





F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	2
ILLINOIS			CONTRACT NO. 87791	

**General Notes**

- The thickness of HMA shown on the plans is the nominal thickness. Deviations from the nominal thickness will be permitted when such deviations occur due to irregularities in the existing surface or base on which the HMA is placed.
- Except as noted on plans, pavement grades shown are at the top of pavement surfaces.
- The Engineer will be the sole judge concerning curing time for the various HMA lifts.
- For stabilization, all Type III barricades will require a minimum of eight (8) sandbags per barricade.
- Seeding will not be permitted at any time when the ground is frozen, wet, or in an untillable condition. Locations to be seeded will be determined by the Engineer.
- All elevations referring to U.S.G.S. Mean Sea Level Datum.
- Abandoned underground utilities that conflict with construction shall be disposed of outside the limits of the Right of Way according to Article 202.03 of the Standard Specifications and as directed by the Engineer. This work will be not be paid for separately, but will be included in the cost of Earth Excavation.
- Any reference to a Standard in these Plans shall be interpreted to mean the Edition as indicated by the subnumber shown in the list of Standards or the copy included in these Plans.
- The following rates of application have been used in calculating plan quantities:

Granular Materials	2.05	tons/cu yd
HMA Surfacing	112	lbs/sq yd/in
- Members of J.U.L.I.E. known to be within the limits of the improvements are: COMED, AT&T, NICOR, ENTERPRISE PRODUCTS PIPELINE, KRAUS CABLE
- The Contractor shall contact J.U.L.I.E. at least 48 hours prior to excavation to determine which utilities are in the area.
- Both structures shall be constructed at same time to accelerate construction schedule and minimize length of closures.
- The finished earthwork shall have a vegetation sustaining soil covering the top four inches in areas to be seeded. The vegetation sustaining soil required will not be paid for separately but will be included in the cost of the Furnished Excavation.

**Summary of Commitments**  
Trees 3" or greater in diameter at breast height will not be cleared April 1 through September 30.

**IDOT HIGHWAY STANDARDS**

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-10	PAVEMENT JOINTS
420406	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
515001-04	NAME PLATE FOR BRIDGES
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAINS
630001-13	STEEL PLATE BEAM GUARDRAIL
630101-11	STRONG POST GUARDRAIL ATTACHED TO CULVERT
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-10	TRAFFIC BARRIER TERMINAL, TYPE 6A
701901-09	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
BLR 21-9	TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 22-7	TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

**Erosion and Sediment Control Notes**

Soil erosion and sediment control shall be in accordance with applicable portions of the Illinois Urban Manual, updated 2020.

Provisions shall be made to minimize the transport of sediment by vehicular traffic from the construction site. All public streets shall be cleaned daily or as directed by the Engineer to keep clean of sediment and debris caused by construction activities. Adjacent properties shall be protected from sediment deposition by use of an acceptable erosion control practice such as vegetative buffer strips or sediment barriers. Should an erosion control item not be included as a Bid Item or not be addressed per Special Provision and be determined necessary by the Engineer, those items will be paid for at a pre-approved unit price.

For construction sites with one (1) acre or more of disturbance, all Contractors and Sub-Contractors will be required to certify a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP, if necessary, and all permits pertaining to soil and erosion control will be prepared and submitted by the Owner/Engineer.

It will be the Contractor/Sub-Contractor's responsibility to implement all necessary erosion control measures and follow the SWPPP.

Contractor shall employ all erosion control devices as shown on the plans, applicable IDOT Roadway Standards, and applicable Illinois Urban Manual Standards. A temporary concrete washout facility shall be constructed as depicted on the plans if concrete will wash out at the work site.

All erosion control measures will be maintained in accordance with the IDOT Erosion Control and Sediment Control Field Guide for construction inspection found on the construction tab at: <https://idot.illinois.gov/> The Contractor will assume responsibility for maintenance of all soil erosion control during construction.

All the soil erosion and sediment control features must be constructed prior to the commencement of upland disturbance. Soil disturbance must be phased or enacted in such manner as to minimize erosion. Soil stabilization measures must consider the time of year, site conditions and the use of temporary and/or permanent measures.

The Contractor shall check all ESC measures weekly and after each rainfall, 0.5 inches or greater in a 24-hour period, or equivalent snowfall. Additionally, during winter months, all measures should be checked by the Contractor after each significant snowmelt.

It is the responsibility of the Contractor to ensure that sediment transport off the site is reduced by a combination of minimization of erosion at the source and with the installation of specific measures to control or reduce the transport of sediment.

All runoff originating on disturbed areas associated with this project will pass through one or more measures that will minimize the off-site sediment impacts of the construction activities.

Temporary or permanent stabilization shall be initiated immediately upon completion of disturbance or if the work area is to be left undisturbed for 14 days or more.

Disturbed areas are to be protected from erosion in a timely manner, upon completion of grading or construction activity. The area will be stabilized (using permanent measures when possible) within 7 calendar days.

Under no circumstances shall the Contractor prolong final grading and shaping so that the entire project can be permanently seeded at one time.

The Contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the resident.

The Contractor must clean up, grade the work area as the project progresses, and install erosion protection to eliminate the concentration of runoff, or must install appropriate sediment control devices to trap sediment. Pavement must be cleaned daily or necessary to remove earthen material to the satisfaction of the engineer.

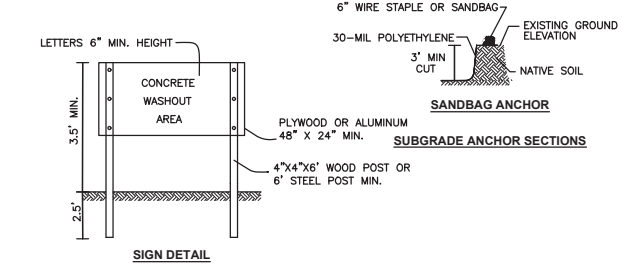
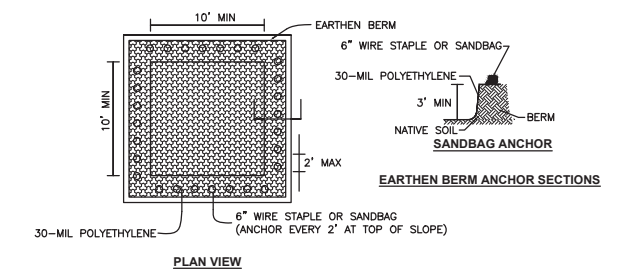
The Contractor's representative and the Engineer must keep a written report summarizing the required inspections taken place. The reports must be kept at the site during construction and submitted to the Owner upon project completion. The reports must also be retained for three years from the date the site is finally stabilized.

All the erosion and sediment control measures shall be maintained during the construction season as well as over any winter shutdown period and other days when the project is closed down for a longer duration. Any control measures filled more than 75% must be cleaned and reset and these spoils removed to an approved site.

Any sediment laden dewatering discharge must be directed to an approved sediment trapping control measure prior to release from the project site. Any dewatering method used by the Contractor shall be included in the cost of the item.

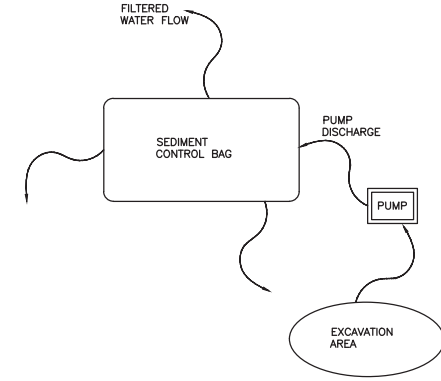
**Erosion Control Operations & Maintenance**

All maintenance of erosion control systems will be the responsibility of the Contractor.



- NOTES:**
- MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDEND CONCRETE AND/OR SLURRY AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION.
  - FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.
  - COST OF WASHOUT FACILITY SHALL BE INCLUDED IN THE CONCRETE PAY ITEMS.

**TEMPORARY CONCRETE WASHOUT FACILITY - EARTHEN TYPE**  
ILLINOIS URBAN MANUAL DRAWING IUM-654ET



- NOTES:**
- SEDIMENT FILTRATION BAGS SHALL BE PLACED ON A STABILIZED SURFACE AWAY FROM RECEIVING WATERWAYS AND/OR CONSTRUCTION ACTIVITIES. SEDIMENT FILTRATION BAGS SHALL NOT BE PLACED, WHOLE OR PARTIALLY, WITHIN AQUATIC AREAS (WETLANDS, STREAMS, ETC.) OR WATER CONVEYANCE FEATURES.
  - SEDIMENT FILTER BAGS SHALL BE RAISED ABOVE THE SUPPORTING GROUND ON A SURFACE, OR MATERIAL THAT ALLOWS WATER TO FLOW OUT OF THE BOTTOM OF THE BAG. THE PUMP DISCHARGE SHALL NOT EXCEED THE DESIGN DISCHARGE RATE OF THE SELECTED SEDIMENT FILTER BAG.
  - SEDIMENT FILTER BAGS SHALL MEET THE MATERIAL REQUIREMENTS OF THE ILLINOIS URBAN MANUAL, MATERIAL SPECIFICATIONS 592, TABLE 2, CLASS 1 WITH MINIMUM TENSILE STRENGTH OF 200 LBS.
  - SEDIMENT FILTER BAGS SHALL BE SIZED PER MANUFACTURER RECOMMENDATIONS AND BASED ON THE SIZED OF PUMP. MINIMUM BAG SIZE SHALL BE 10 FEET X 15 FEET WITH A USEABLE SURFACE DRAINAGE AREA OF 300 SQUARE FEET.
  - LARGEST SIZE PUMP HOSE TO BE USED WITH A SEDIMENT FILTRATION BAG IS 4-INCHES. MULTIPLE HOSES SHALL NOT BE USED TO ONE BAG.
  - SEDIMENT FILTRATION BAGS MUST BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS. BAGS MAY NOT BE REUSED.

**SEDIMENT CONTROL BAG FOR DEWATERING**  
ILLINOIS URBAN MANUAL STANDARD 830

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Drawing Name: H:\A\02\11.111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\CAD\PLANS\002-NOTES.dwg Last Modified: Thursday, February 22, 2024 3:49:11 PM Plotted On: Friday, March 1, 2024 2:09:45 PM by Kurt Decker

CONTRACT NO. 87791

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DATE: 02/2023				

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**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**GENERAL NOTES**

**BID SET**

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 2
FILE NO.: 111506.00 Y-	OF 51

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	3
		ILLINOIS	CONTRACT NO. 87791	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				BRACEVILLE RD 80%FED 20%LOCAL	CARBON HILL RD 80%FED 20%LOCAL
				BOX CULVERT 0010 S.N. 032-3251	BRIDGE 0013 S.N. 032-5121
20200100	EARTH EXCAVATION	CU YD	707	215	492
20400800	FURNISHED EXCAVATION	CU YD	220	155	65
20700220	POROUS GRANULAR EMBANKMENT	CU YD	350	350	
21001600	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	817	341	476
25000300	SEEDNG, CLASS 3	ACRE	0.50	0.25	0.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45	23	22
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	23	22
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	23	22
25100630	EROSION CONTROL BLANKET	SQ YD	1739	868	871
28000305	TEMPORARY DITCH CHECKS	FOOT	30	30	
28000400	PERIMETER EROSION BARRIER	FOOT	1351	598	753
28100107	STONE RIPRAP, CLASS A4	SQ YD	1147	102	1045
28200200	FILTER FABRIC	SQ YD	1147	102	1045
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	817	341	476
35300300	PORTLAND CEMENT CONCRETE BASE COURSE 8"	SQ YD	134	134	
40800275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	1838	767	1071
40800290	BITUMINOUS MATERIALS (TACK COAT)	POUND	233	126	107
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	275	115	160
40604050	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	TON	192	49	143
48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	743	263	480
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1	
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1		1
50102400	CONCRETE REMOVAL	CU YD	35		35
50300225	CONCRETE STRUCTURES	CU YD	29		29
50400805	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	4350		4350

\*DENOTES SPECIALTY ITEM

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				BRACEVILLE RD 80%FED 20%LOCAL	CARBON HILL RD 80%FED 20%LOCAL
				BOX CULVERT 0010 S.N. 032-3251	BRIDGE 0013 S.N. 032-5121
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	7086		7086
*50900209	STEEL RAILING, TYPE SMX	FOOT	331		331
51500100	NAME PLATES	EACH	2	1	1
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2	2	
54011010	PRECAST CONCRETE BOX CULVERTS 10' X 10'	FOOT	99	99	
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	483		483
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	932		932
58800101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	122		122
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	205	138	67
60100080	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4		4
60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	107		107
*63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	470	259	211
*63000030	STRONG POST GUARDRAIL ATTACHED TO CULVERT	FOOT	70	70	
*63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4		4
*63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	8	4	4
63200310	GUARDRAIL REMOVAL	FOOT	526	366	160
67100100	MOBILIZATION	L SUM	1	0.5	0.5
*72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	8	4	4
*78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1785	400	1385
X5810103	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	138	138	
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	0.5	0.5
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	20		20
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	100		100
Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	30		30
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5	0.5

\*DENOTES SPECIALTY ITEM

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 Drawing Name: H:\A\09\11\11506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL BOX CULVERTS\003-500.dwg  
 Last Modified: Thursday, February 22, 2024 4:23:05 PM  
 Plotted On: Monday, February 26, 2024 2:21:02 PM  
 By: Kurt Dieker

CONTRACT NO. 87791

DRAWN BY: NET	REVISIONS			
CHECKED BY: DAH	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2023				

