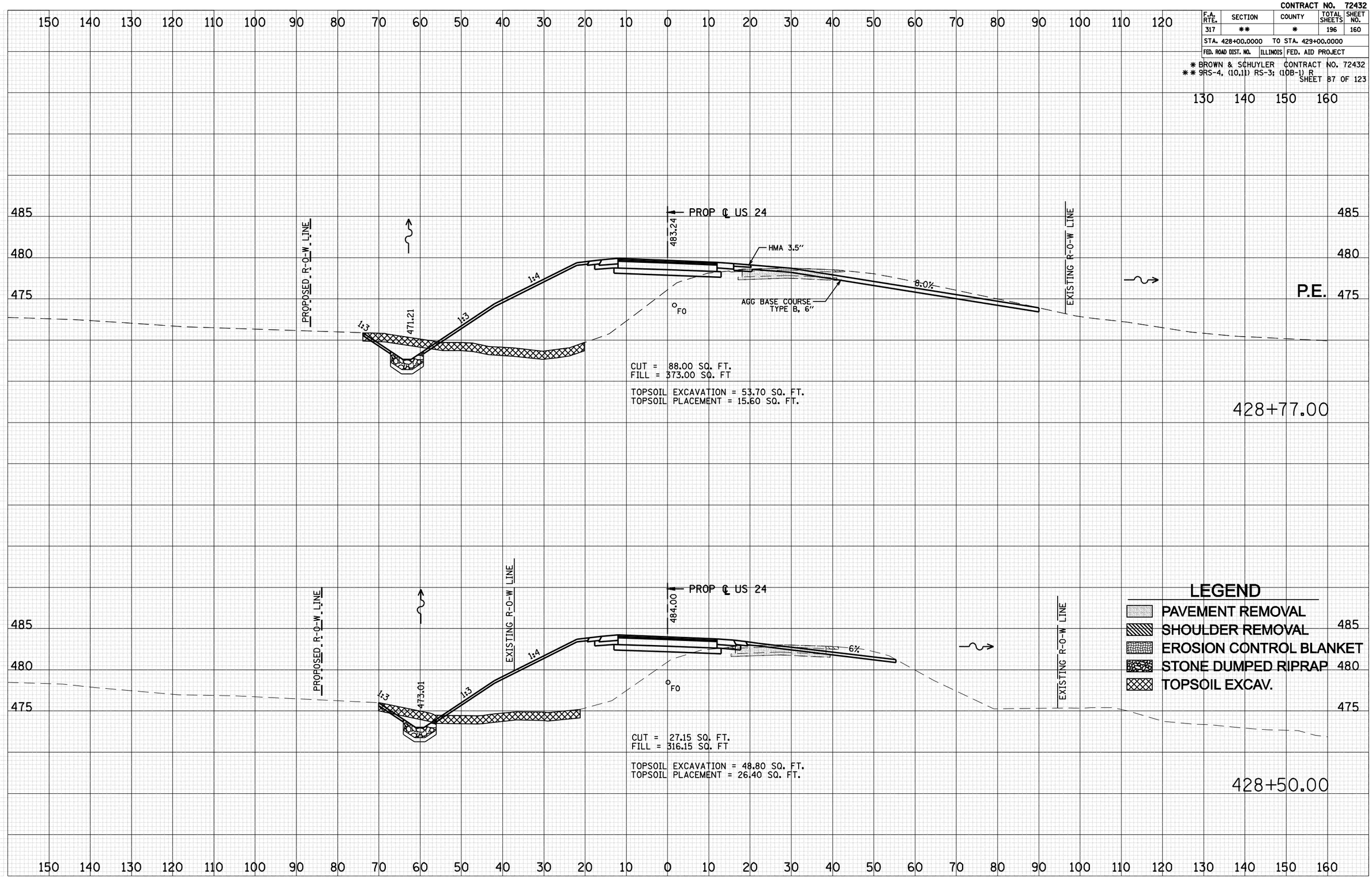
CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	160
STA. 428+00.0000	TO STA. 429+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

SHEET 87 OF 123

	DATE
BY	
FINAL SURVEY	SURVEYED
	PLOTTED
	TRIANGULATE
NOTE BOOK	AREAS
NO.	AREAS CHECKED



	DATE
BY	
ORIGINAL SURVEY	SURVEYED
	PLOTTED
	TRIANGULATE
NOTE BOOK	AREAS
NO.	AREAS CHECKED

PLOT DATE = Mar-24-2010
PLOT TIME = 10:29:13 AM
FILE NAME = #FILE#

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	161
STA. 429+50.0000	TO STA. 430+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

480 475 470 465

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

← PROP ℄ US 24

480.39

1:4

1:3

1:3

463.00

6%

FO

CUT = 27.40 SQ. FT.
FILL = 705.90 SQ. FT

TOPSOIL EXCAVATION = 57.10 SQ. FT.
TOPSOIL PLACEMENT = 35.00 SQ. FT.

EXISTING R-O-W LINE

430+00.00

485 480 475 470 465

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

← PROP ℄ US 24

481.42

1:4

1:3

1:3

466.34

6%

FO

CUT = 24.10 SQ. FT.
FILL = 600.40 SQ. FT

TOPSOIL EXCAVATION = 47.00 SQ. FT.
TOPSOIL PLACEMENT = 31.80 SQ. FT.

EXISTING R-O-W LINE

429+50.00

485 480 475 470

PROPOSED R-O-W LINE

EXISTING R-O-W LIN

← PROP ℄ US 24

482.63

1:4

1:3

1:3

469.68

6%

FO

CUT = 31.90 SQ. FT.
FILL = 424.40 SQ. FT

TOPSOIL EXCAVATION = 44.20 SQ. FT.
TOPSOIL PLACEMENT = 29.40 SQ. FT.

EXISTING R-O-W LINE

429+00.00

485 480 475 470

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
	SURVEYED			
	PLOTTED			
	TYPED			
	AREAS			
	AREAS CHECKED			

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
	SURVEYED			
	PLOTTED			
	TYPED			
	AREAS			
	AREAS CHECKED			

PLOT DATE = Mar-24-2018 10:29:51AM
PLOT TIME = 10:29:51 AM
FILE NAME = #FILE9

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	162
STA. 430+50.0000	TO STA. 431+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 89 OF 123

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

480 475 470 465 460

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

459.13

1:3

1:4

478.85

PROP ℄ US 24

6%

FO

TBT TYPE 1, SPECIAL (TANGENT)
BEGINS RT. STA 430+84.03

EXTEND SHOULDER TO
FACE OF GUARDRAIL

CUT = 23.80 SQ. FT.
FILL = 689.80 SQ. FT

TOPSOIL EXCAVATION = 40.00 SQ. FT.
TOPSOIL PLACEMENT = 37.30 SQ. FT.

431+00.00

479.53

461.06

CUT = 17.80 SQ. FT.
FILL = 568.70 SQ. FT

TOPSOIL EXCAVATION = 26.50 SQ. FT.
TOPSOIL PLACEMENT = 34.70 SQ. FT.

430+50.00

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	
PLOTTED		DATE
TRIANGULATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	
PLOTTED		DATE
TRIANGULATE		
AREAS		
AREAS CHECKED		

PLOT DATE = Mar-24-2010 10:30:28AM
PLOT TIME = 10:30:28 AM
FILE NAME = $FILE$

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	163
STA. 431+50.0000	TO STA. 432+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
	SURVEYED			
	PLOTTED			
	TRIANGULATE			
	AREAS			
	AREAS CHECKED			

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

480 475 470 465 460 455

PROP ℄ US 24

478.00

1:4

1:3

6%

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

455.25

1:3

FO

TBT TYPE 1, SPECIAL (TANGENT)
BEGINS RT. STA 431+90.31

EXTEND SHOULDER TO
FACE OF GUARDRAIL

EXTEND SHOULDER TO
FACE OF GUARDRAIL

CUT = 33.50 SQ. FT.
FILL = 1223.60 SQ. FT

TOPSOIL EXCAVATION = 65.20 SQ. FT.
TOPSOIL PLACEMENT = 40.50 SQ. FT.

EXISTING R-O-W LINE

432+00.00

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
	SURVEYED			
	PLOTTED			
	TRIANGULATE			
	AREAS			
	AREAS CHECKED			

PROP ℄ US 24

478.34

1:4

1:3

6%

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

457.19

1:3

FO

TBT TYPE 1, SPECIAL (TANGENT)
ENDS RT. STA 431+34.03

SPBGR TYPE A
BEGINS RT. STA. 431+34.03

EXTEND SHOULDER TO
FACE OF GUARDRAIL

CUT = 30.00 SQ. FT.
FILL = 1087.50 SQ. FT

TOPSOIL EXCAVATION = 64.90 SQ. FT.
TOPSOIL PLACEMENT = 39.20 SQ. FT.

EXISTING R-O-W LINE

431+50.00

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

PLOT DATE = Mar-24-2010 10:31:05 AM
PLOT TIME = 10:31:05 AM
FILE NAME = #FILE#

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	164
STA. 432+50.0000	TO STA. 433+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

SHEET 91 OF 123

	DATE
BY	
FINAL SURVEY	SURVEYED
	PLOTTED
NOTE BOOK	VOLUME
NO.	AREAS
	AREAS CHECKED

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

480 475 470 465 460 455

PROP ℄ US 24

477.50

6%

1:3

EXTEND SHOULDER TO
FACE OF GUARDRAIL

FO

EXTEND SHOULDER TO
FACE OF GUARDRAIL

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

451.38

1:3

1:3

CUT = 21.90 SQ. FT.
FILL = 1340.00 SQ. FT

TOPSOIL EXCAVATION = 81.60 SQ. FT.
TOPSOIL PLACEMENT = 41.40 SQ. FT.

EXISTING R-O-W LINE

433+00.00

PROP ℄ US 24

477.75

1:3.5

6%

TBT TYPE 1, SPECIAL (TANGENT)
ENDS LT. STA 432+40.31

FO

SPBGR TYPE A
BEGINS LT STA 432+40.31

EXTEND SHOULDER TO
FACE OF GUARDRAIL

EXTEND SHOULDER TO
FACE OF GUARDRAIL

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

453.31

1:3

1:3

CUT = 23.40 SQ. FT.
FILL = 1280.50 SQ. FT

TOPSOIL EXCAVATION = 61.00 SQ. FT.
TOPSOIL PLACEMENT = 39.30 SQ. FT.