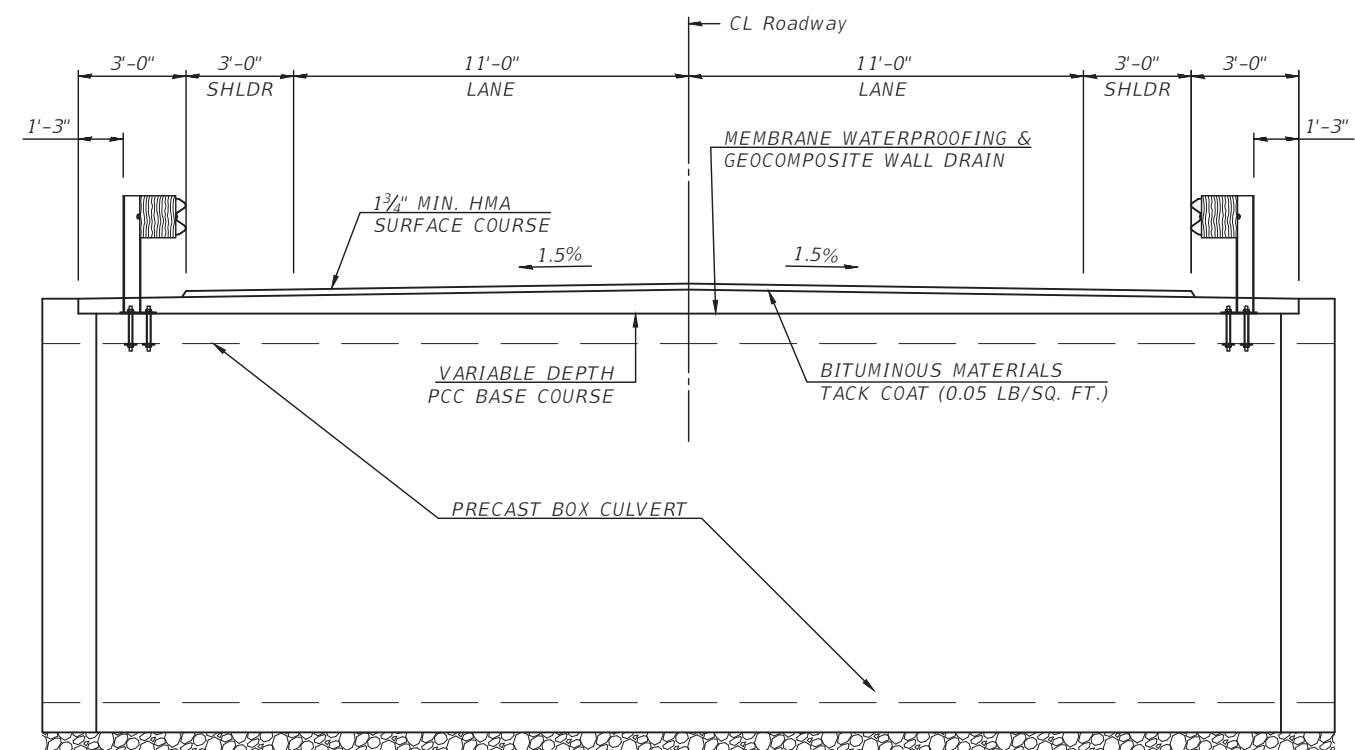


CH 34V SECTION 19-00178-00-BR  
 FAS 272 SECTION 22-00192-00-BR  
 GRUNDY COUNTY

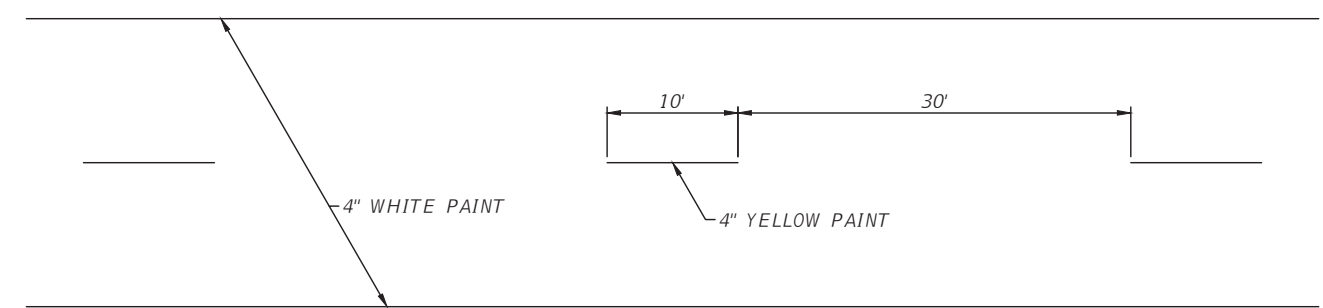
SUMMARY OF QUANTITIES

BID SET

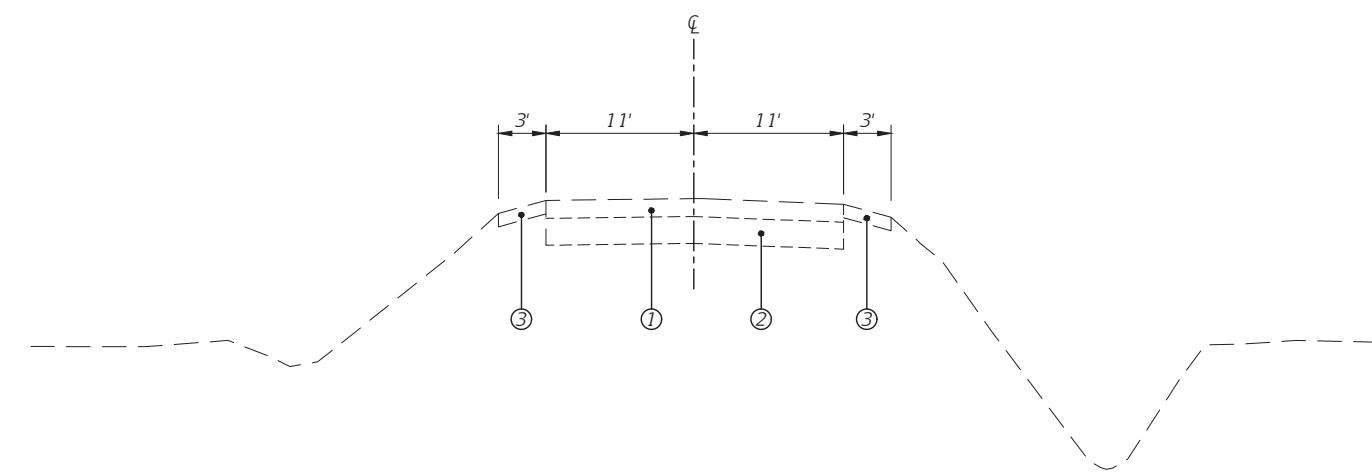
CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 3
FILE NO.: 111506.00 Y~	OF 51



**PROPOSED TYPICAL SECTION - BOX CULVERT**  
BRACEVILLE ROAD



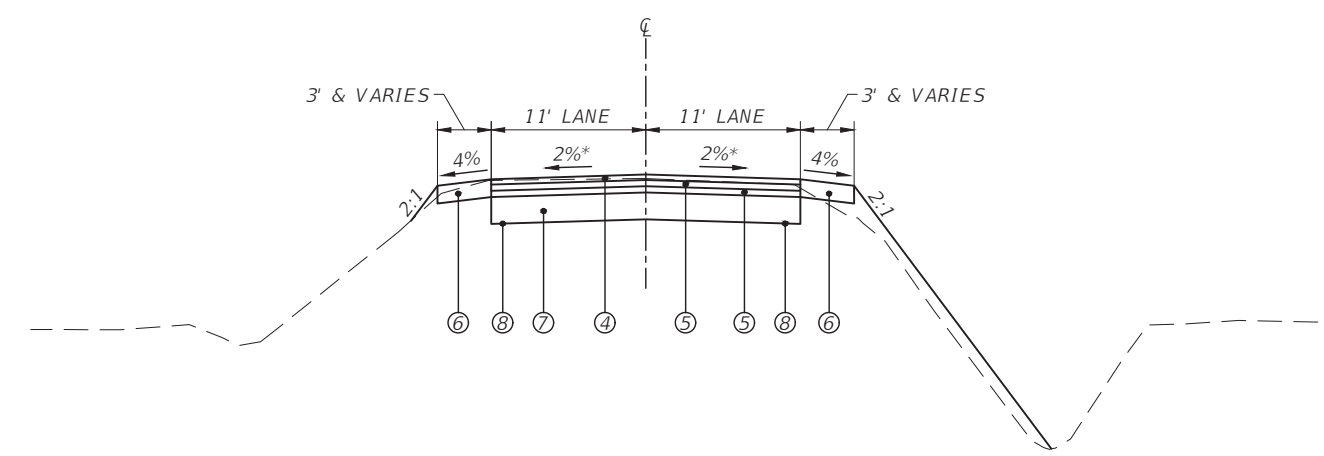
**PAINT PAVEMENT MARKING DETAIL**  
NOT TO SCALE



**EXISTING TYPICAL SECTION**

**LEGEND**

- ① EXISTING HMA PAVEMENT, 8"
- ② EXISTING AGGREGATE BASE COURSE, 12"
- ③ EXISTING AGGREGATE SHOULDER, 8"
- ④ PROPOSED HMA SURFACE COURSE, 1L-9.5, MIX "C", N50-2"
- ⑤ PROPOSED HMA BINDER COURSE, 1L-19.0, N50-6" (2 LIFTS)
- ⑥ PROPOSED AGGREGATE SHOULDER, 8"
- ⑦ PROPOSED AGGREGATE SUBGRADE IMPROVEMENT, 12"
- ⑧ GEOTECHNICAL FABRIC FOR GROUND STABILIZATION



**PROPOSED TYPICAL SECTION**

NOT TO SCALE  
 STA. 121+52.80 TO STA. 121+98.52  
 STA. 122+34.02 TO STA. 123+27.73  
 \*TRANSITION LANE CROSS-SLOPE FROM 1.5% TO 2% 25' AWAY FROM BOX CULVERT

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 Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\ROAD\PLANS\004-BRACEVILLE RD - TYP SEC.dwg  
 Last Modified: Thursday, February 15, 2024 3:00:28 PM  
 Plotted On: Monday, February 26, 2024 2:23:09 PM  
 by Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	DESCRIPTION

PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

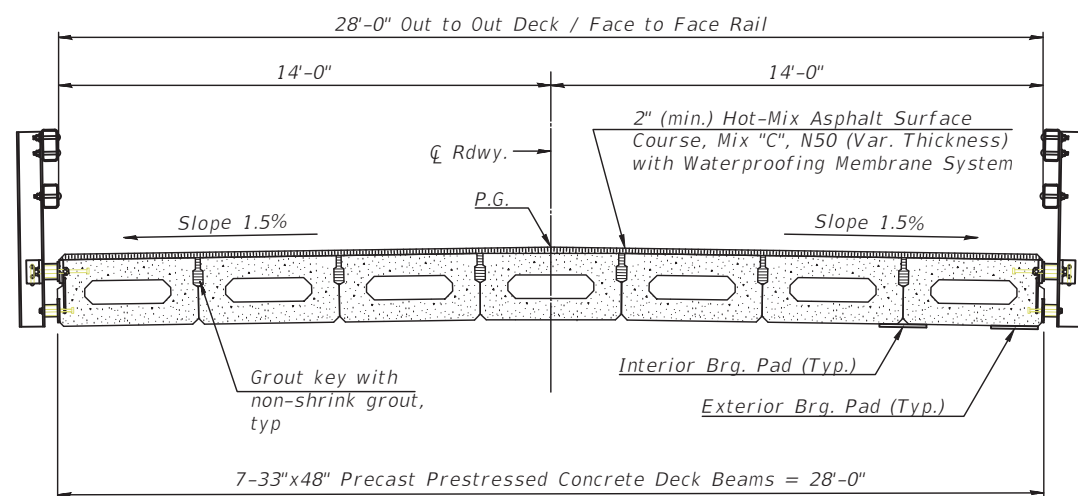
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**STR 032-3250 (E) STR 032-3251 (P)**

**BID SET**

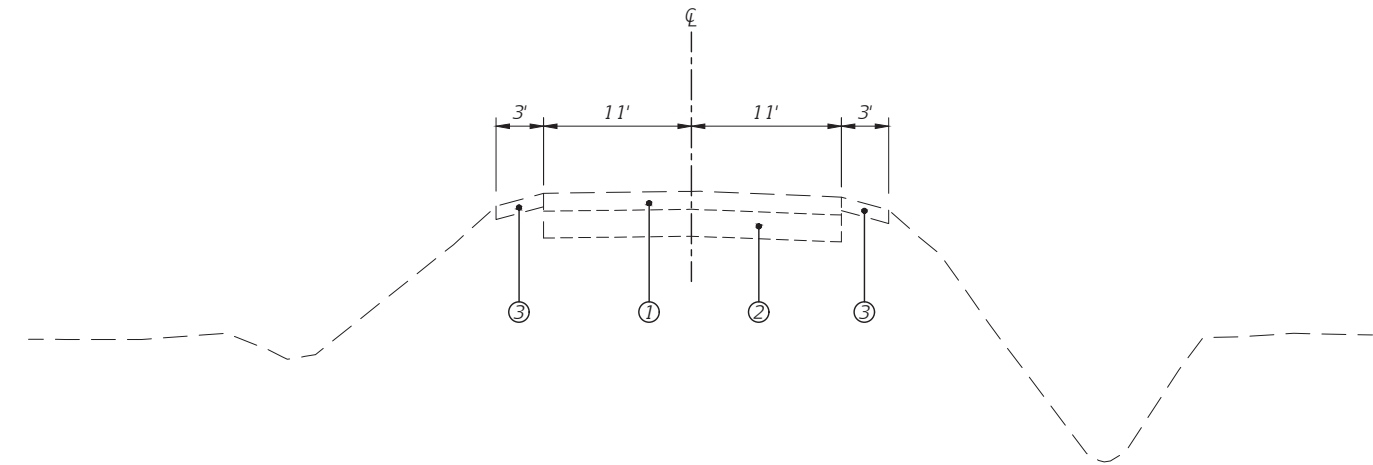
CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 4
FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	5
		ILLINOIS	CONTRACT NO. 87791	



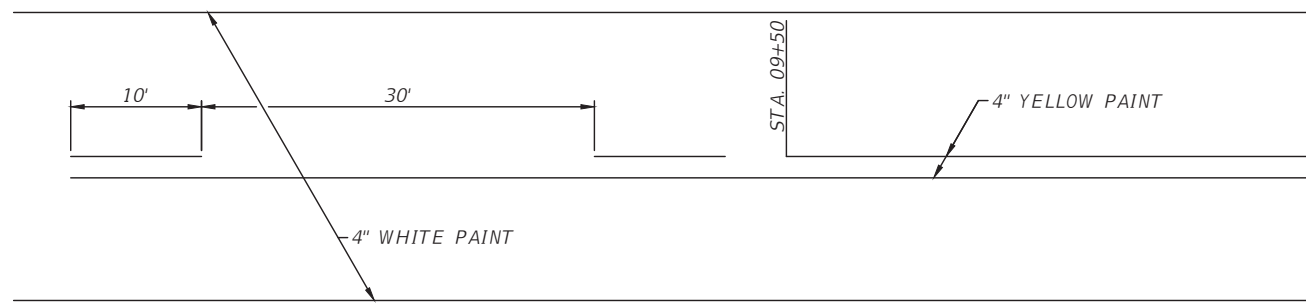
**PROPOSED BRIDGE CROSS SECTION**



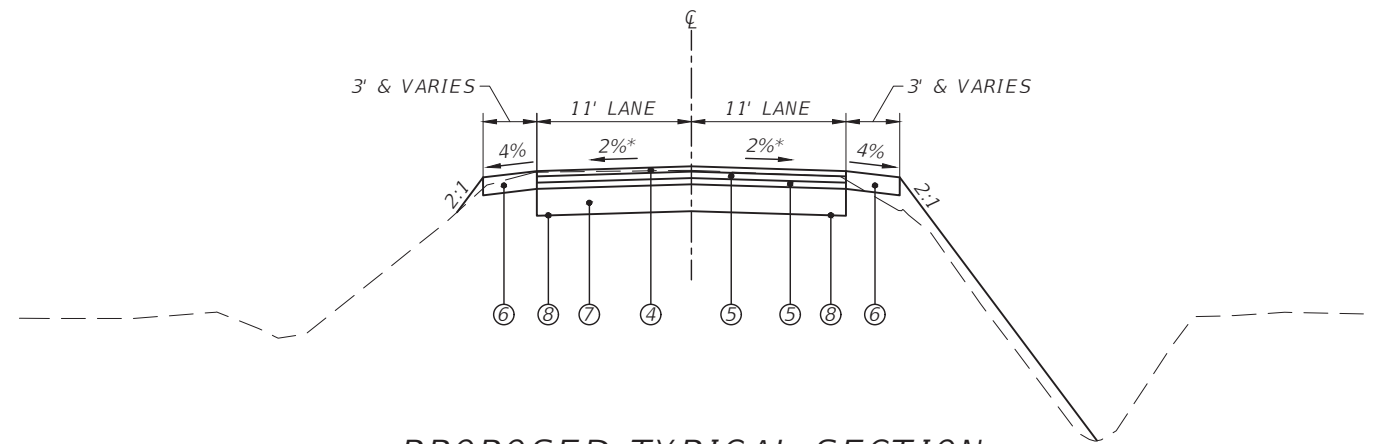
**EXISTING TYPICAL SECTION**

**LEGEND**

- ① EXISTING HMA PAVEMENT, 8"
- ② EXISTING AGGREGATE BASE COURSE, 12"
- ③ EXISTING AGGREGATE SHOULDER, 8"
- ④ PROPOSED HMA SURFACE COURSE, IL-9.5, MIX "C", N50-2"
- ⑤ PROPOSED HMA BINDER COURSE, IL-19.0, N50-6" (2 LIFTS)
- ⑥ PROPOSED AGGREGATE SHOULDER, 8"
- ⑦ PROPOSED AGGREGATE SUBGRADE IMPROVEMENT, 12"
- ⑧ GEOTECHNICAL FABRIC FOR GROUND STABILIZATION



**PAINT PAVEMENT MARKING DETAIL**  
NOT TO SCALE



**PROPOSED TYPICAL SECTION**

NOT TO SCALE  
 STA. 8+95.04 TO STA. 9+52.69  
 STA. 11+08.10 TO STA. 12+50.00  
 \*TRANSITION LANE CROSS-SLOPE FROM 1.5% TO 2% 25' AWAY FROM BACK OF BRIDGE ABUTMENTS

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 Drawing Name: H:\ADGE\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\ROAD\PLANS\005-CARBON HILL RD - TYP SEC.dwg  
 Last Modified: Thursday, February 15, 2024 3:00:47 PM  
 Plotted On: Monday, February 26, 2024 2:25:14 PM  
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CONTRACT NO. 87791

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DATE: 02/2023				

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ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**TYPICAL SECTIONS**  
**STR 032-5121 (E)(P)**

**BID SET**

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 5
FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	6
		ILLINOIS	CONTRACT NO. 87791	



- ① BRIDGE CLOSED 2 1/2 MILES AHEAD BEGINS XX/XX/XX (1 REQ'D)
  - ② BRIDGE CLOSED ON BRACEVILLE ROAD BEGINS XX/XX/XX (2 REQ'D)
  - ③ ROAD CLOSED R11-2 (2 REQ'D)
  - ④ ROAD CLOSED TO THRU TRAFFIC R11-4 (2 REQ'D)
  - ⑤ ROAD CLOSED AHEAD W20-3 48"x48" WITH FLAG (2 REQ'D)
  - ⑥ ROAD CLOSED 500 FT W20-3 48"x48" WITH FLAG (0 REQ'D)
  - ⑦ TYPE III BARRICADES (4 REQ'D)
  - ⑧ TYPE III BARRICADES (4 REQ'D - OFFSET)
- NOTES: ALL SIGNS SHALL BE FLUORESCENT ORANGE.  
TEMP SIGNAGE COST INCLUDED IN TRAFFIC CONTROL & PROTECTION (SPECIAL)

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 Drawing Name: H:\A\08\1111506\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\CAD\PLANS\006-TRAFFIC-BRACEVILLE ROAD.dwg  
 Last Modified: Thursday, February 15, 2024 3:19:26 PM  
 Plotted On: Monday, February 26, 2024 2:25:47 PM  
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DATE: 02/2023				



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CH 34V SECTION 19-00178-00-BR  
 FAS 272 SECTION 22-00192-00-BR  
 GRUNDY COUNTY

TRAFFIC CONTROL PLAN  
 STR 032-3250 (E) 032-3251 (P)

<b>BID SET</b>	CURRENT AS OF: 02/14/2024	
	SCALE: AS NOTED	SHEET 6
	FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	7
		ILLINOIS	CONTRACT NO. 87791	



- ① BRIDGE CLOSED  
2 1/2 MILES AHEAD  
BEGINS XX/XX/XX (1 REQ'D)
  - ② BRIDGE CLOSED  
ON CARBON HILL ROAD  
BEGINS XX/XX/XX (6 REQ'D)
  - ③ ROAD CLOSED R11-2  
(2 REQ'D)
  - ④ ROAD CLOSED TO  
THRU TRAFFIC R11-4  
(2 REQ'D)
  - ⑤ ROAD CLOSED AHEAD W20-3 48"x48"  
WITH FLAG (2 REQ'D)
  - ⑥ ROAD CLOSED 500 FT W20-3 48"x48"  
WITH FLAG (2 REQ'D)
  - ⑦ TYPE III BARRICADES (4 REQ'D)
  - ⑧ TYPE III BARRICADES (4 REQ'D - OFFSET)
- NOTES: ALL SIGNS SHALL BE FLUORESCENT ORANGE.  
TEMP SIGNAGE COST INCLUDED IN TRAFFIC CONTROL & PROTECTION (SPECIAL)

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 Drawing Name: H:\A\08\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\CAD\PLANS\007-TRAFFIC-CARBON HILL ROAD.dwg Last Modified: Thursday, February 15, 2024 3:18:24 PM Plotted On: Monday, February 26, 2024 2:24:07 PM by Kurt Decker

CONTRACT NO. 87791

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CHECKED BY: DAH	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2023				



PERU MORRIS  
 OTTAWA MENDOTA  
 ILLINOIS

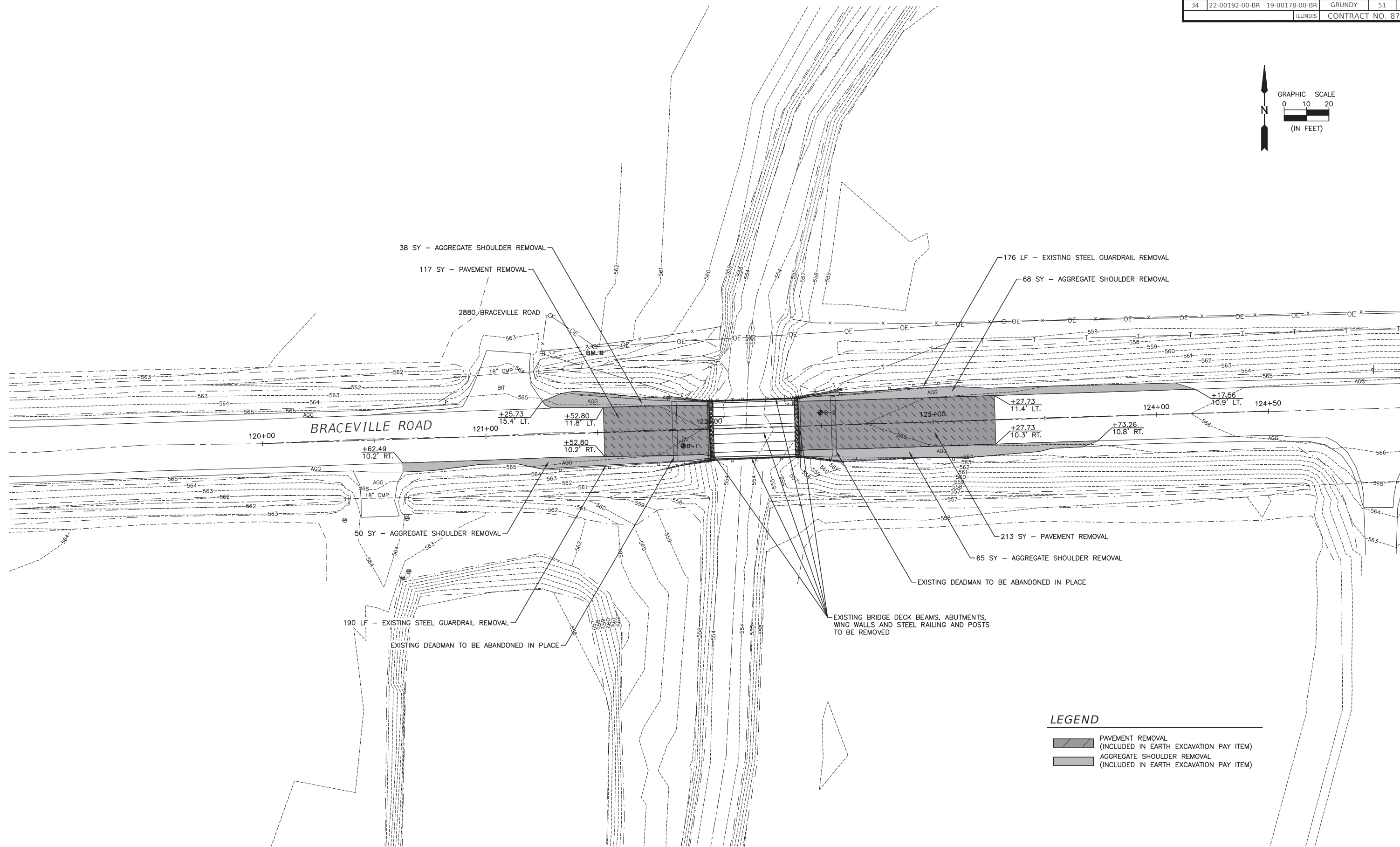
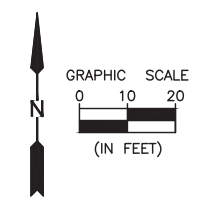
CH 34V SECTION 19-00178-00-BR  
 FAS 272 SECTION 22-00192-00-BR  
 GRUNDY COUNTY

TRAFFIC CONTROL PLAN  
 STR 032-5121 (E)(P)

BID SET	CURRENT AS OF: 02/14/2024	
	SCALE: AS NOTED	SHEET 7
	FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	8
		ILLINOIS	CONTRACT NO. 87791	



**LEGEND**

	PAVEMENT REMOVAL (INCLUDED IN EARTH EXCAVATION PAY ITEM)
	AGGREGATE SHOULDER REMOVAL (INCLUDED IN EARTH EXCAVATION PAY ITEM)

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 Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\LOAD PLANS\008-BRACEVILLE RD - REMOVAL.dwg Last Modified: Thursday, February 15, 2024 2:24:22 PM Plotted On: Monday, February 26, 2024 2:24:22 PM by Kurt Decker

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DATE: 02/2023				

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OTTAWA MENDOTA  
ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**REMOVAL PLAN**  
**STR 032-3250 (E) 032-3251 (P)**