EXISTING R-O-W LINE

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

432+50.00

	DATE
BY	
ORIGINAL SURVEY	SURVEYED
	PLOTTED
NOTE BOOK	VOLUME
NO.	AREAS
	AREAS CHECKED

PLOT DATE = Mar-24-2010 18:31:43 AM
PLOT TIME = 18:31:43 AM
FILE NAME = #FILE#

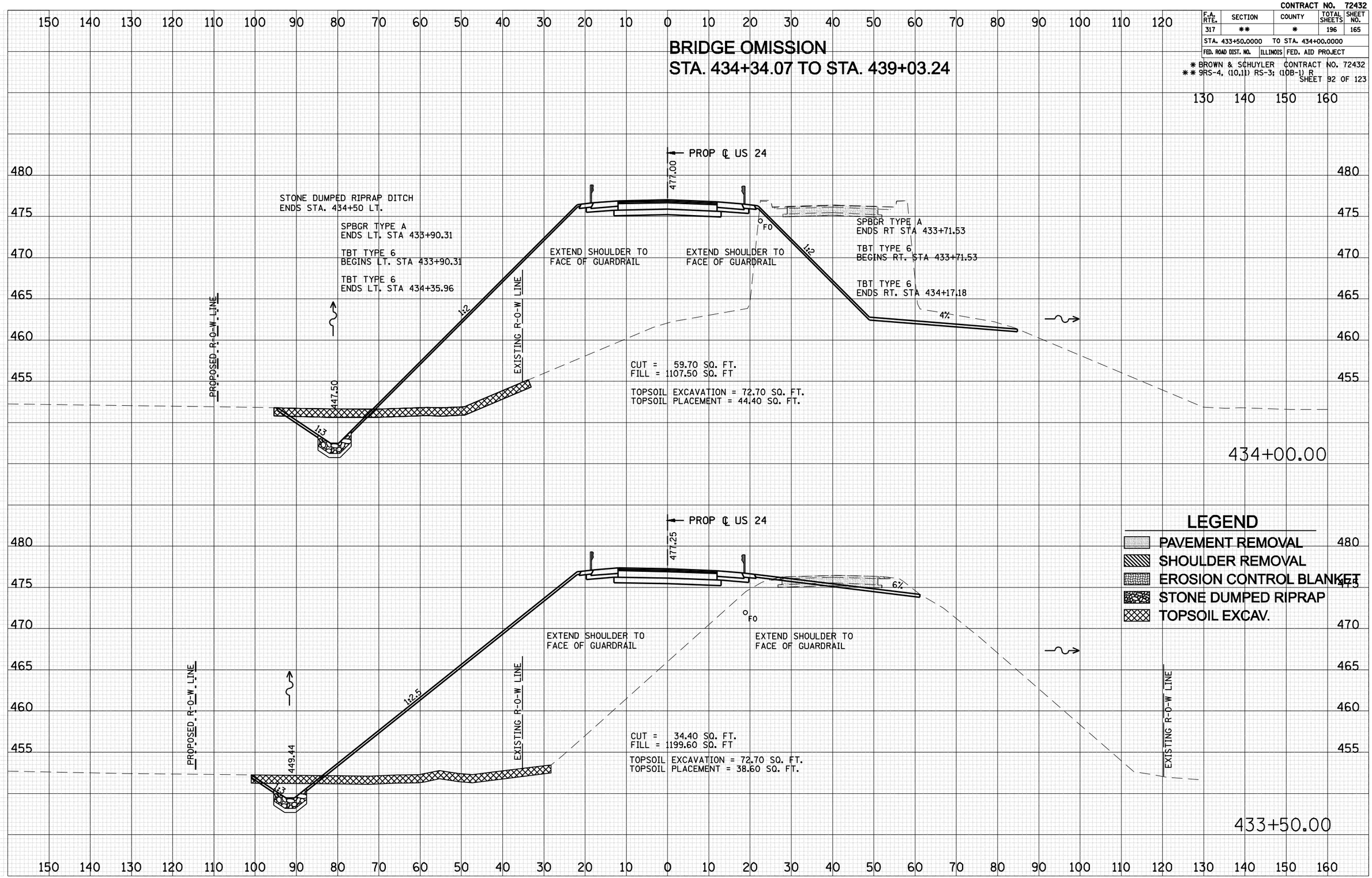
CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	165
STA. 433+50.0000	TO STA. 434+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 92 OF 123

BRIDGE OMISSION
STA. 434+34.07 TO STA. 439+03.24

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPING DATE				
AREAS				
AREAS CHECKED				



ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPING DATE				
AREAS				
AREAS CHECKED				

PLOT DATE = Mar-24-2010 10:32:21AM
PLOT TIME = 10:32:21 AM
FILE NAME = #FILE#

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	166
STA. 439+50.0000	TO STA. 439+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPING DATE				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPING DATE				
AREAS				
AREAS CHECKED				

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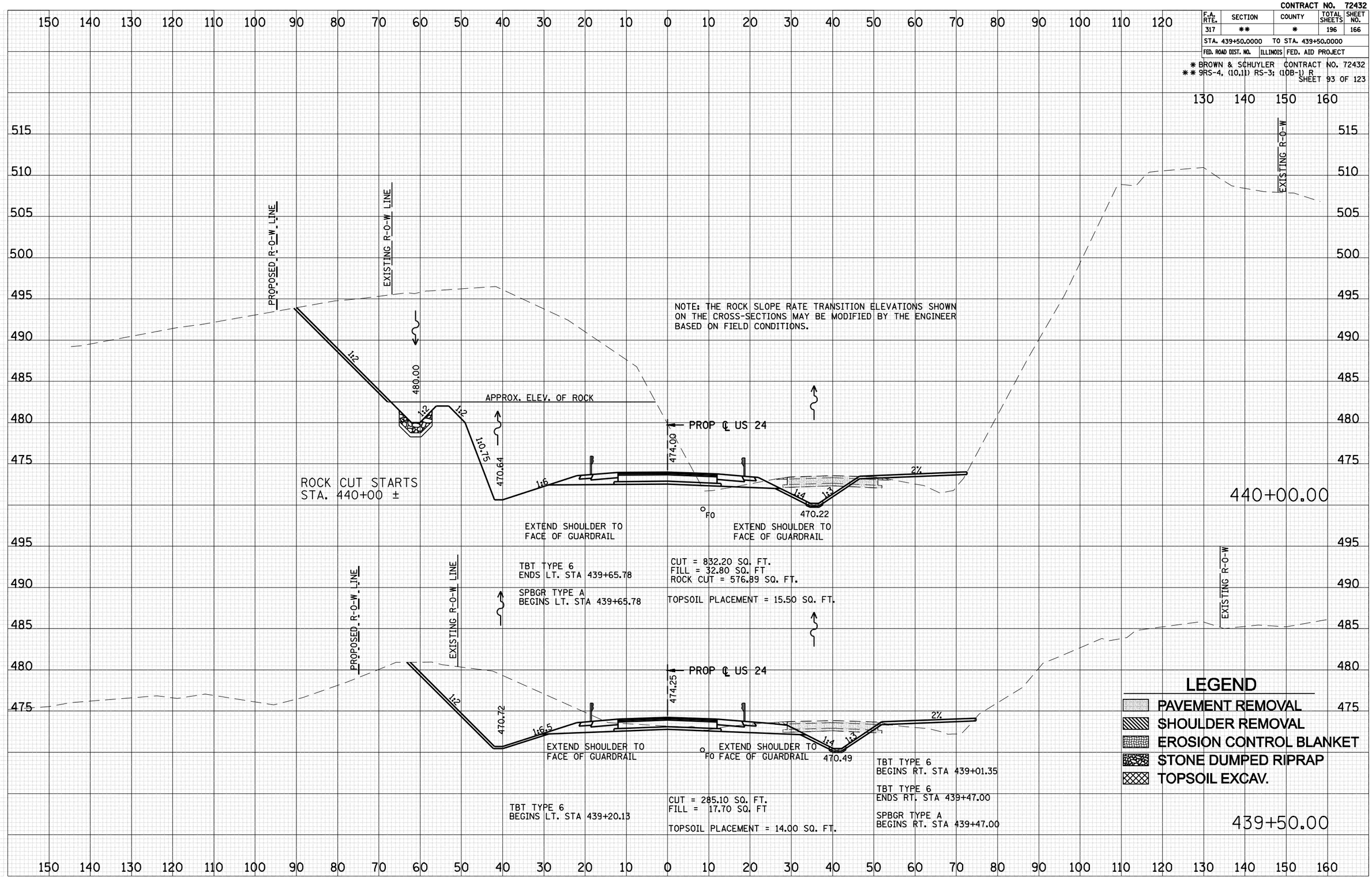
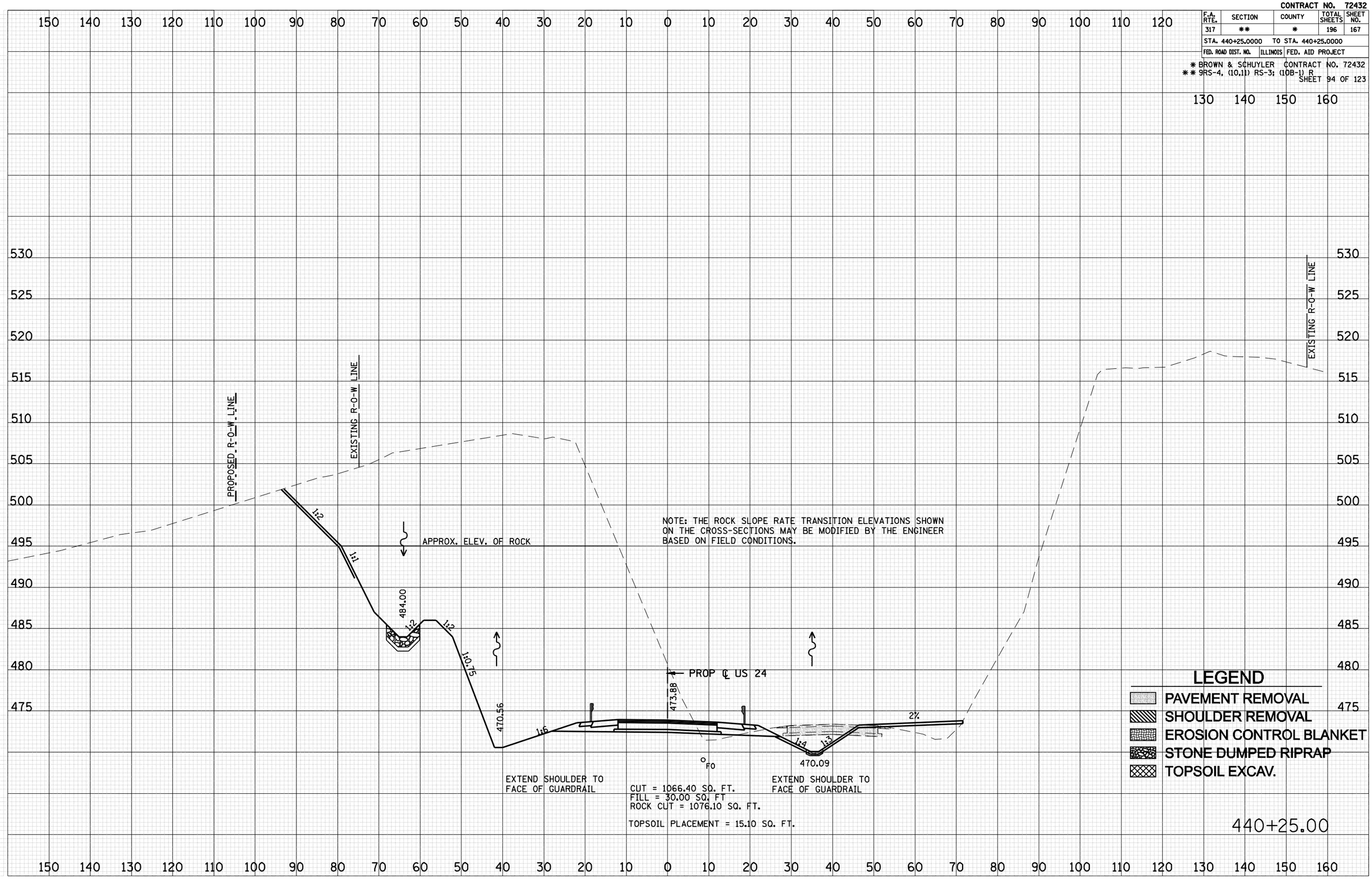


CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	167
STA. 440+25.0000	TO STA. 440+25.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R



FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TYPED — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TYPED — AREAS — AREAS CHECKED — BY — DATE

PLOT DATE = Mar-25-2010 03:39:51PM
PLOT TIME = 3.39561 PM
FILE NAME = #FILE9

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	168
STA. 440+50.0000	TO STA. 440+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 95 OF 123

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPING DATE				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPING DATE				
AREAS				
AREAS CHECKED				

PLOT DATE = Mar-25-2010 03:48:38PM
PLOT TIME = 3:48:38 PM
FILE NAME = #FILE#

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

530 525 520 515 510 505 500 495 490 485 480 475 470

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

1:2

APPROX. ELEV. OF ROCK

1:1

1:2

486.00

1:0.75

470.50

1:6

PROP ℄ US 24

473.75

1:4

1:3

2%

469.95

FO

NOTE: THE ROCK SLOPE RATE TRANSITION ELEVATIONS SHOWN ON THE CROSS-SECTIONS MAY BE MODIFIED BY THE ENGINEER BASED ON FIELD CONDITIONS.