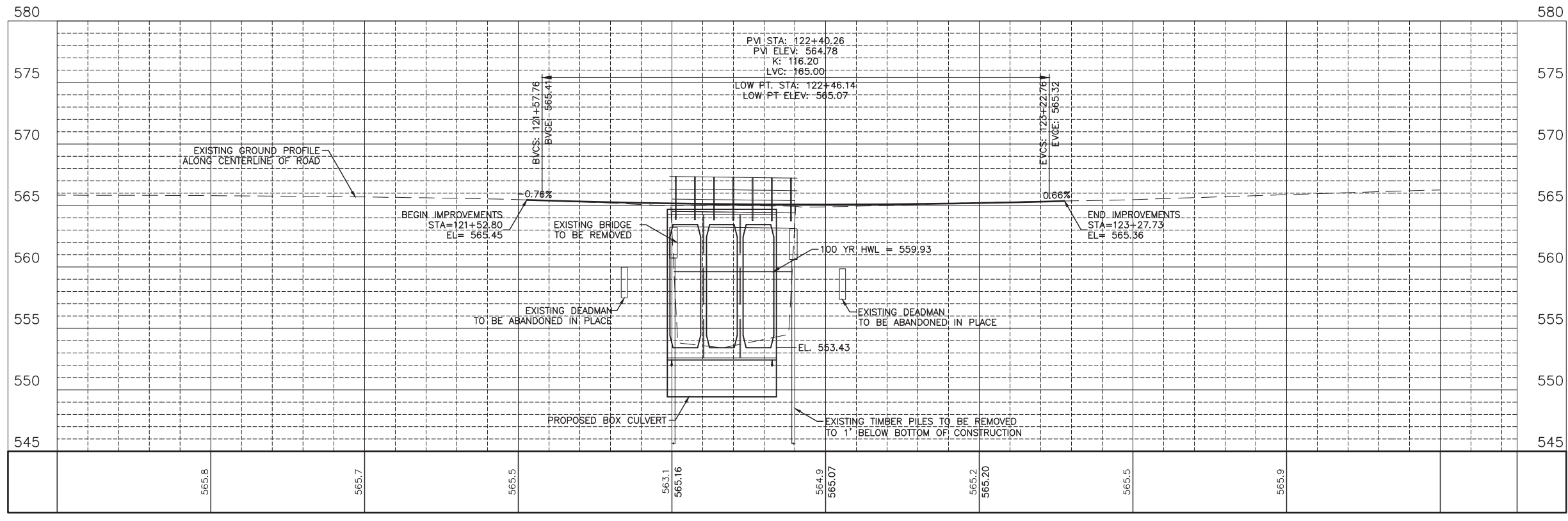
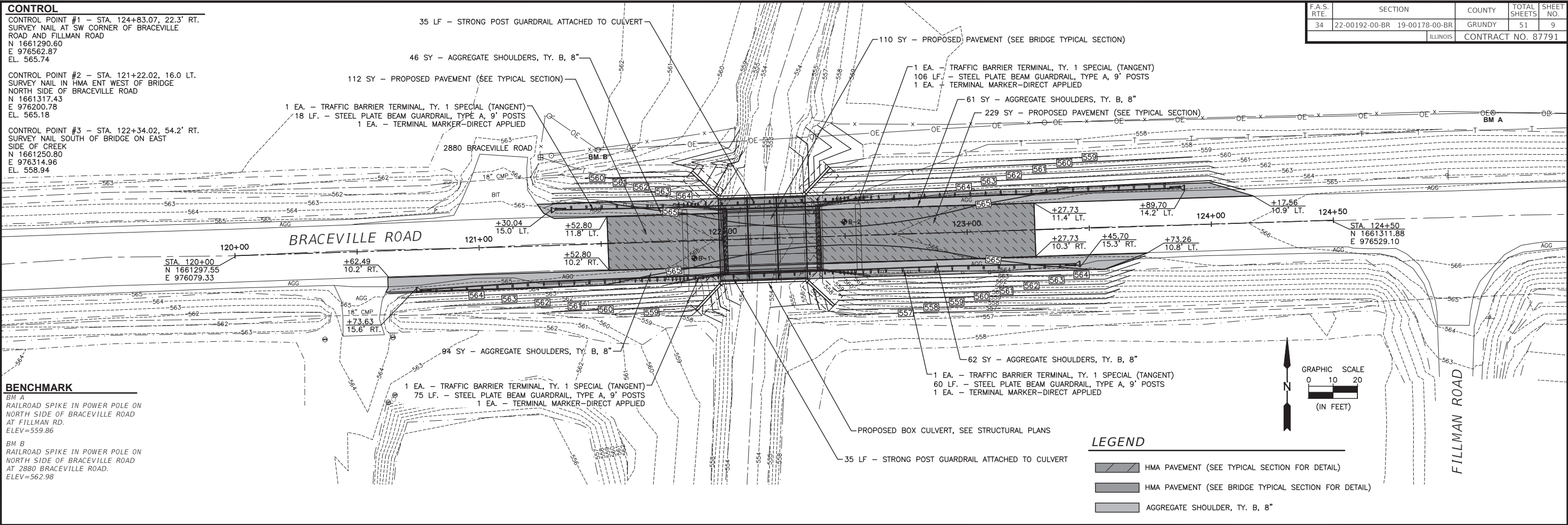
<b>BID SET</b>	CURRENT AS OF: 02/14/2024	
	SCALE: AS NOTED	SHEET 8
	FILE NO.: 111506.00 Y-	OF 51

**CONTROL**  
 CONTROL POINT #1 - STA. 124+83.07, 22.3' RT.  
 SURVEY NAIL AT SW CORNER OF BRACEVILLE  
 ROAD AND FILLMAN ROAD  
 N 1661290.60  
 E 976562.87  
 EL. 565.74  
 CONTROL POINT #2 - STA. 121+22.02, 16.0 LT.  
 SURVEY NAIL IN HMA ENT WEST OF BRIDGE  
 NORTH SIDE OF BRACEVILLE ROAD  
 N 1661317.43  
 E 976200.78  
 EL. 565.18  
 CONTROL POINT #3 - STA. 122+34.02, 54.2' RT.  
 SURVEY NAIL SOUTH OF BRIDGE ON EAST  
 SIDE OF CREEK  
 N 1661250.80  
 E 976314.96  
 EL. 558.94

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR	GRUNDY	51	9
		ILLINOIS	CONTRACT NO. 87791	

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 Drawing Name: H:\AUG\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\CAD\PLANS\009-BRACEVILLE RD - PNP.dwg  
 Last Modified: Thursday, February 22, 2024 2:45:42 PM  
 Plotted On: Monday, February 26, 2024 2:24:40 PM by Kurt Decker

**BENCHMARK**  
 BM A  
 RAILROAD SPIKE IN POWER POLE ON  
 NORTH SIDE OF BRACEVILLE ROAD  
 AT FILLMAN RD.  
 ELEV=559.86  
 BM B  
 RAILROAD SPIKE IN POWER POLE ON  
 NORTH SIDE OF BRACEVILLE ROAD  
 AT 2880 BRACEVILLE ROAD.  
 ELEV=562.98



CONTRACT NO. 87791		120+00		120+50		121+00		121+50		122+00		122+50		123+00		123+50		124+00		124+50		124+75	
DRAWN BY: NET	LEVEL	BY	DATE	REVISIONS																			
CHECKED BY: DAH				DESCRIPTION																			
DATE: 02/2023																							

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 OTTAWA MENDOTA  
 ILLINOIS

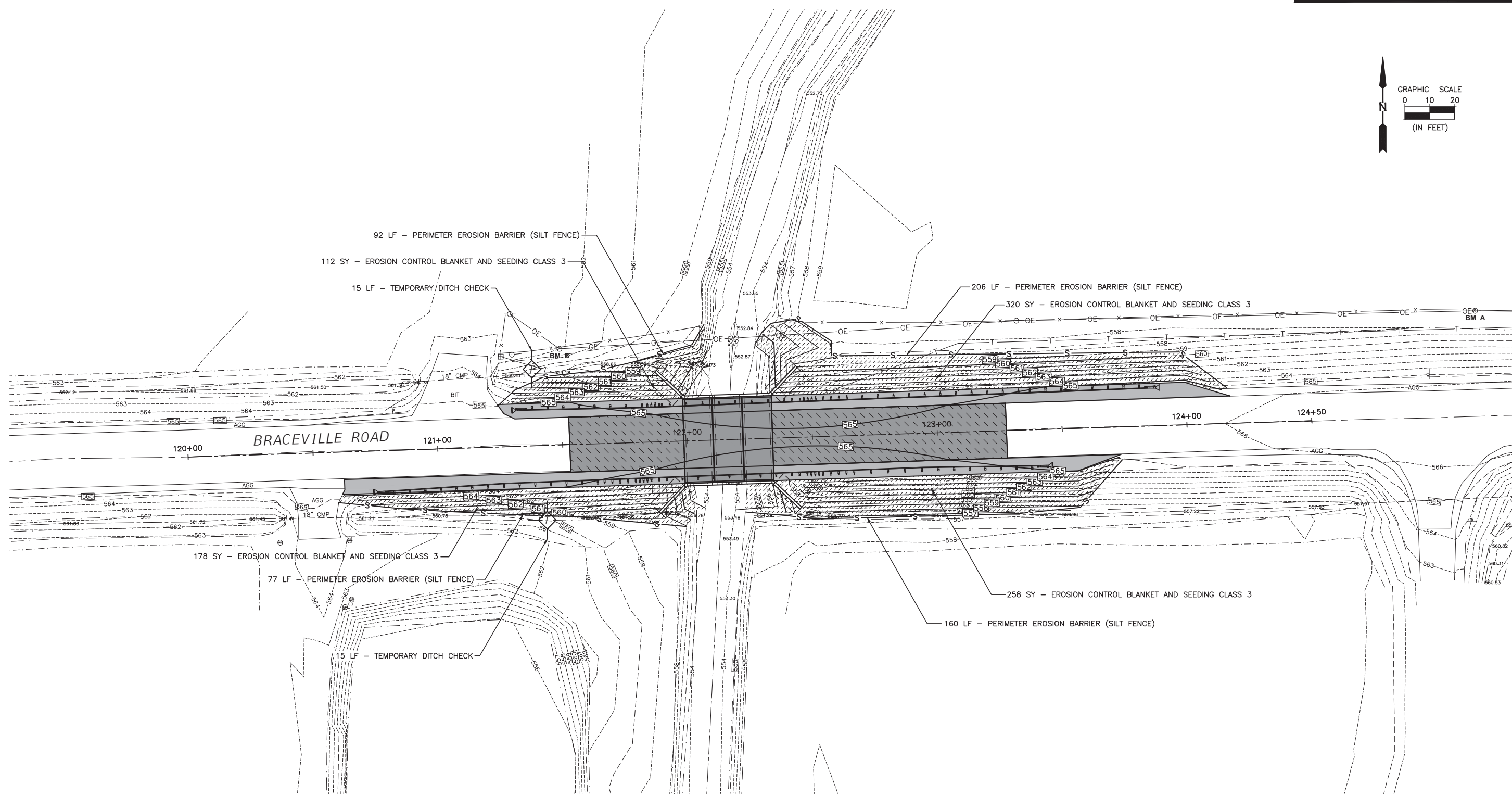
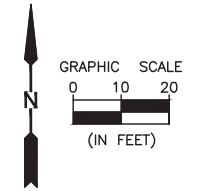
**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**PLAN AND PROFILE**  
**STR 032-3250 (E) 032-3251 (P)**

**BID SET**

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 9
FILE NO.: 111506.00 Y-	OF 51

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	10
		ILLINOIS	CONTRACT NO. 87791	



**LEGEND**

	EROSION CONTROL BLANKET AND SEEDING CLASS 3
	TEMPORARY DITCH CHECK
	PERIMETER EROSION CONTROL BARRIER (SILT FENCE)

NOTE: REFER TO EROSION CONTROL NOTES ON SHEET 2 OF 51.

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 Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\CAD\PLANS\010-BRACEVILLE RD - EROSION.dwg Last Modified: Wednesday, February 14, 2024 2:11:46 PM Plotted On: Monday, February 26, 2024 2:24:59 PM by Kurt Decker

CONTRACT NO. 87791

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CHECKED BY: DAH	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2023				



PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

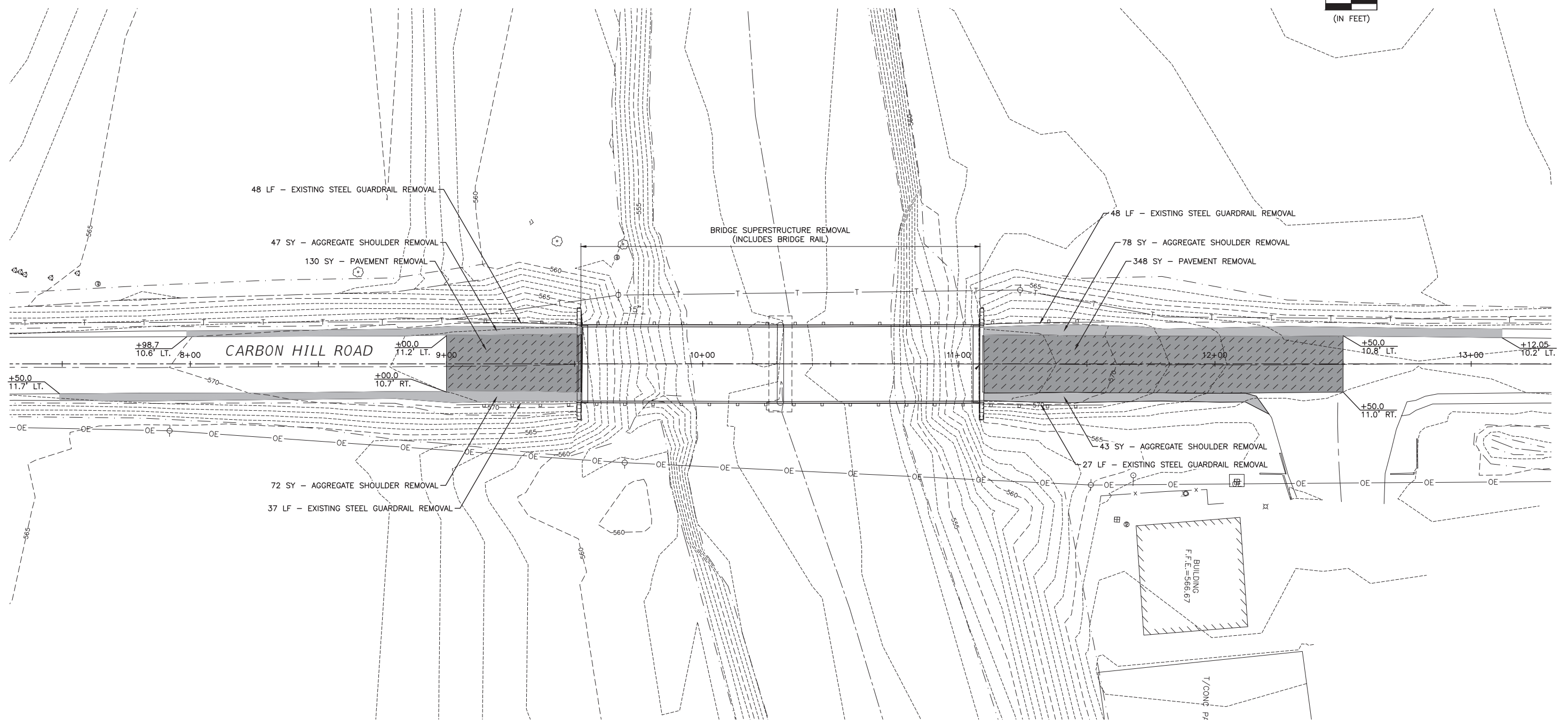
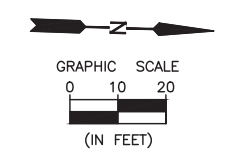
**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**EROSION CONTROL PLAN**  
**STR 032-3250 (E) 032-3251 (P)**

<b>BID SET</b>	CURRENT AS OF: <b>02/14/2024</b>	
	SCALE: AS NOTED	SHEET <b>10</b>
	FILE NO.: 111506.00 Y-	OF <b>51</b>



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	11
		ILLINOIS	CONTRACT NO. 87791	



**LEGEND**

	PAVEMENT REMOVAL (INCLUDED IN EARTH EXCAVATION PAY ITEM)
	AGGREGATE SHOULDER REMOVAL (INCLUDED IN EARTH EXCAVATION PAY ITEM)

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 Drawing Name: H:\ADGE\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\CAD\PLANS\01-CARBON HILL RD - REMOVAL.dwg Last Modified: Wednesday, February 14, 2024 10:57:13 AM Plotted On: Monday, February 26, 2024 2:25:10 PM by Kurt Decker

CONTRACT NO. 87791

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	LEVEL	BY	DATE	DESCRIPTION
CHECKED BY: DAH				
DATE: 02/2023				



PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**REMOVAL PLAN**  
**STR 032-5121 (E)(P)**

<b>BID SET</b>	CURRENT AS OF: <b>02/14/2024</b>	
	SCALE: AS NOTED	SHEET <b>11</b>
	FILE NO.: 111506.00 Y-	OF <b>51</b>

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR	19-00178-00-BR	GRUNDY	51
			ILLINOIS	CONTRACT NO. 87791

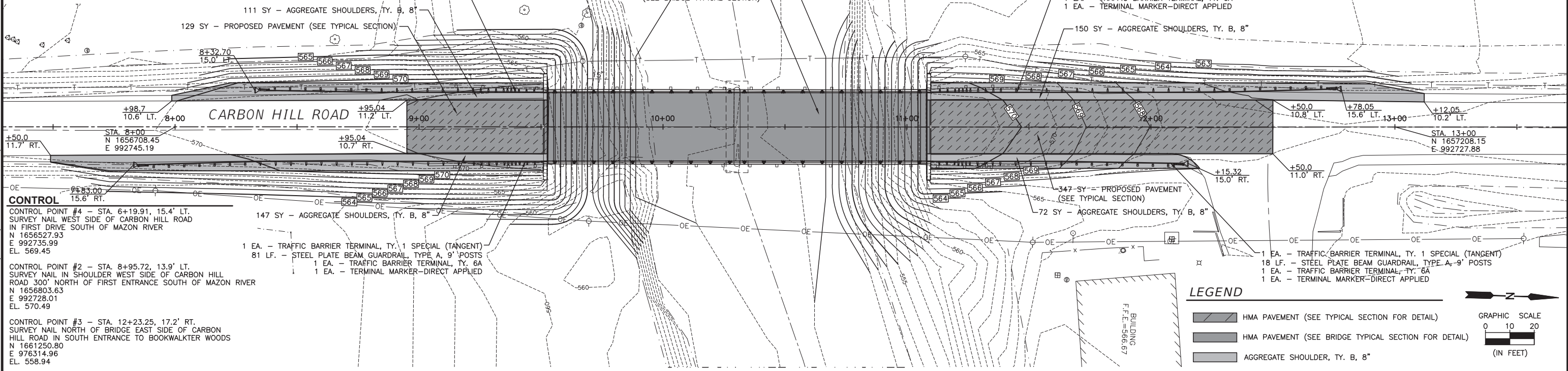
**BENCHMARK**

BM A  
RAILROAD SPIKE IN POWER POLE  
AT SOUTHEAST CORNER OF  
CARBON HILL ROAD & CREEKSIDE  
BOOKWALTER WOODS  
ELEV=567.39

BM B  
RAILROAD SPIKE IN POWER POLE  
ON EAST SIDE OF PICKWICK @  
CREEKSIDE  
ELEV=571.05

1 EA. - TRAFFIC BARRIER TERMINAL, TY. 1 SPECIAL (TANGENT)  
31 LF. - STEEL PLATE BEAM GUARDRAIL, TYPE A, 9' POSTS  
1 EA. - TRAFFIC BARRIER TERMINAL, TY. 6A  
1 EA. - TERMINAL MARKER-DIRECT APPLIED

1 EA. - TRAFFIC BARRIER TERMINAL, TY. 1 SPECIAL (TANGENT)  
81 LF. - STEEL PLATE BEAM GUARDRAIL, TYPE A, 9' POSTS  
1 EA. - TRAFFIC BARRIER TERMINAL, TY. 6A  
1 EA. - TERMINAL MARKER-DIRECT APPLIED



**CONTROL**

CONTROL POINT #4 - STA. 6+19.91, 15.4' LT.  
SURVEY NAIL WEST SIDE OF CARBON HILL ROAD  
IN FIRST DRIVE SOUTH OF MAZON RIVER  
N 1656527.93  
E 992735.99  
EL. 569.45

CONTROL POINT #2 - STA. 8+95.72, 13.9' LT.  
SURVEY NAIL IN SHOULDER WEST SIDE OF CARBON HILL  
ROAD, 300' NORTH OF FIRST ENTRANCE SOUTH OF MAZON RIVER  
N 1656803.63  
E 992728.01  
EL. 570.49

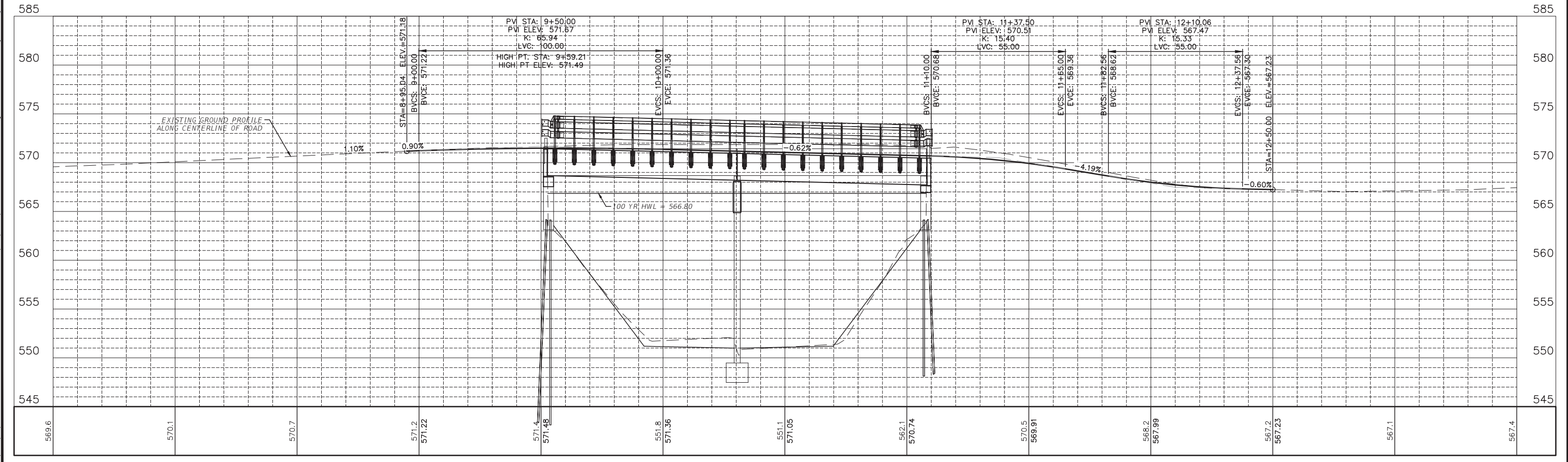
CONTROL POINT #3 - STA. 12+23.25, 17.2' RT.  
SURVEY NAIL NORTH OF BRIDGE EAST SIDE OF CARBON  
HILL ROAD IN SOUTH ENTRANCE TO BOOKWALKER WOODS  
N 1661250.80  
E 976314.96  
EL. 558.94

1 EA. - TRAFFIC BARRIER TERMINAL, TY. 1 SPECIAL (TANGENT)  
81 LF. - STEEL PLATE BEAM GUARDRAIL, TYPE A, 9' POSTS  
1 EA. - TRAFFIC BARRIER TERMINAL, TY. 6A  
1 EA. - TERMINAL MARKER-DIRECT APPLIED

**LEGEND**

- HMA PAVEMENT (SEE TYPICAL SECTION FOR DETAIL)
- HMA PAVEMENT (SEE BRIDGE TYPICAL SECTION FOR DETAIL)
- AGGREGATE SHOULDER, TY. B, 8"

GRAPHIC SCALE  
0 10 20  
(IN FEET)



CONTRACT NO. 87791	8+00	8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00	13+50
569.6	570.1	570.7	571.2 571.22	571.4 571.48	551.8 571.36	551.1 571.05	562.1 570.74	570.5 569.91	568.2 567.99	567.2 567.23	567.1	567.4

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CHECKED BY: DAH					
DATE: 02/2023					

**PERU MORRIS**  
OTTAWA MENDOTA  
ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**PLAN AND PROFILE**  
**STR 032-5121 (E)(P)**

**BID SET**

CURRENT AS OF: 02/14/2024

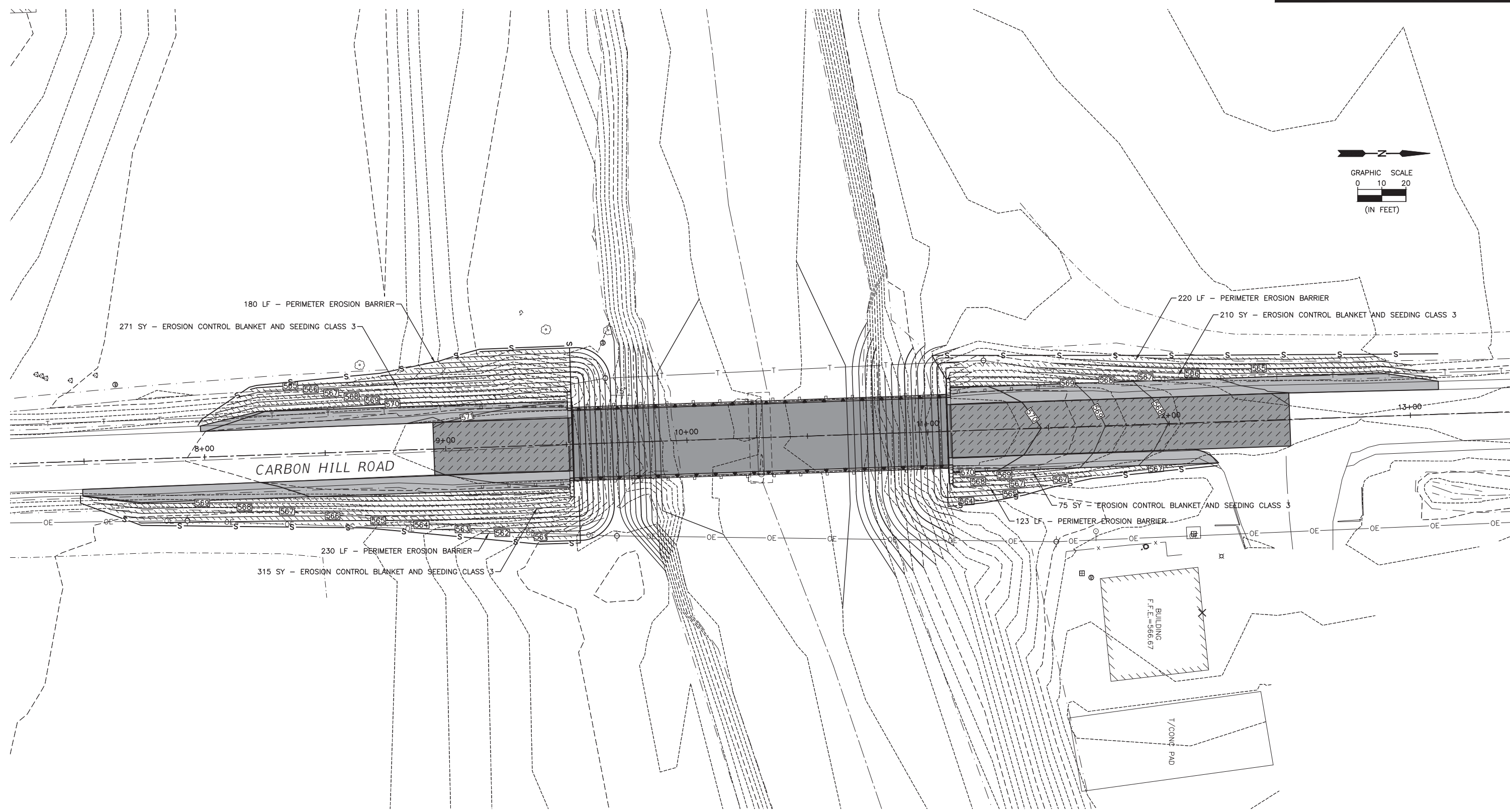
SCALE: AS NOTED SHEET 12

FILE NO.: 111506.00 Y- OF 51

CHAMLIN & ASSOCIATES, INC. © 2024  
Drawing Name: H:\AUG\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD - PNP.dwg Last Modified: Thursday, February 22, 2024 2:46:13 PM Plotted On: Monday, February 26, 2024 2:25:28 PM by Kurt Decker



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	13
		ILLINOIS	CONTRACT NO. 87791	



**LEGEND**

EROSION CONTROL BLANKET AND SEEDING CLASS 3

PERIMETER EROSION CONTROL BARRIER (SILT FENCE)

NOTE: REFER TO EROSION CONTROL NOTES ON SHEET 2 OF 51.