EXTEND SHOULDER TO FACE OF GUARDRAIL

CUT = 779.00 SQ. FT.
FILL = 24.00 SQ. FT
ROCK CUT = 1201.90 SQ. FT.

TOPSOIL PLACEMENT = 15.00 SQ. FT.

EXTEND SHOULDER TO FACE OF GUARDRAIL

LEGEND

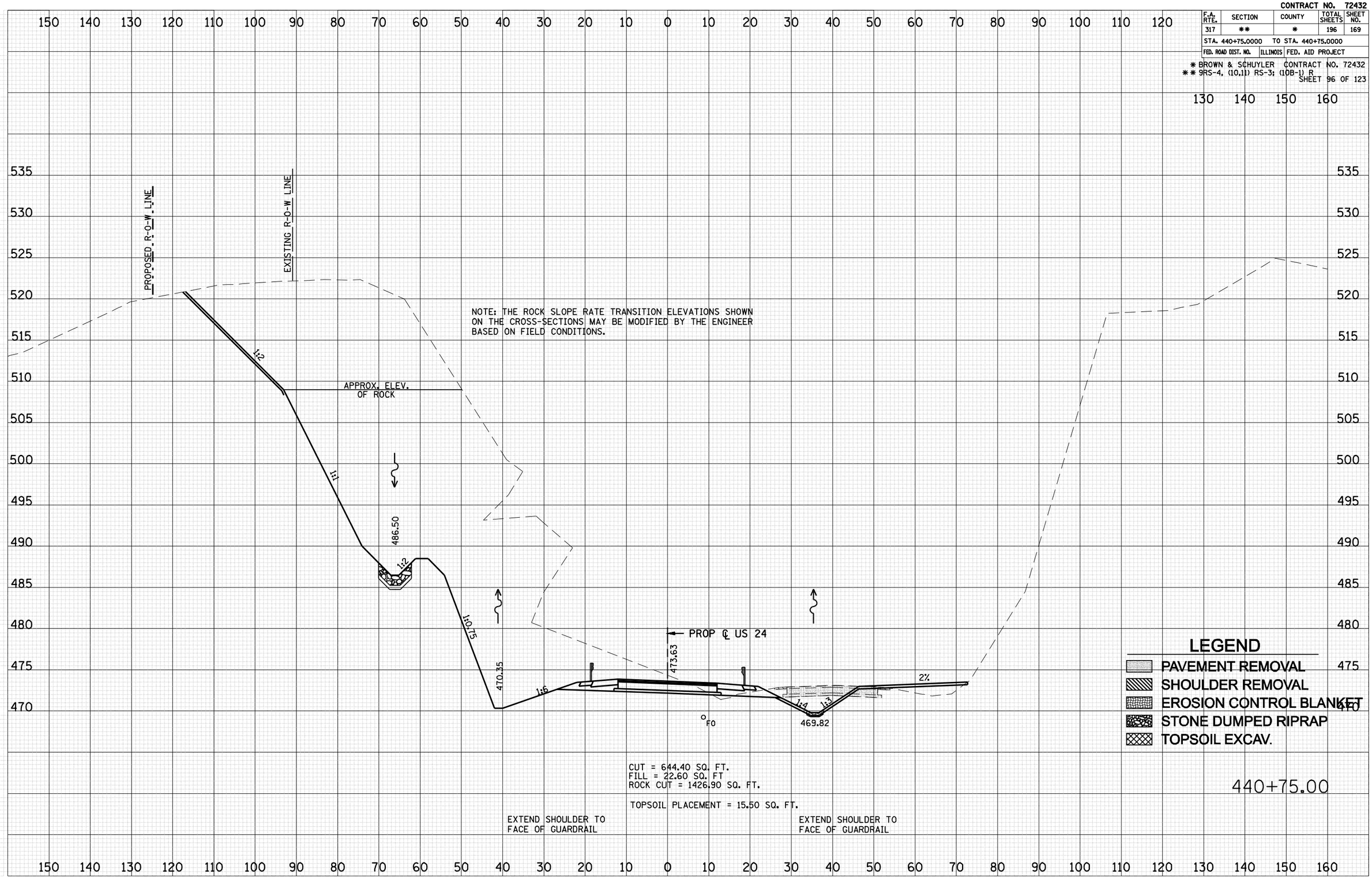
- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

440+50.00

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	169
STA. 440+75.0000	TO STA. 440+75.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 96 OF 123



FINAL SURVEY NOTE BOOK — DATE / BY / SURVEYED / PLOTTED / TRANSLATE AREAS / AREAS CHECKED / NO.

ORIGINAL SURVEY NOTE BOOK — DATE / BY / SURVEYED / PLOTTED / TRANSLATE AREAS / AREAS CHECKED / NO.

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PLOT TIME = 3:41:07 PM
FILE NAME = #FILE#

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	170
STA. 441+00.0000	TO STA. 441+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TRIANGULATE
	AREAS
	AREAS CHECKED

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TRIANGULATE
	AREAS
	AREAS CHECKED

PLOT DATE = Mar-24-2010 10:35:24 AM
PLOT TIME = 10:35:24 AM
FILE NAME = $FILE$

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

NOTE: THE ROCK SLOPE RATE TRANSITION ELEVATIONS SHOWN ON THE CROSS-SECTIONS MAY BE MODIFIED BY THE ENGINEER BASED ON FIELD CONDITIONS.

APPROX. ELEV. OF ROCK

1:2

1:1

1:2

487.00

1:2

1:0.75

470.22

1:6

PROP ℄ US 24

473.50

SPBGR TYPE A
ENDS RT. STA 440+97.00

TBT TYPE 1, SPECIAL (TANGENT)
BEGINS RT. STA 440+97.00

2%

1:4

1:3

FO

469.69

EXTEND SHOULDER TO FACE OF GUARDRAIL

CUT = 393.70 SQ. FT.
FILL = 21.70 SQ. FT
ROCK CUT = 1782.10 SQ. FT.

TOPSOIL PLACEMENT = 15.10 SQ. FT.

EXTEND SHOULDER TO FACE OF GUARDRAIL

LEGEND

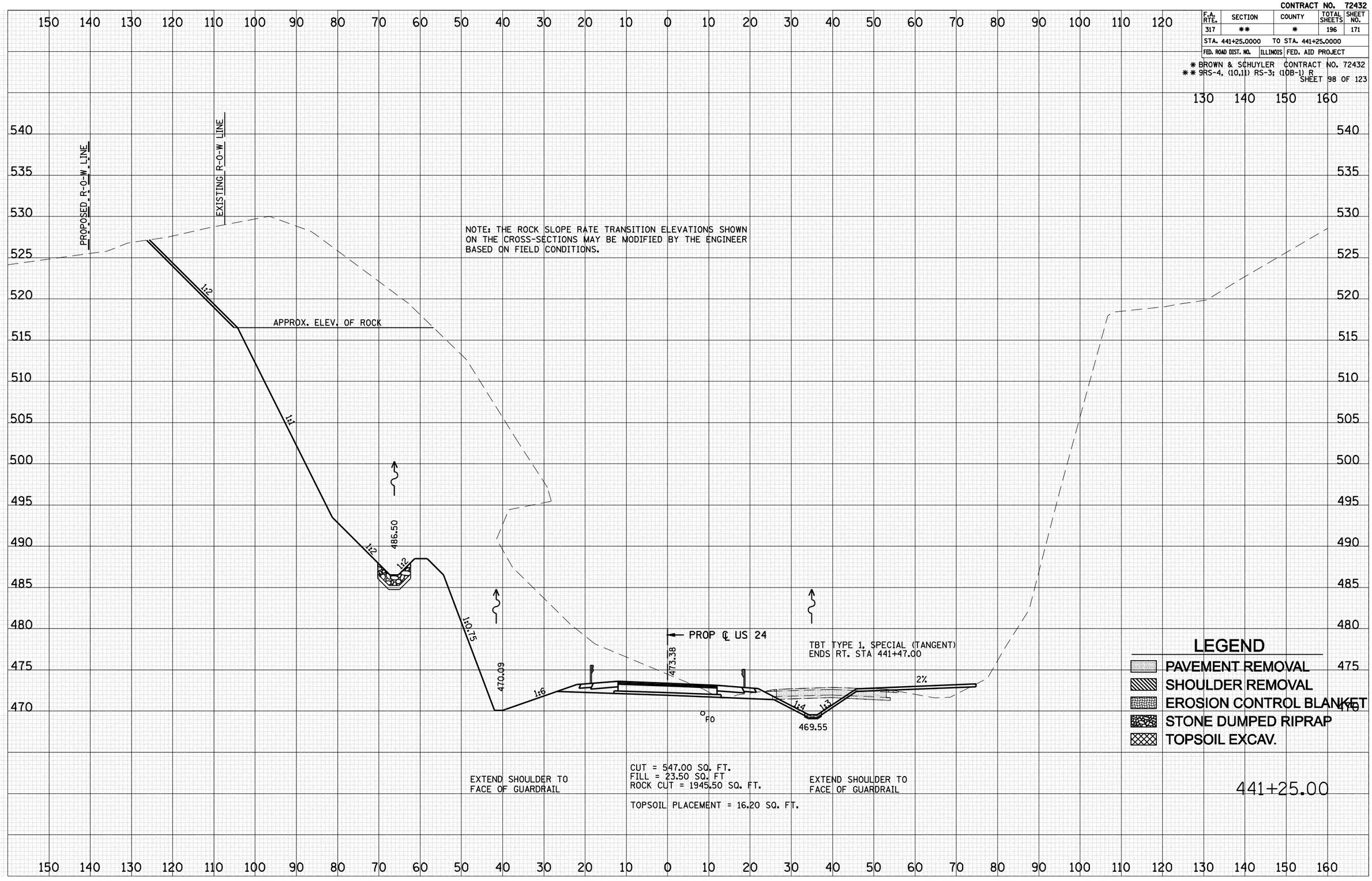
- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

441+00.00

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	171
STA. 441+25.0000	TO STA. 441+25.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R



FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TYPED — AREAS — AREAS CHECKED