CHAMLIN & ASSOCIATES, INC. © 2024  
 Drawing Name: H:\A08\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\CAD\PLANS\013-CARBON HILL RD - EROS.DWG  
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 Plotted On: Monday, February 26, 2024 2:25:36 PM by Kurt Decker

CONTRACT NO. 87791

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CHECKED BY: DAH	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2023				

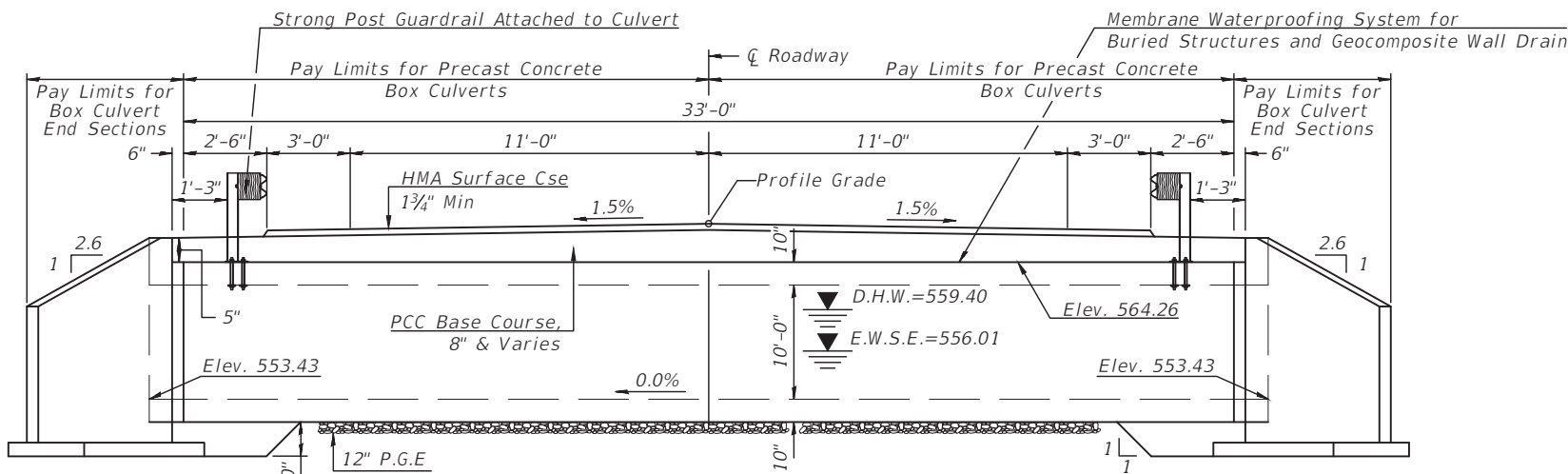
PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

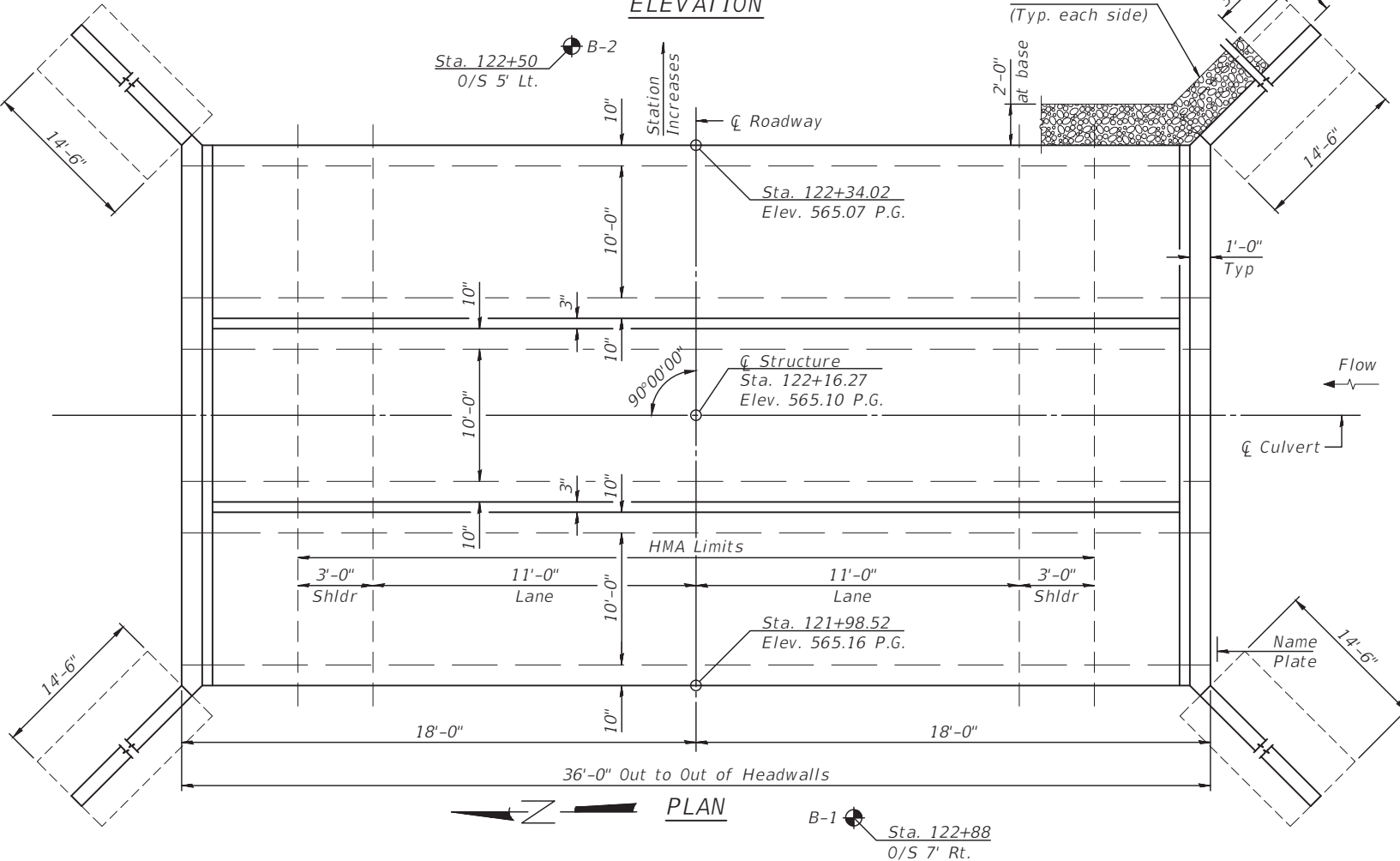
EROSION CONTROL PLAN  
STR 032-5121 (E)(P)

BID SET	CURRENT AS OF: 02/14/2024	
	SCALE: AS NOTED	SHEET 13
	FILE NO.: 111506.00 Y-	OF 51





ELEVATION



PLAN

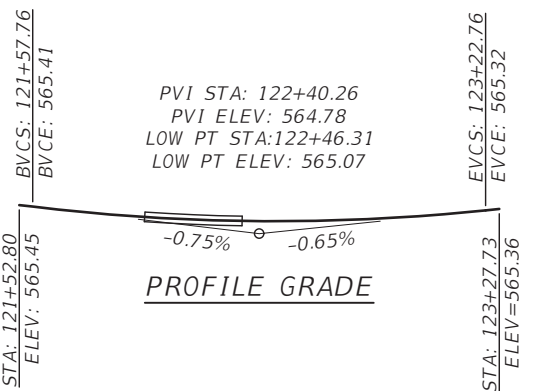
WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.				Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Total	Bridge	Prop.		Exist.	Prop.	Exist.	Prop.
	10	360	176.7	176.7	162.9	162.9	558.98	0.00	0.03	558.98	559.01
Design	50	526	191.9	191.9	176.4	176.4	559.40	0.00	0.06	559.40	559.46
Base	100	593	196.8	196.8	180.9	180.9	559.53	0.00	0.08	559.53	559.61
Max. Calc.	500	747	206.7	206.7	190.5	190.5	559.79	0.00	0.14	559.79	559.93

Exist. 10 Year Velocity: 1.89 (ft./sec.)

Prop. 10 Year Velocity: 1.86 (ft./sec.)

EXISTING STRUCTURE NO: 032-3250  
 Sta. 122+20 - Single span prestressed precast concrete deck beam bridge on timber pile supported closed abutments with concrete deadmen.  
 Structure closed to traffic during construction.  
 No Salvage.



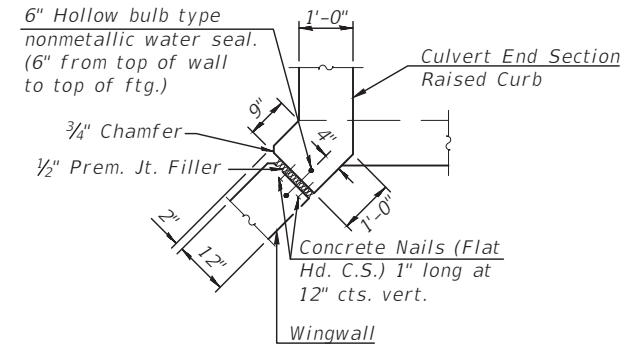
PROFILE GRADE

DESIGN SPECIFICATIONS  
 2020 AASHTO LRFD Bridge Design Specifications  
 Customary U.S. Units, 9th Edition

LOADING HL-93  
 Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

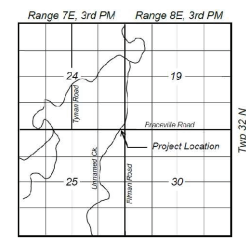
- PRECAST UNITS  
 f'c = 5,000 psi  
 fy = 65,000 psi (Welded Wire Reinforcement)
- FIELD UNITS  
 f'c = 3,500 psi  
 fy = 65,000 psi (Welded Wire Reinforcement)



CORNER DETAIL

STA. 122+16.27  
 BUILT 2024 BY  
 GRUNDY COUNTY  
 F.A.S. 272 - SEC. 22-00192-00-BR  
 LOADING HL-93  
 STR. NO. 032-3251

NAME PLATE  
 See Std. 515001



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	350
Stone Rip Rap, Class A4	Sq. Yd.	102
Filter Fabric	Sq. Yd.	102
Removal of Existing Structures	Each	1
Name Plates	Each	1
Box Culverts End Sections	Each	2
Precast Concrete Box Culverts, 10'x10'	Foot	99
Geocomposite Wall Drain	Foot	138
Membrane Waterproofing System for Buried Structure	Foot	138

GENERAL PLAN AND ELEVATION  
 BRACEVILLE ROAD (F.A.S. 272)

OVER UNNAMED CREEK  
 SEC. 22-00192-00-BR

GRUNDY COUNTY  
 STATION 122+16.27  
 S.N. 032-3251

I certify that to the best of knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.



INDEX OF SHEETS

- General Plan and Elevation
- Rip Rap Details
- Box Culvert Details
- Soil Borings
- Existing Plans

CHAMLIN & ASSOCIATES, INC. © 2024  
 Drawing Name: H:\A\08\1111506-00 GRUNDY CO BRACEVILLE RD - GPE.dwg  
 Last Modified: Thursday, February 22, 2024 2:48:40 PM  
 Plotted On: Monday, February 26, 2024 2:25:45 PM  
 by Kurt Decker

REVISIONS	LEVEL	BY	DATE	DESCRIPTION

**CA**  
 CHAMLIN & ASSOCIATES  
 PERU MORRIS  
 OTTAWA MENDOTA  
 ILLINOIS

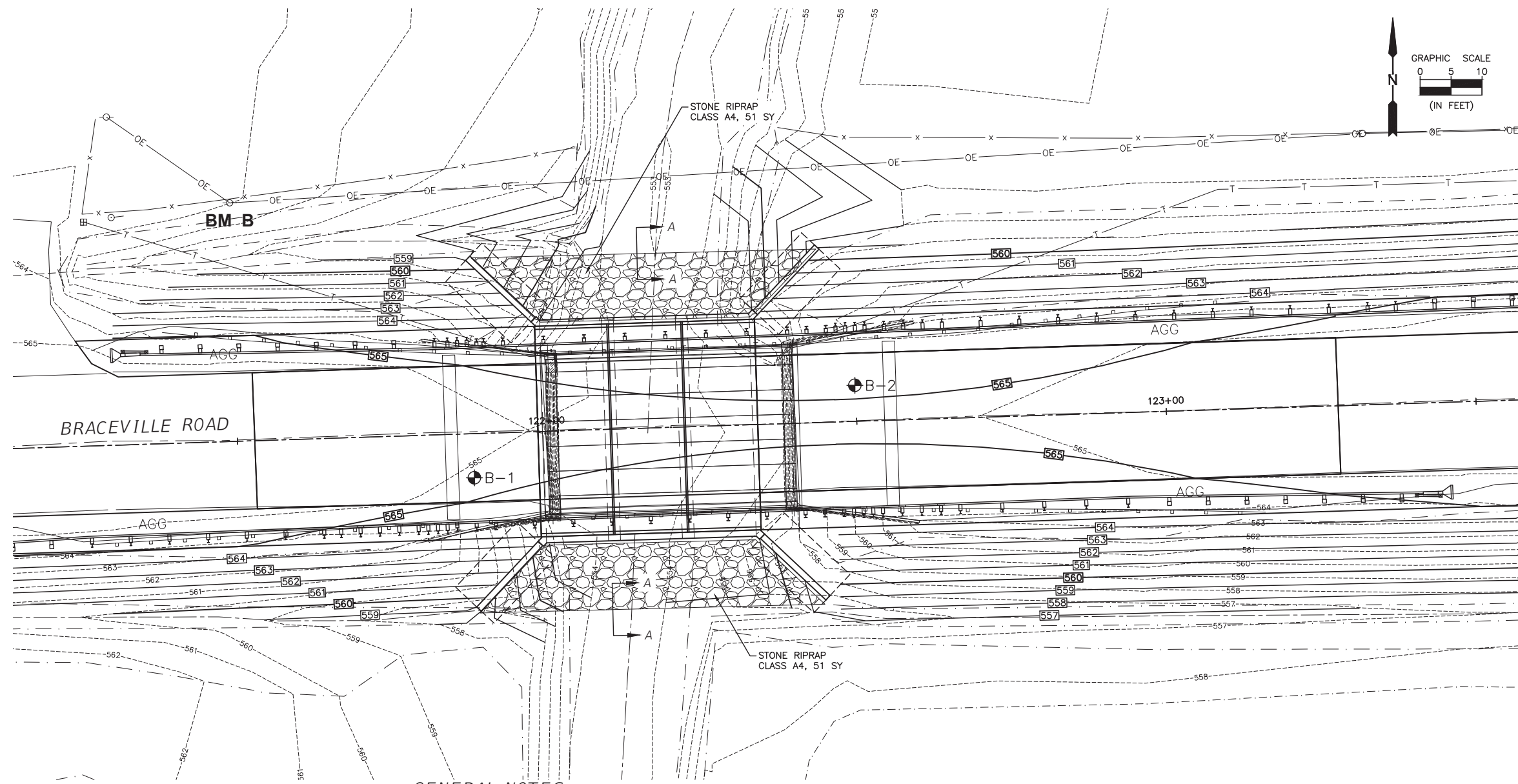
CH 34V SECTION 19-00178-00-BR  
 FAS 272 SECTION 22-00192-00-BR  
 GRUNDY COUNTY

GENERAL PLAN AND ELEVATION  
 STR 032-3250 (E) 032-3251 (P)

BID SET

CURRENT AS OF: 02/14/2024	SHEET 14
SCALE: AS NOTED	OF 51
FILE NO.: 111506.00 Y-	

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	15
		ILLINOIS	CONTRACT NO. 87791	



**GENERAL NOTES**

The design fill height for this box is 0.4' to 0.9' ft. The precast box culvert sections shall conform to the requirements of ASTM C 1577.

Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specification.

Non-woven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

Precast concrete box culverts and box culvert end sections shall be backfilled with Porous Granular Embankment in the required excavation areas on the sides of the box culvert from the top of the box culvert to 1' below the bottom of the box culvert. This area of PGE is included in the Porous Granular Embankment pay item.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

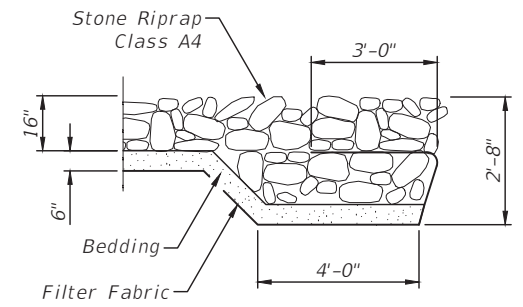
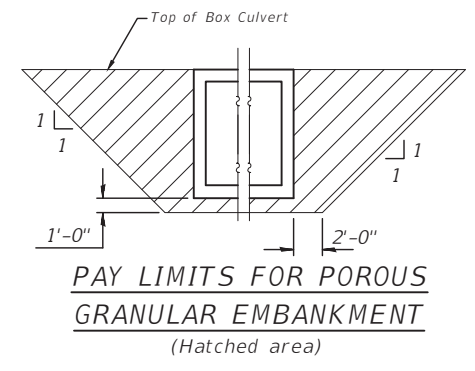
Reinforcement bars designated (E) shall be epoxy coated.

All proposed construction activities shall be in accordance with Statewide Permit 12 and Nationwide Permit 3 or 14 of the US Army Corps of Engineers.

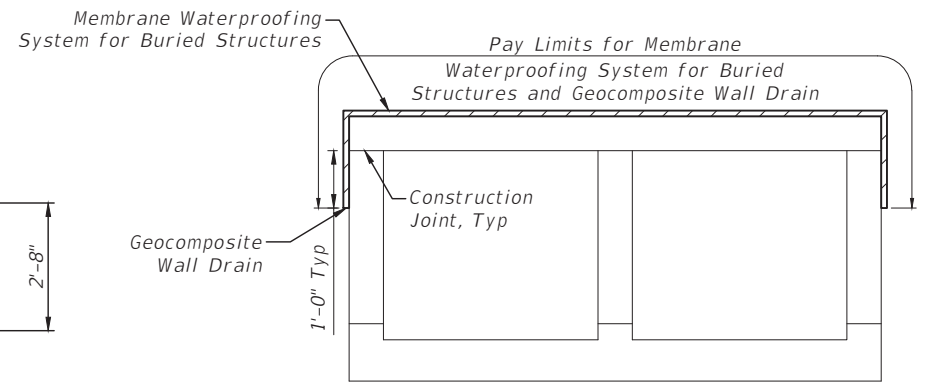
Contractor shall be responsible for diverting the water flow from the construction area using a method meeting the approval of the Engineer and included in the unit cost of Concrete Box Culverts.

Structure Excavation shall be included in the cost of Precast Concrete Box Culverts and Box Culvert End Sections.

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.



**SECTION A-A**



**MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES**

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 Drawing Name: H:\A03\1111506-00 GRUNDY CO BRACEVILLE RD - RIPRAP.dwg  
 Last Modified: Thursday, February 22, 2024 3:57:19 PM  
 Plotted On: Monday, February 26, 2024 2:28:03 PM  
 by: Kurt Decker

DRAWN BY: KED	REVISIONS			
CHECKED BY: DAH	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2023				

PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

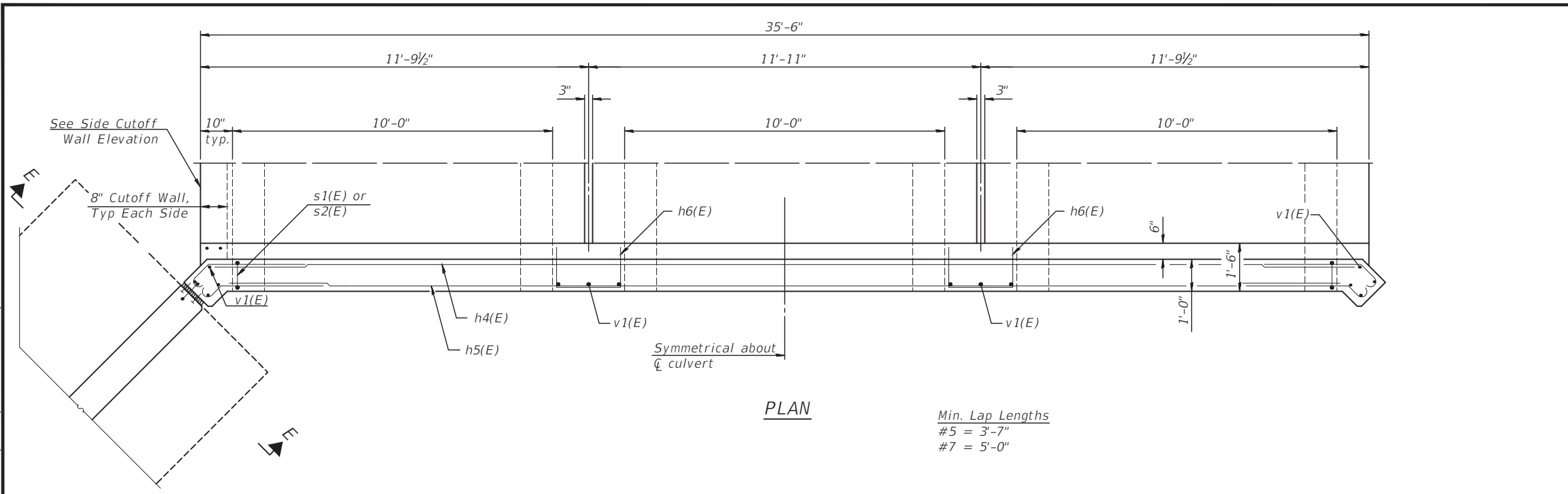
**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**RIPRAP DETAILS**  
**STR 032-3250 (E) 032-3251 (P)**

<b>BID SET</b>	CURRENT AS OF: 02/14/2024	
	SCALE: AS NOTED	SHEET 15
	FILE NO.: 111506.00 Y-	OF 51

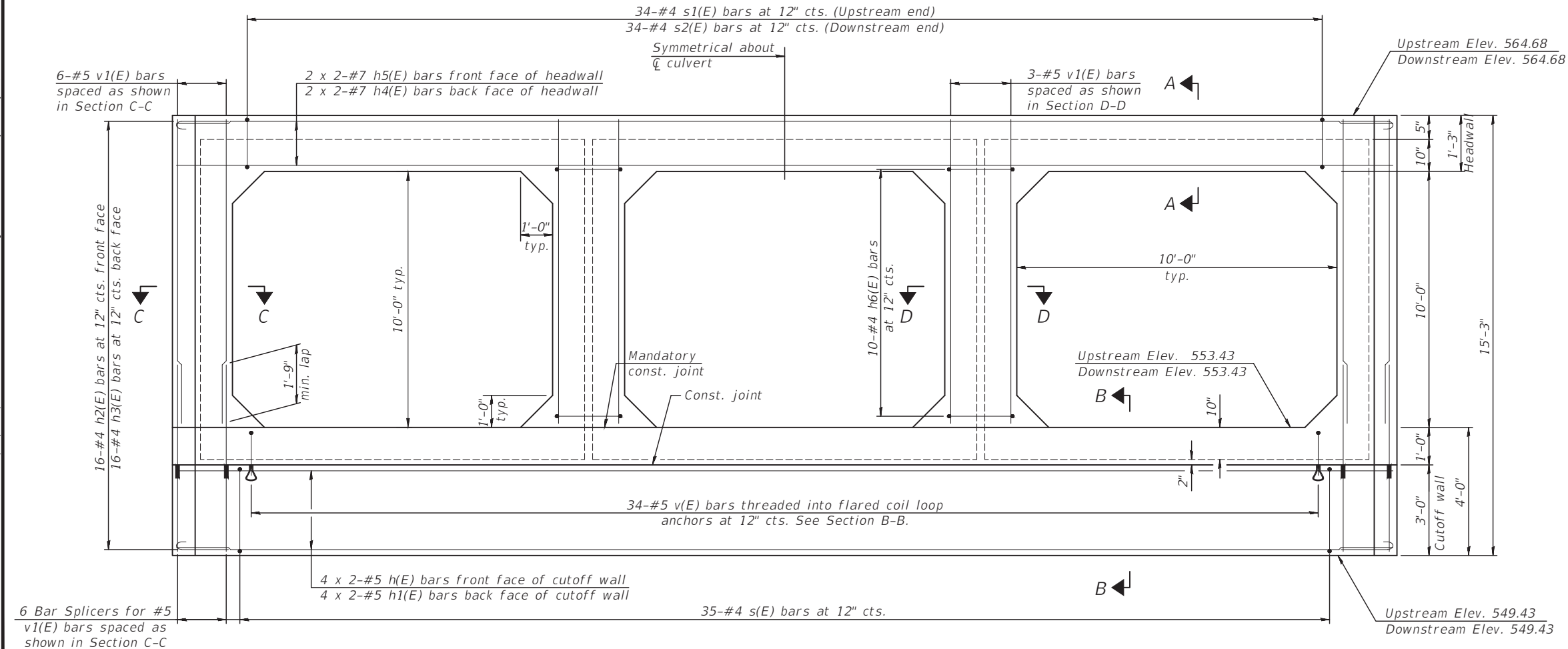
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	16
	ILLINOIS	CONTRACT NO. 87791		

Sheet 3 of 12



PLAN

Min. Lap Lengths  
 #5 = 3'-7"  
 #7 = 5'-0"



END ELEVATION

(Wingwalls omitted in this view for clarity.)

Note:  
 The box culvert end section shall be built in the field and a precast option is not allowed except the cutoff wall may be precast. If the Contractor elects to use a precast cutoff wall, shop drawings and a proposed construction sequence shall be submitted to the Engineer for approval.

Areas of the precast box culvert in contact with cast-in-place concrete shall be sandblasted, cleaned, and wetted prior to placing concrete in the field according to Article 503.09(b).

The ends of the precast box sections adjacent to the end section shall be formed without male and female shapes.

The joints between precast box sections shall be sealed, all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13 inch wide external sealing band. The seal shall be centered over the joint, secured in place and protected during the backfilling process.

Tilt h2 and h3 bars as required to maintain clearance.

Extend precast concrete box culvert welded wire reinforcement into end section. Bend as necessary to provide 1 1/2" clear cover.

See sheet 17 of 51 for Section A-A, B-B, C-C, D-D and E-E.

See sheet 18 of 51 for additional wing wall details.