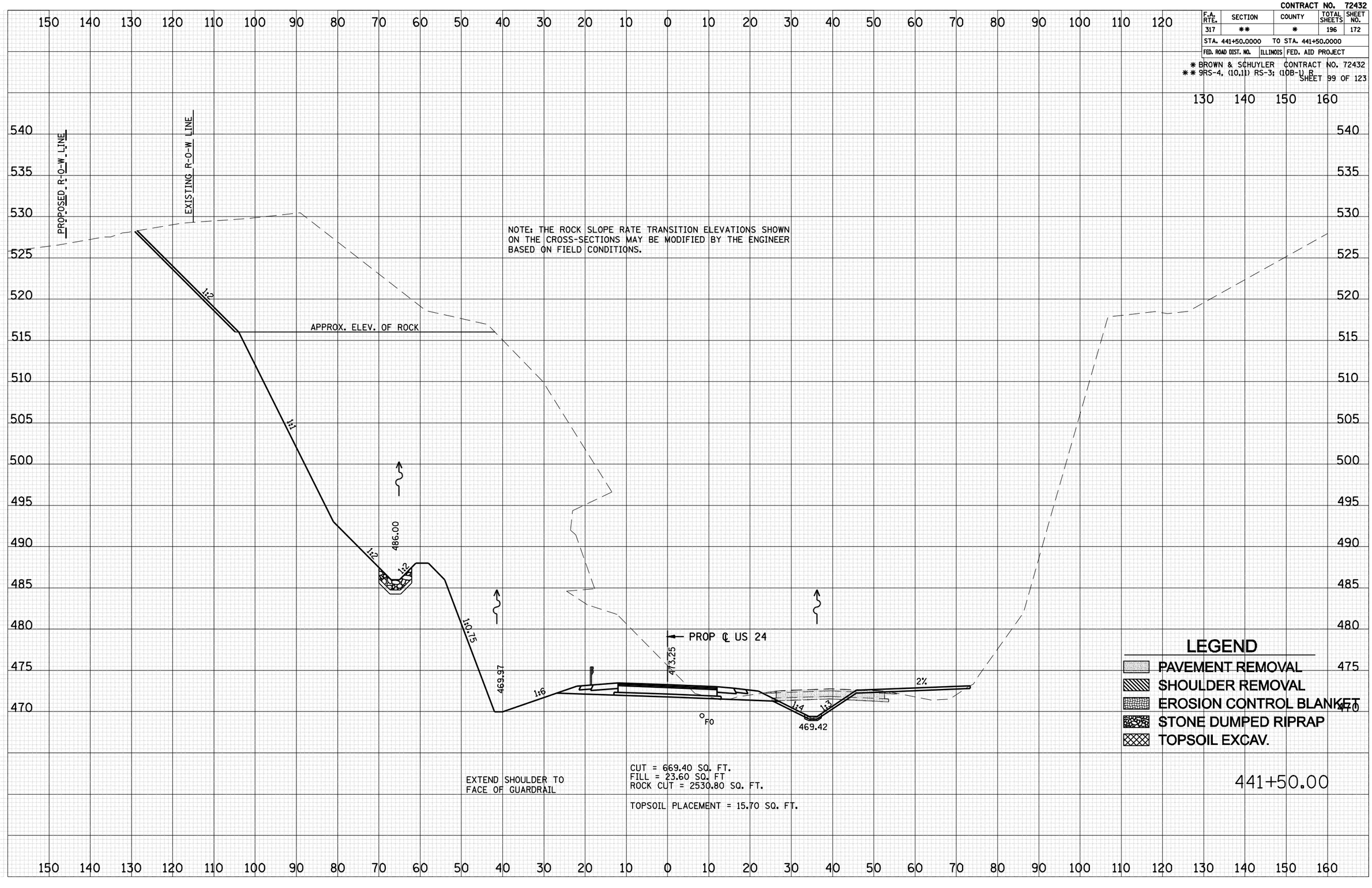
ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TYPED — AREAS — AREAS CHECKED

PLOT DATE = Mar-24-2010 10:36:59AM
PLOT TIME = 10:35:59 AM
FILE NAME = #FILE#

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	172
STA. 441+50.0000	TO STA. 441+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R



FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TRIANGULATE
	AREAS
	AREAS CHECKED

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TRIANGULATE
	AREAS
	AREAS CHECKED

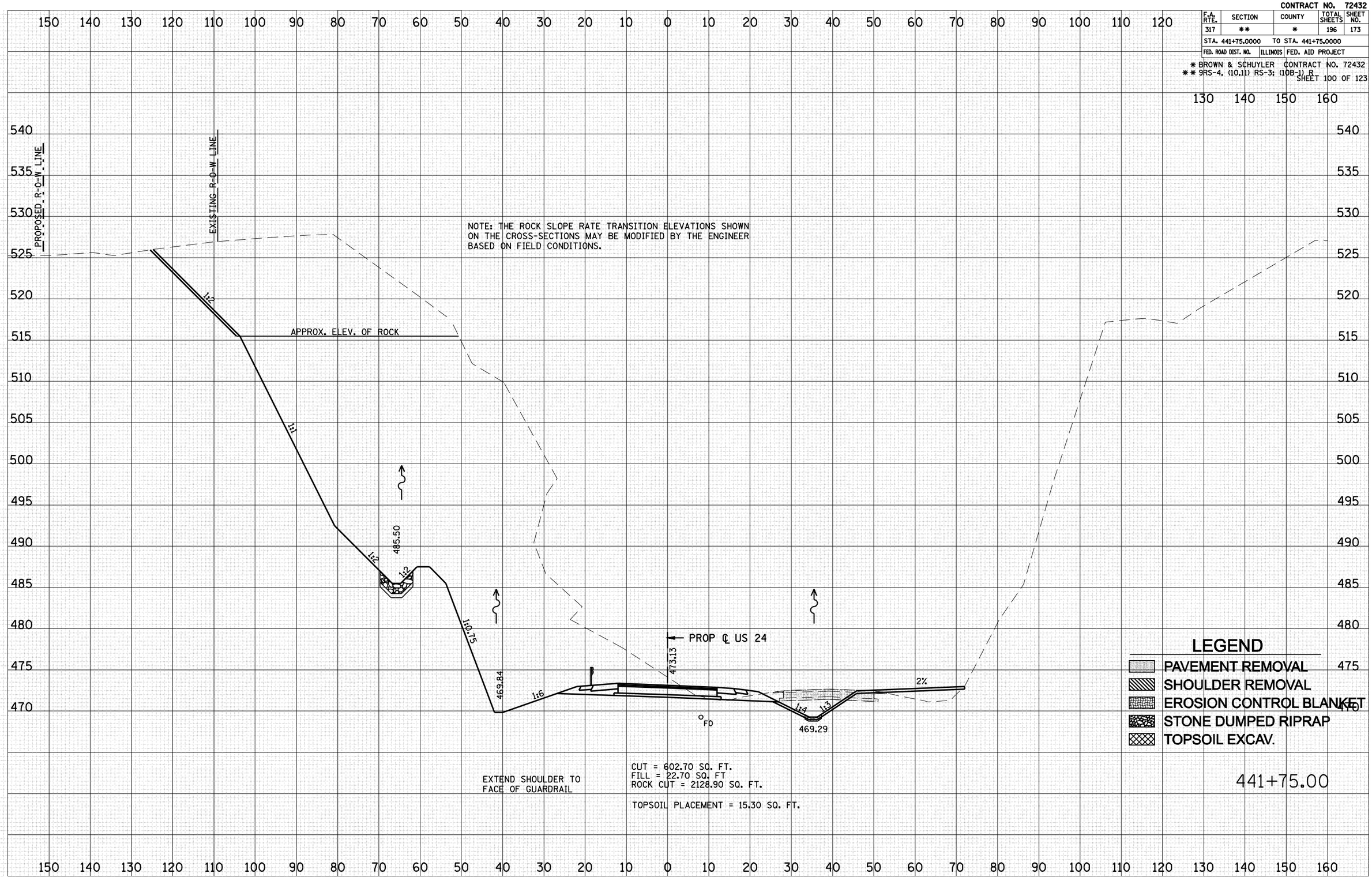
PLOT DATE = Mar-24-2010 10:36:36AM
PLOT TIME = 10:36:35 AM
FILE NAME = #FILE9

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	173
STA. 441+75.0000	TO STA. 441+75.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

SHEET 100 OF 123



FINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TRIANGULATE	AREAS	AREAS CHECKED	BY	DATE
NO.								

ORIGINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TRIANGULATE	AREAS	AREAS CHECKED	BY	DATE
NO.								

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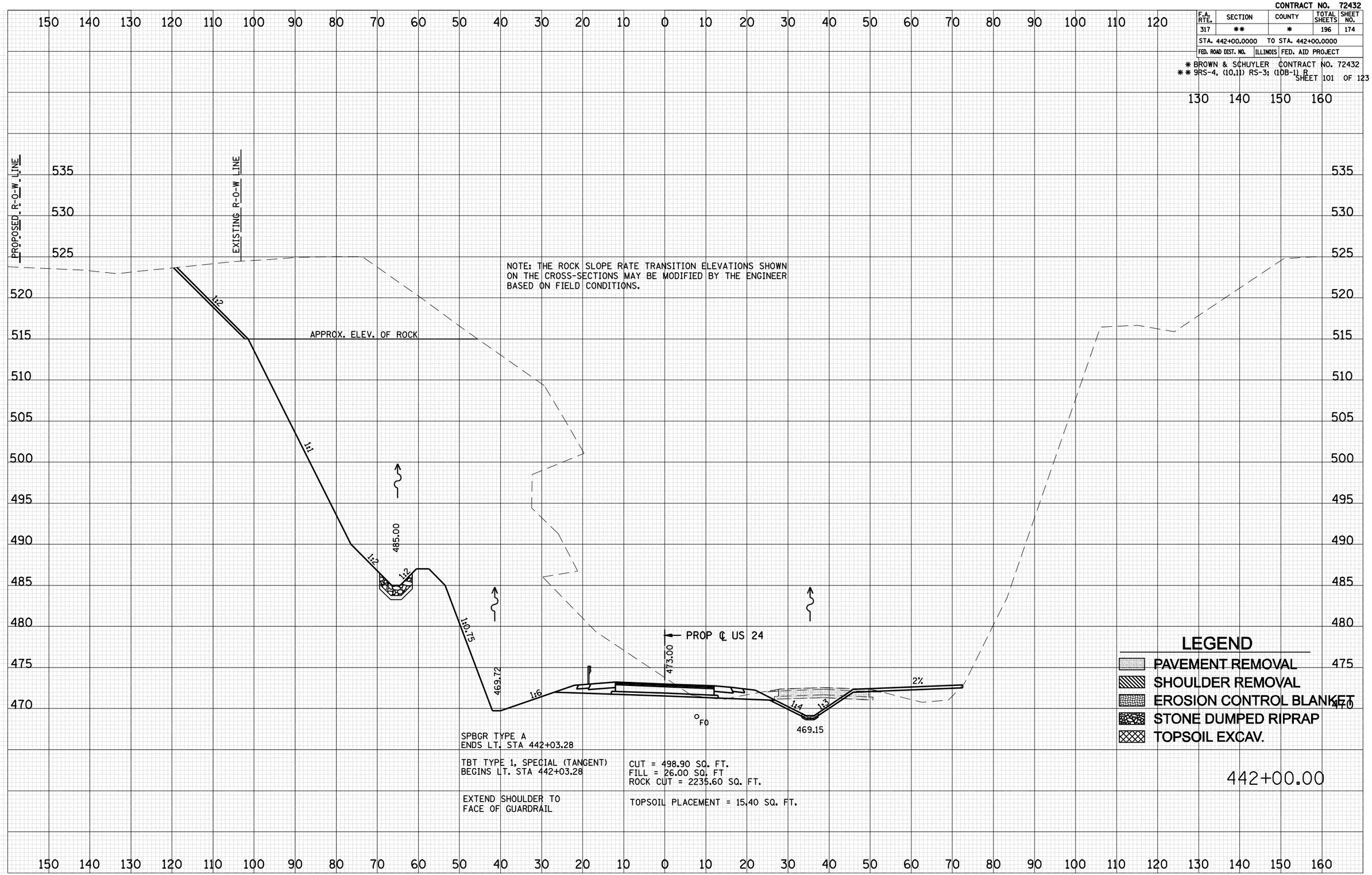
FILE NAME = $FILE$

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	174
STA. 442+00.0000	TO STA. 442+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

SHEET 101 OF 123



FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TRIANGULATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TRIANGULATE — AREAS — AREAS CHECKED — BY — DATE

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PLOT TIME = 10:37:47 AM
FILE NAME = $FILE$

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	175
STA. 442+25.0000	TO STA. 442+25.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

SHEET 102 OF 123

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPED/LAID OUT				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPED/LAID OUT				
AREAS				
AREAS CHECKED				

PLOT DATE = Mar-24-2010 10:38:23AM
PLOT TIME = 10:38:23 AM
FILE NAME = $FILE$

PROPOSED R-O-W LINE
162.00' LT.

EXISTING R-O-W LINE

518.51

NOTE: THE ROCK SLOPE RATE TRANSITION ELEVATIONS SHOWN ON THE CROSS-SECTIONS MAY BE MODIFIED BY THE ENGINEER BASED ON FIELD CONDITIONS.

APPROX. ELEV. OF ROCK

STONE DUMPED RIPRAP DITCH BEGINS
STA. 442+25 LT. (TOP OF ROCK CUT)

484.13

469.60

PROP ℄ US 24

472.88

469.02

EXTEND SHOULDER TO
FACE OF GUARDRAIL

CUT = 626.90 SQ. FT.
FILL = 26.50 SQ. FT
ROCK CUT = 2472.70 SQ. FT.

TOPSOIL PLACEMENT = 15.40 SQ. FT.

LEGEND
- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

442+25.00

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	176
STA. 442+50.0000	TO STA. 442+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

PROPOSED R-O-W LINE
165.60' LT.

EXISTING R-O-W LINE

515.89

483.25

469.47

472.75

468.88

140.75

APPROX. ELEV. OF ROCK

NOTE: THE ROCK SLOPE RATE TRANSITION ELEVATIONS SHOWN ON THE CROSS-SECTIONS MAY BE MODIFIED BY THE ENGINEER BASED ON FIELD CONDITIONS.

PROP ℄ US 24

FO

TBT TYPE 1, SPECIAL (TANGENT)
ENDS LT. STA 442+53.28

EXTEND SHOULDER TO
FACE OF GUARDRAIL

CUT = 596.30 SQ. FT.
FILL = 25.90 SQ. FT
ROCK CUT = 1343.40 SQ. FT.

TOPSOIL PLACEMENT = 15.30 SQ. FT.

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

442+50.00

FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED / PLOTTED / TRIANGULATE / AREAS / AREAS CHECKED

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED / PLOTTED / TRIANGULATE / AREAS / AREAS CHECKED

PLOT DATE = Mar-24-2010 10:38:59 AM
PLOT TIME = 10:38:59 AM
FILE NAME = $FILE$

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	177
STA. 442+75.0000	TO STA. 442+75.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	BY
	PLOTTED	DATE
	TYPING DATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	BY
	PLOTTED	DATE
	TYPING DATE	
	AREAS	
	AREAS CHECKED	

PLOT DATE = Mar-24-2010 10:39:36AM
PLOT TIME = 10:39:36 AM
FILE NAME = $FILE$

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

525 520 515 510 505 500 495 490 485 480 475 470

PROPOSED R-O-W LINE
166.93' LT.

EXISTING R-O-W LINE

513.28

1:2

1:2

1:2

APPROX. ELEV. OF ROCK

NOTE: THE ROCK SLOPE RATE TRANSITION ELEVATIONS SHOWN ON THE CROSS-SECTIONS MAY BE MODIFIED BY THE ENGINEER BASED ON FIELD CONDITIONS.

1:1

482.38

1:2

1:2

1:0.75

469.35

1:6

PROP ℄ US 24

472.63

FO

1:4

1:3

468.75

2%

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

CUT = 641.70 SQ. FT.
FILL = 25.90 SQ. FT
ROCK CUT = 2022.30 SQ. FT.

TOPSOIL PLACEMENT = 15.20 SQ. FT.

442+75.00

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	178
STA. 443+00.0000	TO STA. 443+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TRIANGULATE
	AREAS
	AREAS CHECKED

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TRIANGULATE
	AREAS
	AREAS CHECKED

PLOT DATE = Mar-24-2010 10:40:13AM
PLOT TIME = 10:40:13 AM
FILE NAME = $FILE$

PROPOSED R-O-W LINE
168.32' LT.

EXISTING R-O-W LINE

NOTE: THE ROCK SLOPE RATE TRANSITION ELEVATIONS SHOWN ON THE CROSS-SECTIONS MAY BE MODIFIED BY THE ENGINEER BASED ON FIELD CONDITIONS.

APPROX. ELEV. OF ROCK

1:2
510.67
1:2
1:1.33
481.50
1:2
1:2
1:0.75
469.22
1:6
PROP ℄ US 24
472.50
FO
1:4
1:3
468.62
2%

EXISTING R-O-W LINE

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

CUT = 640.40 SQ. FT.
FILL = 24.90 SQ. FT
ROCK CUT = 1872.70 SQ. FT.

TOPSOIL PLACEMENT = 14.90 SQ. FT.

443+00.00

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	179
STA. 443+25.0000	TO STA. 443+25.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	CHECKED
	AREAS
	AREAS CHECKED

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	CHECKED
	AREAS
	AREAS CHECKED

PLOT DATE = Mar-24-2018 10:48:51 AM
PLOT TIME = 10:48:51 AM
FILE NAME = @FILE@

PROPOSED R-O-W LINE
169.79' LT.

EXISTING R-O-W LINE

508.05

1:2

1:2

1:1.86

480.62

1:2

1:2

1:0.75

469.10

1:6

APPROX. ELEV. OF ROCK

PROP ℄ US 24

FO

468.48

1:4

1:2

2%

EXISTING R-O-W LINE

NOTE: THE ROCK SLOPE RATE TRANSITION ELEVATIONS SHOWN ON THE CROSS-SECTIONS MAY BE MODIFIED BY THE ENGINEER BASED ON FIELD CONDITIONS.

CUT = 676.90 SQ. FT.
FILL = 24.40 SQ. FT
ROCK CUT = 1368.00 SQ. FT.

TOPSOIL PLACEMENT = 15.50 SQ. FT.

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

443+25.00

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	180
STA. 443+50.0000	TO STA. 443+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	
TRIANGULATE	
NOTE BOOK	AREAS
NO.	AREAS CHECKED

ORIGINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	
TRIANGULATE	
NOTE BOOK	AREAS
NO.	AREAS CHECKED

PLOT DATE = Mar-24-2018 18:41:38AM
PLOT TIME = 18:41:38 AM
FILE NAME = @FILE@

PROPOSED R-O-W LINE
171.31' LT.

EXISTING R-O-W LINE

EXISTING R-O-W LINE

505.24

479.75

468.97

472.25

468.35

APPROX. ELEV. OF ROCK

1:2

1:2

1:2

0.75:1

1:6

1:4

1:3

2%

PROP ℄ US 24

FO

NOTE: THE ROCK SLOPE RATE TRANSITION ELEVATIONS SHOWN ON THE CROSS-SECTIONS MAY BE MODIFIED BY THE ENGINEER BASED ON FIELD CONDITIONS.

CUT = 848.10 SQ. FT.
FILL = 27.70 SQ. FT
ROCK CUT = 1579.00 SQ. FT.

TOPSOIL PLACEMENT = 16.20 SQ. FT.

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

443+50.00

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	181
STA. 443+75.0000	TO STA. 443+75.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

SHEET 108 OF 123

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

520 515 510 505 500 495 490 485 480 475 470

PROPOSED R-O-W LINE
172.90' LT.

EXISTING R-O-W LINE

EXISTING R-O-W LINE

502.43

1:2

1:2

APPROX. ELEV. OF ROCK

1:2

478.88

1:2

1:2

468.85

1:6

PROP ℄ US 24

472.13

FO

1:4

1:4

468.22

2%

NOTE: THE ROCK SLOPE RATE TRANSITION ELEVATIONS SHOWN ON THE CROSS-SECTIONS MAY BE MODIFIED BY THE ENGINEER BASED ON FIELD CONDITIONS.

CUT = 1235.50 SQ. FT.
FILL = 25.10 SQ. FT
ROCK CUT = 1399.30 SQ. FT.

TOPSOIL PLACEMENT = 15.90 SQ. FT.

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

443+75.00

FINAL SURVEY	DATE
BY	
SURVEYED	
PLOTTED	
TRIANGULATE	
NOTE BOOK	AREAS
NO.	AREAS CHECKED

ORIGINAL SURVEY	DATE
BY	
SURVEYED	
PLOTTED	
TRIANGULATE	
NOTE BOOK	AREAS
NO.	AREAS CHECKED

PLOT DATE = Mar-24-2010 18:42:18:04
PLOT TIME = 18:42:18 AM
FILE NAME = #FILE#

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	182
STA. 444+00.0000	TO STA. 444+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	ORIGINAL SURVEY	BY	DATE
NOTE BOOK	NOTE BOOK		
SURVEYED	SURVEYED		
PLOTTED	PLOTTED		
TRIANGULATE	TRIANGULATE		
AREAS	AREAS		
AREAS CHECKED	AREAS CHECKED		
NO.	NO.		

PLOT DATE = Mar-24-2018 10:42:47 AM
PLOT TIME = 10:42:47 AM
FILE NAME = #FILE#

PROPOSED R-O-W LINE
175.00' LT.

EXISTING R-O-W LINE

EXISTING R-O-W LINE

499.62

APPROX. ELEV. OF ROCK

478.00

468.72

472.00

PROP ℄ US 24

468.08

FO

1:2

1:2

1:2

1:2

1:6

1:4

1:3

2%

NOTE: THE ROCK SLOPE RATE TRANSITION ELEVATIONS SHOWN ON THE CROSS-SECTIONS MAY BE MODIFIED BY THE ENGINEER BASED ON FIELD CONDITIONS.

ROCK CUT ENDS
STA. 444+00 ±

CUT = 1602.90 SQ. FT.
FILL = 24.20 SQ. FT
ROCK CUT = 987.80 SQ. FT.

TOPSOIL PLACEMENT = 15.70 SQ. FT.

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

444+00.00

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	183
STA. 444+50.0000	TO STA. 444+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPED/CHK'E				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TYPED/CHK'E				
AREAS				
AREAS CHECKED				

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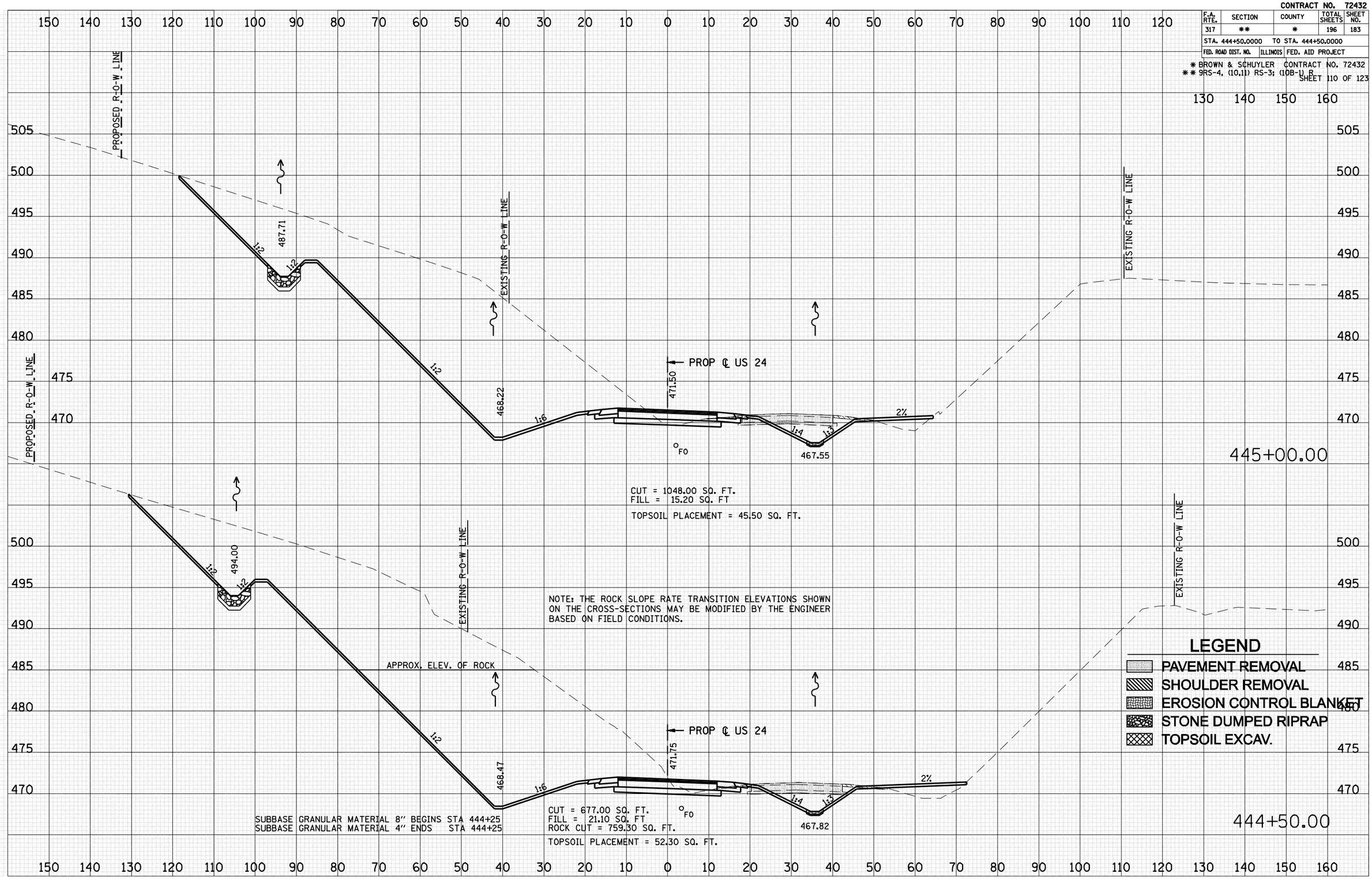

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	184
STA. 445+50.0000	TO STA. 446+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TRIANGULATE	AREAS	AREAS CHECKED	BY	DATE
ORIGINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TRIANGULATE	AREAS	AREAS CHECKED	BY	DATE

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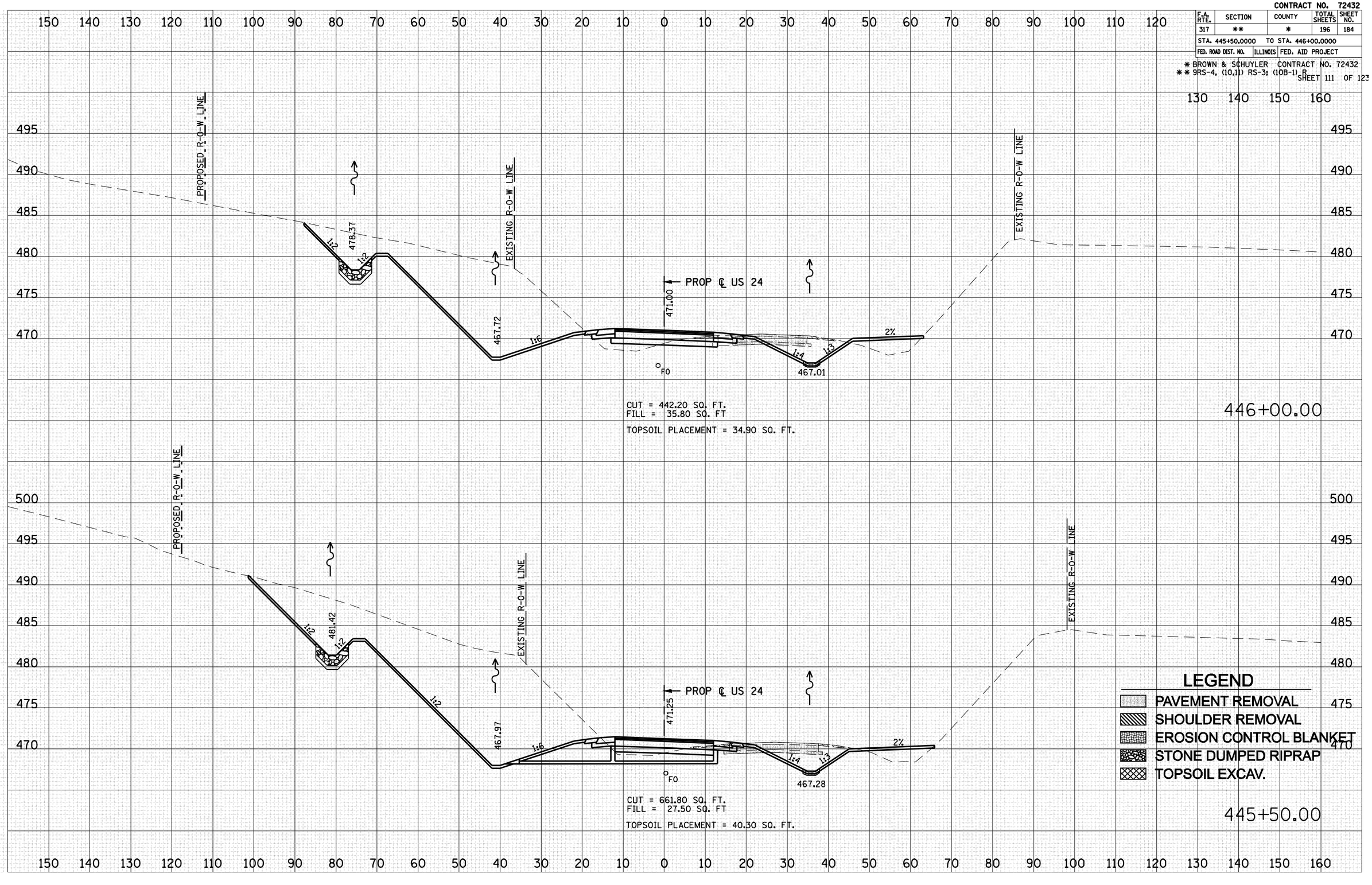

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	185
STA. 446+50.0000	TO STA. 447+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

490 485 480 475 470

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

PROP ℄ US 24

470.50

466.98

1:2

1:6

1:4

466.48

1:3

2%

EXISTING R-O-W LINE

$^{O}_{FO}$

CUT = 251.00 SQ. FT.
FILL = 32.40 SQ. FT

TOPSOIL PLACEMENT = 28.00 SQ. FT.

447+00.00

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

475.32

1:2

1:2

467.28

1:6

PROP ℄ US 24

470.75

1:4

1:3

2%

466.74

EXISTING R-O-W LINE

$^{O}_{FO}$

CUT = 321.40 SQ. FT.
FILL = 31.50 SQ. FT

TOPSOIL PLACEMENT = 30.50 SQ. FT.

446+50.00

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TRIANGULATE				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TRIANGULATE				
AREAS				
AREAS CHECKED				

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PLOT TIME = 10:44:39 AM
FILE NAME = #FILE#

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	186
STA. 447+50.0000	TO STA. 448+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

485 480 475 470

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

PROP ℄ US 24

470.00

466.38

1:3 1:5 1:4 1:3 2%

FO

CUT = 179.70 SQ. FT.
FILL = 24.60 SQ. FT

TOPSOIL PLACEMENT = 24.10 SQ. FT.

448+00.00

EXISTING R-O-W LINE

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

485 480 475 470

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

PROP ℄ US 24

470.25

466.68

466.21

1:3 1:6 1:4 1:3 2%

FO

STONE DUMPED RIPRAP DITCH
BEGINS STA. 447+50 LT.

CUT = 239.10 SQ. FT.
FILL = 27.60 SQ. FT

TOPSOIL PLACEMENT = 26.60 SQ. FT.

447+50.00

EXISTING R-O-W LINE

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TRIANGULATE				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TRIANGULATE				
AREAS				
AREAS CHECKED				

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PLOT TIME = 10:45:16 AM
FILE NAME = #FILE#

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	187
STA. 448+50.0000	TO STA. 449+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

475
470

PROPOSED R-O-W LINE

PROP ℄ US 24

469.24

EXISTING R-O-W LINE

1:3 465.47 1:4 1:4 465.14 1:3

FO

449+50.00

CUT = 117.30 SQ. FT.
FILL = 13.20 SQ. FT

TOPSOIL PLACEMENT = 16.80 SQ. FT.

485
480
475
470

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

PROP ℄ US 24

469.50

EXISTING R-O-W LINE

1:3 465.77 1:4 1:4 (465.41) 1:3

FO

449+00.00

CUT = 137.70 SQ. FT.
FILL = 17.70 SQ. FT

TOPSOIL PLACEMENT = 20.30 SQ. FT.

485
480
475
470

PROPOSED R-O-W LINE

EXISTING R-O-W LINE

PROP ℄ US 24

469.75

EXISTING R-O-W LINE

1:3 466.07 1:4 1:4 465.67 1:3

FO

448+50.00

CUT = 151.90 SQ. FT.
FILL = 16.90 SQ. FT

TOPSOIL PLACEMENT = 21.20 SQ. FT.

EROSION CONTROL BLANKET
BEGINS STA. 448+50 RT.

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	AREAS CHECKED
SURVEYED	
PLOTTED	
TYPED	
AREAS	

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	AREAS CHECKED
SURVEYED	
PLOTTED	
TYPED	
AREAS	

PLOT DATE = Mar-24-2010 10:45:52AM
PLOT TIME = 10:45:52 AM
FILE NAME = #FILE#

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	188
STA. 450+00.0000	TO STA. 451+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

FINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TRIANGULATE	AREAS	AREAS CHECKED	NO.	BY	DATE
ORIGINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TRIANGULATE	AREAS	AREAS CHECKED	NO.	BY	DATE

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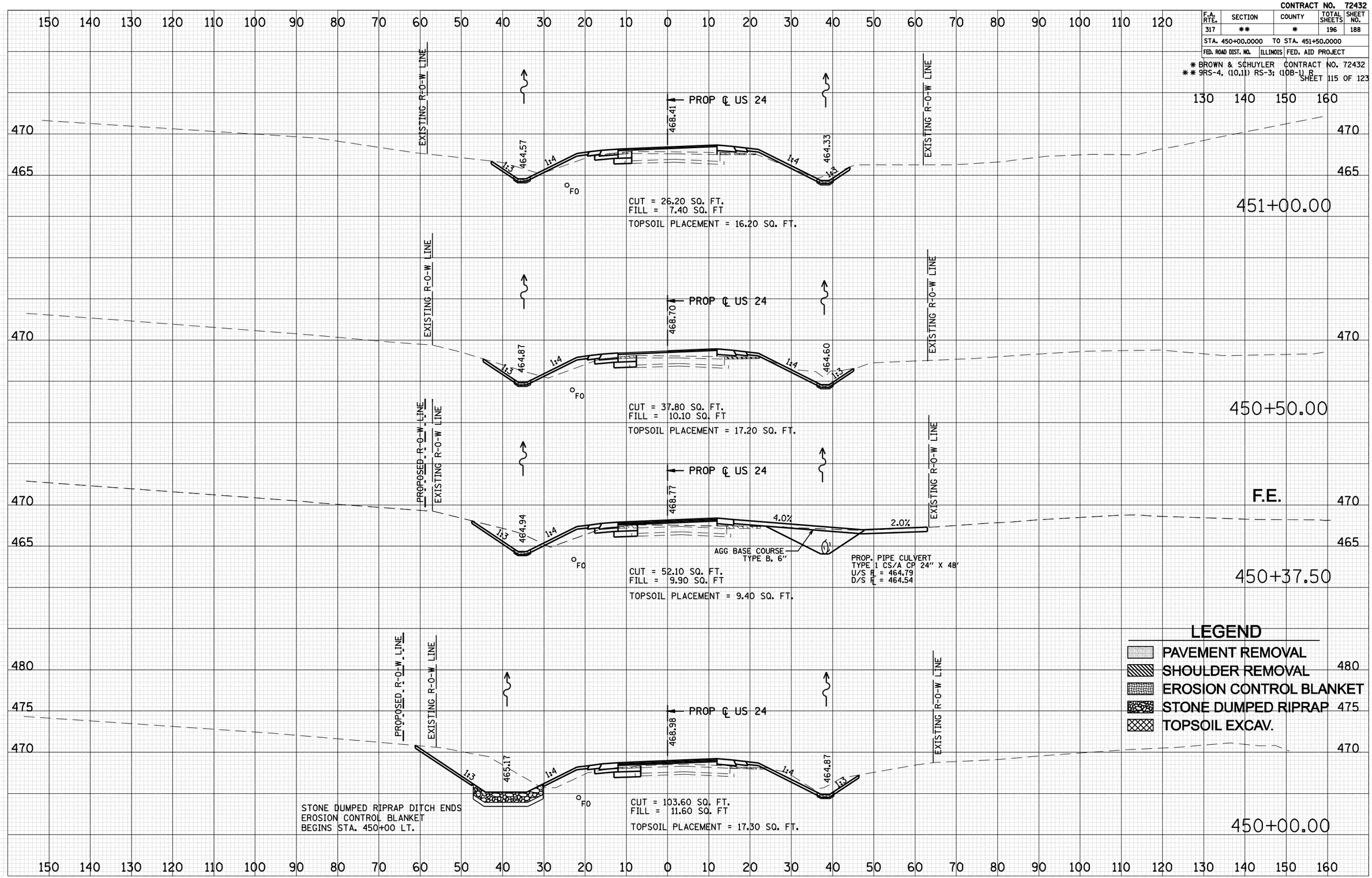


CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	189
STA. 452+00.0000	TO STA. 453+50.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

470
465

EXISTING R-O-W LINE

PROP ℄ US 24

467.82

463.96 1:4 1:3 463.80 1:4 1:3

FO

CUT = 21.00 SQ. FT.
FILL = 3.00 SQ. FT

TOPSOIL PLACEMENT = 14.90 SQ. FT.

452+00.00

EXISTING R-O-W LINE

PROP ℄ US 24

467.97

464.11 1:4 1:3 4.0% 6.0% 2.0%

FO

PCC DRIVEWAY PAVEMENT 6"

PROP. PIPE CULVERT
TYPE 1 CS/A CP 24" X 46'
U/S FL = 464.07
D/S FL = 463.83

CUT = 22.90 SQ. FT.
FILL = 3.80 SQ. FT

TOPSOIL PLACEMENT = 6.70 SQ. FT.

P.E.

451+75.00

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

EXISTING R-O-W LINE

PROP ℄ US 24

468.12

464.26 1:4 1:3 464.07 1:4 1:3

FO

CUT = 21.40 SQ. FT.
FILL = 4.30 SQ. FT

TOPSOIL PLACEMENT = 15.50 SQ. FT.

451+50.00

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TRIANGULATE				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TRIANGULATE				
AREAS				
AREAS CHECKED				

PLOT DATE = Mar-24-2010 10:47:13AM
PLOT TIME = 10:47:13 AM
FILE NAME = $FILE$

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	190
STA. 454+00.0000	TO STA. 454+00.0000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

470
465

TWP. RD. 1480

HMA PAVEMENT
FULL DEPTH 13.5"

PROP ℄ US 24

466.92

462.99

1:4

1:3

EXISTING R-O-W LINE

FO

PROP. PIPE CULVERT
TYPE 1 RCCP 24" X 56'
PRC FLARED END SECTIONS 24"
U/S FL = 463.22
D/S FL = 462.87

CUT = 51.90 SQ. FT.
FILL = 0.40 SQ. FT

TOPSOIL PLACEMENT = 7.70 SQ. FT.

453+50.00

EXISTING R-O-W LINE

PROP ℄ US 24

467.22

463.35

463.26

CUT = 34.40 SQ. FT.
FILL = 5.80 SQ. FT

TOPSOIL PLACEMENT = 19.00 SQ. FT.

EROSION CONTROL BLANKET
ENDS STA. 453+20 LT.

453+00.00

EXISTING R-O-W LINE

PROP ℄ US 24

467.53

463.66

463.53

CUT = 36.50 SQ. FT.
FILL = 9.90 SQ. FT

TOPSOIL PLACEMENT = 18.00 SQ. FT.

452+50.00

LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- EROSION CONTROL BLANKET
- STONE DUMPED RIPRAP
- TOPSOIL EXCAV.

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
NO.	AREAS CHECKED	

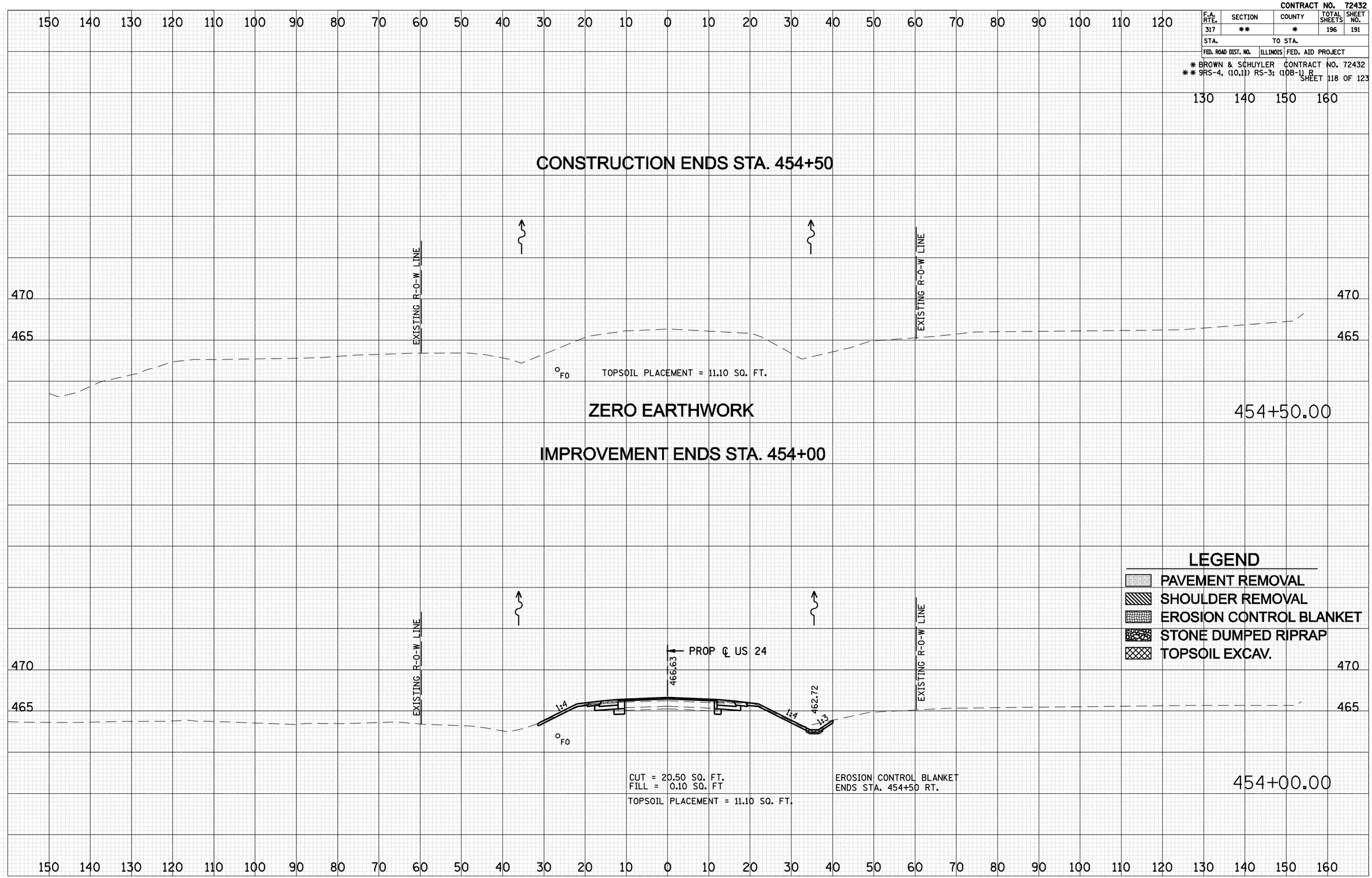
ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
NO.	AREAS CHECKED	

PLOT DATE = Mar-24-2010 10:47:51AM
PLOT TIME = 10:47:51 AM
FILE NAME = $FILE$

CONTRACT NO. 72432

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	191
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 118 OF 123



FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TRIANGULATE				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TRIANGULATE				
AREAS				
AREAS CHECKED				

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PLOT TIME = 10:48:28 AM
FILE NAME = $FILE$

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, District 6

Page 1 of 4 Date 5/8/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 Soil Survey LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. ____
Station ____

BORING NO. 11
Station 441+00
Offset 104.0ft Lt
Ground Surface Elev. 526.7 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter No Encounter ft
Upon Completion Cored ft
After 7 Days Hrs. Dry @ 9 ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Moist SAND LOAM Residuum Ref Classification 12-2			1 3 4	1.2 B	20
Tan and Gray Poorly Indurated Weathered Clayey SHALE	521.70	-5	7 10 32		10
Tan and Lt Gray Poorly Indurated Weathered Fine Grained SANDSTONE Started Rock Core at 9 ft	518.70		12 95 /3"		
Borehole continued with rock coring.	517.70	-10			
		-15			
		-20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — ROCK CORE LOG

Division of Highways, District 6

Page 2 of 4 Date 5/8/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 Soil Survey LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown CORING METHOD Water

STRUCT. NO. ____
Station ____

BORING NO. 11
Station 441+00
Offset 104.0ft Lt
Ground Surface Elev. 526.7 ft

CORING BARREL TYPE & SIZE NQ2WL
Core Diameter 1.99 in
Top of Rock Elev. 517.70 ft
Begin Core Elev. 517.70 ft

Description	Elev.	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Tan and Light Grey Poorly Indurated Fine Grained SANDSTONE Open joints spaced 2" to 12"	517.70	-10	1	88	44		365
Poor to Moderately Indurated		-15	2	98	64		436
		-20	3	98	72		145
Tan and Light Grey Moderately Indurated Medium Grained Fossiliferous SANDSTONE Closed joints spaced 2" to 12"	504.20						
Black Vitreous Bituminous Coal Seam	502.70						
Dark Grey and Light Grey Banded Poorly Indurated Fine Grained SANDSTONE Open joints spaced 2" to 12"		-25	4	100	56		388

Color pictures of the cores Y
Cores will be stored for examination until 5 Yrs After Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

GENERAL NOTES

US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24) SECTION (10B-1) R
BROWN & SCHUYLER COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	193
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 120OF 123

Illinois Department of Transportation
Division of Highways
District 6

ROCK CORE LOG

Page 3 of 4

Date 5/8/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 Soil Survey LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown CORING METHOD Water

STRUCT. NO. _____ CORING BARREL TYPE & SIZE NQ2WL
Station _____

Core Diameter 1.99 in
BORING NO. 11 Top of Rock Elev. 517.70 ft
Station 441+00 Begin Core Elev. 517.70 ft
Offset 104.0ft Lt
Ground Surface Elev. 528.7 ft

DESCRIPTION	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Dark Grey and Light Grey Banded Poorly Indurated Fine Grained SANDSTONE Open joints spaced 2" to 12" *(continued)*	92	5	98	80		606
	484.80					
Grey Poorly Indurated Sandy SHALE Closed joints spaced 2" to 12"	488.90					
Grey Poorly Indurated Fine Grained SANDSTONE Closed Joints 1' to 3'						280
	491.90	6	98	74		
Light & Dark Grey Banded Fine Grained Fossiliferous SANDSTONE Closed joints spaced 2" to 12"						
	499.70					
Dark Grey Poorly Indurated Clayey SHALE Joints spaced 1' to 3'						
	497.90					10
Tan and Light Grey Poorly to Moderately Indurated Fossiliferous Crystalline LIMESTONE Open joints spaced 2" to 12"	98	7	100	90		133
Bottom of weathered zone.						
Closed joints spaced 1' to 3' Semi-Porous	96	8	100	100		660
						332

Color pictures of the cores Y
Cores will be stored for examination until 5 Yrs After Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run

BBS, form 138 (Rev. 8-99)

ROCK CORE 005-0500 US 24 OVER LAMOINE RIVER.DGN DATE/PLT: 05/08/07 02:16:07

Illinois Department of Transportation
Division of Highways
District 6

ROCK CORE LOG

Page 4 of 4

Date 5/8/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 Soil Survey LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown CORING METHOD Water

STRUCT. NO. _____ CORING BARREL TYPE & SIZE NQ2WL
Station _____

Core Diameter 1.99 in.
BORING NO. 11 Top of Rock Elev. 517.70 ft
Station 441+00 Begin Core Elev. 517.70 ft
Offset 104.0ft Lt
Ground Surface Elev. 528.7 ft

DESCRIPTION	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Tan and Light Grey Poorly to Moderately Indurated Fossiliferous Crystalline LIMESTONE Open joints spaced 2" to 12" *(continued)*	92	9	94	90		
Light Brown Closed joints 1' to 3' Semi-Porous Void - Lost water						1069
						496
Begin 9.4 ft long vertical joint. No water return Open joints spaced 1"to 3' NOTE: Low RQD is a result of the vertical joint.	96	10	94	8		
		11	54	12		
Tan Moderately Indurated Weathered Calcareous SHALE No jointing.	462.30 462.70					

Color pictures of the cores Y
Cores will be stored for examination until 5 Yrs After Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run

BBS, form 138 (Rev. 8-99)

ROCK CORE 005-0500 US 24 OVER LAMOINE RIVER.DGN DATE/PLT: 05/08/07 02:16:07

GENERAL NOTES

US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24) SECTION (10B-1) R
BROWN & SCHUYLER COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	194
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 1210F 123

Illinois Department of Transportation
Division of Highways
District 5

SOIL BORING LOG

Page 1 of 4

Date 5/7/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 Soil Survey LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. _____
Station _____

BORING NO. 13
Station 442+00
Offset 107.0ft Lt
Ground Surface Elev. 525.7 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter No Encounter ft
Upon Completion Cored ft
After 8 Days Hrs. Dry @ 9 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Brown Moist Silty Clay to Lt Gray and Reddish Brown Moist SAND LOAM Residuum, Ref Classification 12-2	1		
-5	3 4	2.5 S-12	18
	3		
Lt Gray and Brown Moist	7 12	3.3 S-10	9
Tan Poorly Indurated Weathered Fine Grained SANDSTONE 515.20 / 515.70	9		
-10	100 /6"		
Borehole continued with rock coring.			
-15			
-20			

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District 5

ROCK CORE LOG

Page 2 of 4

Date 5/7/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 Soil Survey LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown CORING METHOD Water

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE NQ2WL

Core Diameter 1.98 in
Top of Rock Elev. 515.70 ft
Begin Core Elev. 515.70 ft

BORING NO. 13
Station 442+00
Offset 107.0ft Lt
Ground Surface Elev. 525.7 ft

DEPTH (ft)	CORE (ft)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Tan and Light Grey Poorly to Moderately Indurated Fine Grained SANDSTONE 515.70 Open joints spaced 2" to 12"	1	96	52		561
-15					
with Multiple Diagonal Joints Moderately to Well Indurated	2	100	48		645
-20					
Moderately Indurated Open joints spaced 2" to 12"	3	98	56		522
-25					
	4	100	44		
498.90 Dark Grey and Light Grey Banded Poorly Indurated Fine Grained SANDSTONE Open joints spaced 2" to 12" filled with dark grey clayey shale and clay					233
495.70 -30					

Color pictures of the cores Y
Cores will be stored for examination until 5 Yrs After Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 135 (Rev. 8-99)

GENERAL NOTES

US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24) SECTION (10B-1) R
BROWN & SCHUYLER COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	195
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 122OF 123

Illinois Department of Transportation
Division of Highways, District 6

ROCK CORE LOG

Date 5/7/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 Soil Survey LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown CORING METHOD Water

STRUCT. NO. _____ CORING BARREL TYPE & SIZE NQ2WL
Station _____
Core Diameter 1.98 in
BORING NO. 13 Top of Rock Elev. 515.70 ft
Station 442+00 Begin Core Elev. 515.70 ft
Offset 107.0ft Lt
Ground Surface Elev. 525.7 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Grey Moderately Indurated Fine Grained SANDSTONE Closed joints spaced 1' to 3'	480.00	5	100	100		312
Grey Moderately Indurated Crystalline LIMESTONE Multiple diagonal joints Open joints spaced 2" to 12" filled with olive grey clay	488.00	6	100	46		254
Turquoise Green Very Poorly Indurated Clayey SHALE Blocky Structure with closed joints spaced 2" to 12"	485.80					
Light Grey and Tan Well Indurated Crystalline LIMESTONE No Joints		7	100	100		692
Closed joints spaced 1' to 3'	-60	8	100	100		683

Color pictures of the cores Y
Cores will be stored for examination until 5 Yrs After Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

ROCK CORE: 005-6000 US 24 OVER LAMOINE RIVER.GPJ DATEMPLY.GDT 5/21/07

Illinois Department of Transportation
Division of Highways, District 6

ROCK CORE LOG

Date 5/7/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 Soil Survey LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown CORING METHOD Water

STRUCT. NO. _____ CORING BARREL TYPE & SIZE NQ2WL
Station _____
Core Diameter 1.98 in
BORING NO. 13 Top of Rock Elev. 515.70 ft
Station 442+00 Begin Core Elev. 515.70 ft
Offset 107.0ft Lt
Ground Surface Elev. 525.7 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Light Grey and Tan Well Indurated Crystalline LIMESTONE No Joints (continued) Large 8" horizontal joint		9	100	70		714
Closed joints spaced 3' to 10'	-65	10	100	100		451
with Geodes and Secondary Quartz Mineralization	485.70 -69					
	-85					
	-70					

Color pictures of the cores Y
Cores will be stored for examination until 5 Yrs After Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

ROCK CORE: 005-6000 US 24 OVER LAMOINE RIVER.GPJ DATEMPLY.GDT 5/21/07

GENERAL NOTES

US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24) SECTION (10B-1) R
BROWN & SCHUYLER COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	*	196	196
STA. 420+00.00 TO STA. 454+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* BROWN & SCHUYLER CONTRACT NO. 72432
** 9RS-4, (10,11) RS-3; (10B-1) R
SHEET 123OF 123

Illinois Department of Transportation
Division of Highways
District 6

SOIL BORING LOG

Page 1 of 2

Date 5/2/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 Soil Survey LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown DRILLING METHOD HSA HAMMER TYPE 140 lb Auto

STRUCT. NO. _____
Station _____

BORING NO. 16
Station 443+50
Offset 81.0ft Lt
Ground Surface Elev. 508.5 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter No Encounter ft
▽ Upon Completion Cored ft
▽ After 3 Days Hrs. Dry ft

	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Brown Moist SILTY CLAY LOAM Ref Classification 23-2		1		
		1 2	1.1 B	22
		1		
	5	1 2	0.8 B	24
502.50				
Brown and Gray Moist SAND LOAM w/ angular LS. Clasts CLASSIFICATION 16-1		1		
		4 3	0.7 P	11
456.50				
Brown and Lt Gray Poorly Indurated Fine Grained SANDSTONE		21		
	-10	29		
498.00		65		
Borehole continued with rock coring.				
	-15			
	-20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District 6

ROCK CORE LOG

Page 2 of 2

Date 5/2/07

ROUTE FAP 317 (US 24) DESCRIPTION US 24 Soil Survey LOGGED BY M. Tappan

SECTION 10(B-1)R LOCATION NE 1/4, SEC. 33, TWP. 1 N, RNG. 2 W, 4 PM

COUNTY Brown CORING METHOD Water

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE NQ2WL

BORING NO. 16
Station 443+50
Offset 81.0ft Lt
Ground Surface Elev. 508.5 ft

Core Diameter 1.97 in
Top of Rock Elev. 498.50 ft
Begin Core Elev. 499.00 ft

	DEPTH (ft)	CORE (ft)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Tan & Light Grey to Dark Grey & Grey Very Poorly Indurated Fine Grained SANDSTONE Joints spaced at <2" filled with dark grey shaley clay	499.00 -10	1	56	38		
	496.00					3.5
Dk Grey to V. Dk Grey Very Poorly Indurated Clayey SHALE (Alternating bands of thinly bedded Lt. Grey & V. Dk. seams) Joints spaced at <2"	494.00 -15					6.2
Br and Dk Grey Poorly to Moderately Indurated Fine to Medium Grained SANDSTONE with multiple weathered zones and fractures. Open & Closed Joints Spaced 2" to 12". Open joints filled with Dk Grey shaley clay. 1.6 ft Broken Zone with 0.25" to 1.5" limestone clasts (sandstone conglomerate)		2	100	50		21
Tan & Light Grey Moderately Indurated Fine Grained SANDSTONE. Open joints spaced at 2" to 12"	490.40 -20					85
	-25	3	92	66		259
Tan and Light Grey Cherty LIMESTONE Conglomerate. Very Fractured Void - No Water Return Broken Formation - Jammed Core Barrel	485.40 -25	4	20	0		
Dark Grey & Dark Grey & Brown Very Well Indurated Calcareous SHALE Open joints spaced 2" to 12" filled with cherty limestone. Broke Water Passage Tube - Core hole ran too far from vertical - Abandoned hole	481.20 480.20	5	100	70		226

Color pictures of the cores Y
Cores will be stored for examination until 5 Yrs After Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 128 (Rev. 8-99)

GENERAL NOTES

US 24 OVER LAMOINE RIVER
F.A.P. RTE 317 (US RTE 24) SECTION (10B-1) R
BROWN & SCHUYLER COUNTY