Bars indicated thus 4 x 2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

BILL OF MATERIAL

Item	Unit	Total
Box Culvert End Sections, Culvert No. 1	Each	2

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 Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\LOAD\PLANS\018-BRACEVILLE RD - CULVERT DTLS 01.dwg  
 Last Modified: Thursday, February 22, 2024 2:49:52 PM  
 Plotted On: Monday, February 26, 2024 2:26:09 PM  
 by Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	DESCRIPTION

PERU MORRIS  
 OTTAWA MENDOTA  
 ILLINOIS

CH 34V SECTION 19-00178-00-BR  
 FAS 272 SECTION 22-00192-00-BR  
 GRUNDY COUNTY

BOX CULVERT DETAILS  
 STR 032-3250 (E) 032-3251 (P)

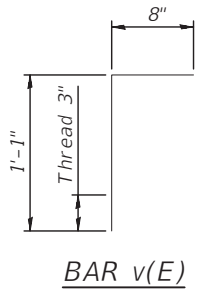
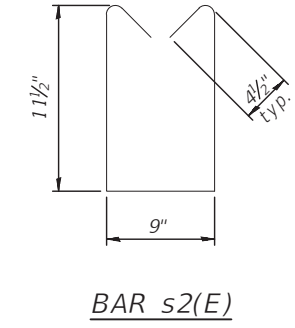
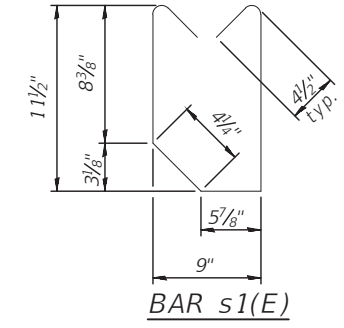
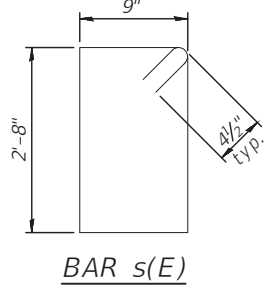
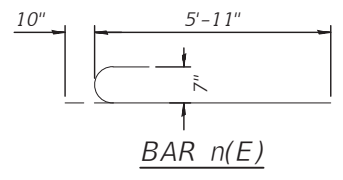
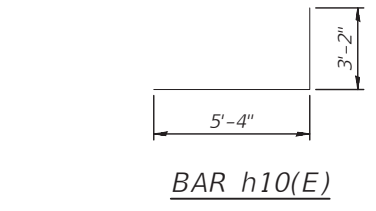
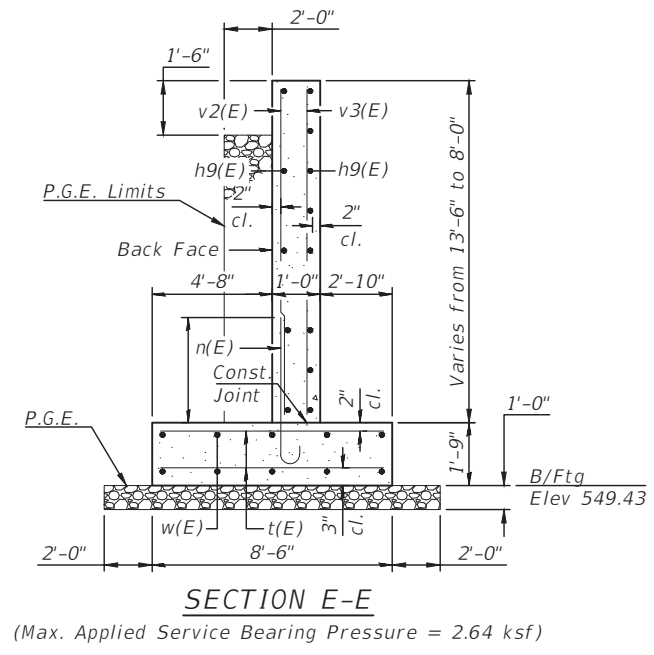
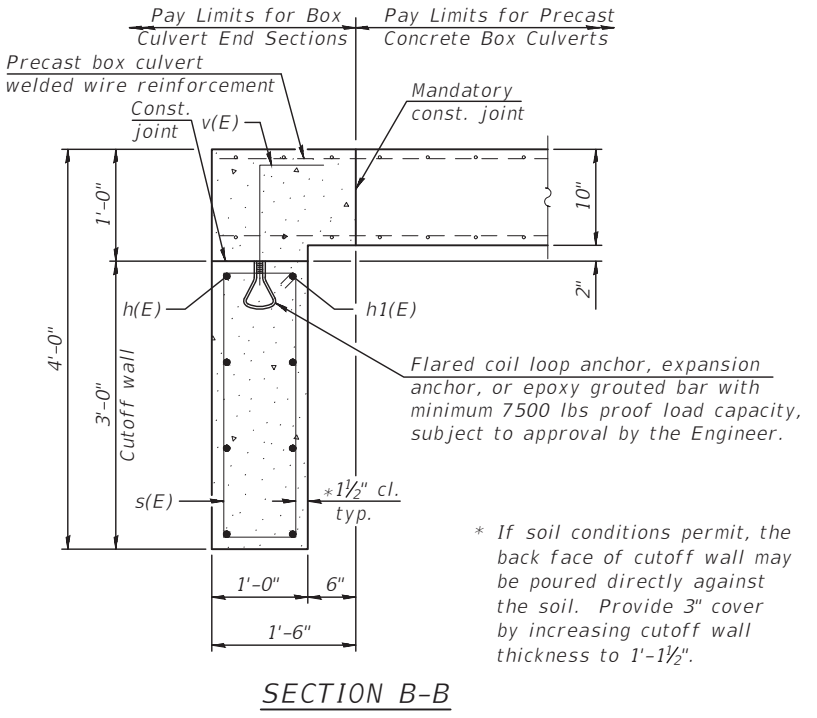
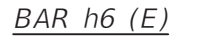
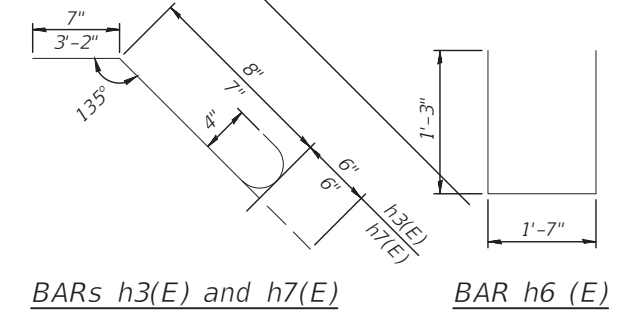
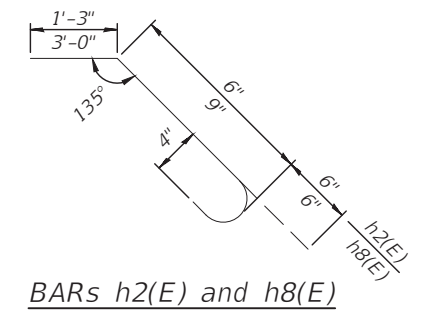
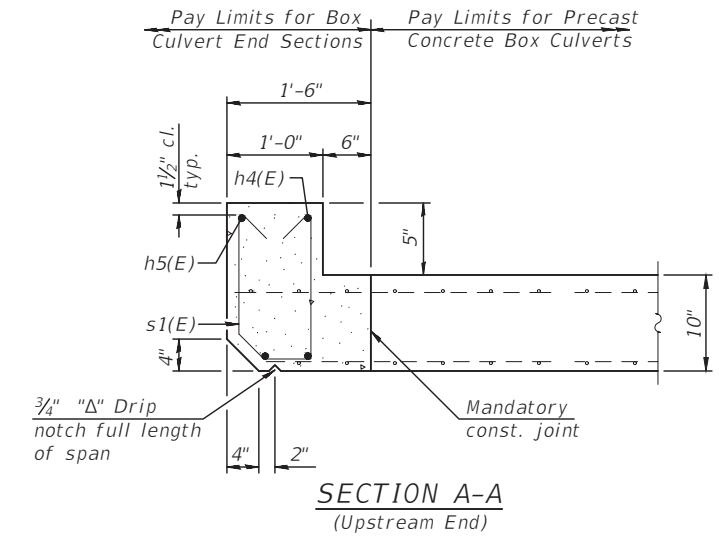
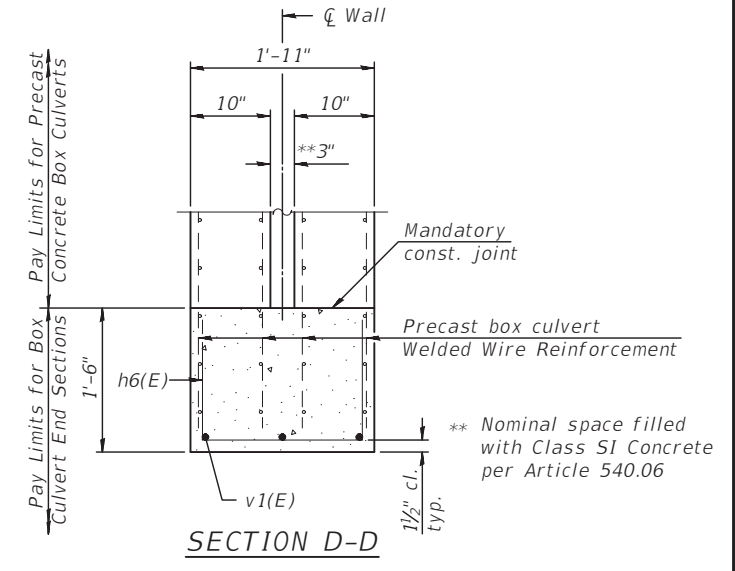
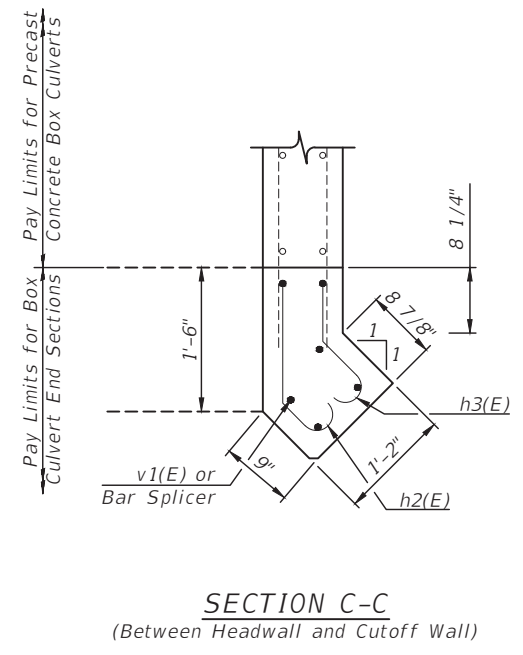
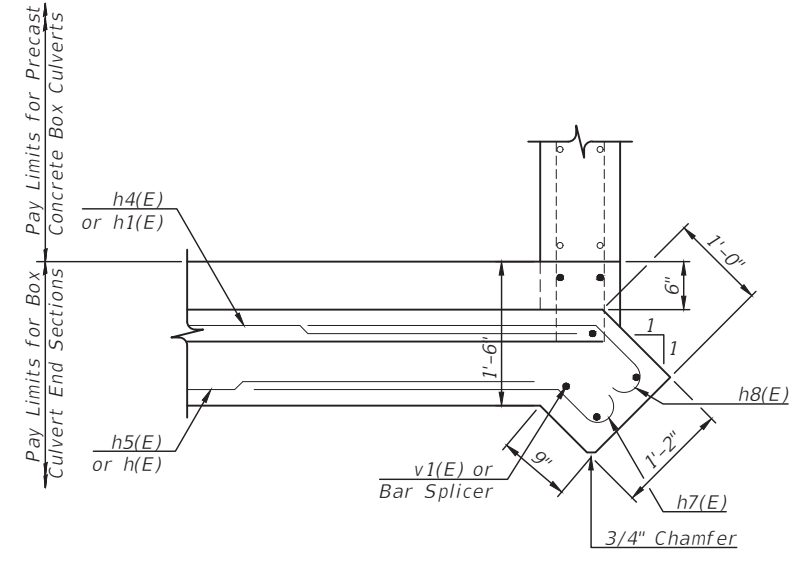
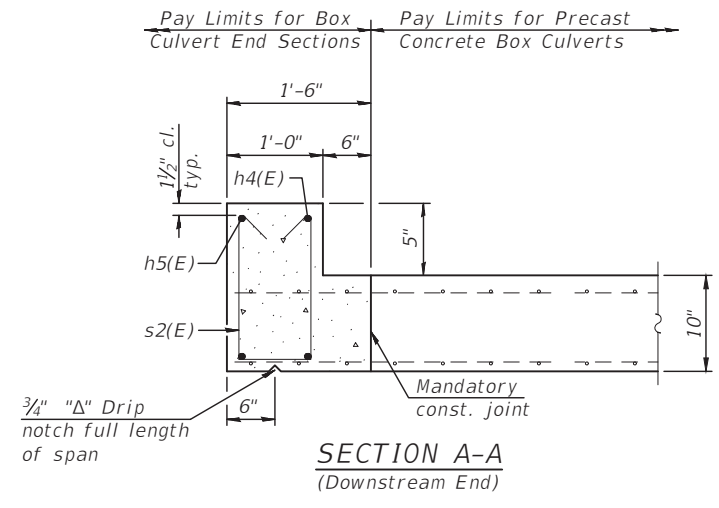
BID SET

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 16
FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	17
	ILLINOIS			CONTRACT NO. 87791

Sheet 4 of 12



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Drawing Name: H:\A\008\1111506-00 GRUNDY CO BRACEVILLE RD - CULVERT DTLS 02.dwg  
Last Modified: Thursday, February 22, 2024 2:51:21 PM  
Plotted On: Monday, February 26, 2024 2:26:15 PM  
By: Kurt Decker

CONTRACT NO. 87791

REVISIONS	LEVEL	BY	DATE	DESCRIPTION

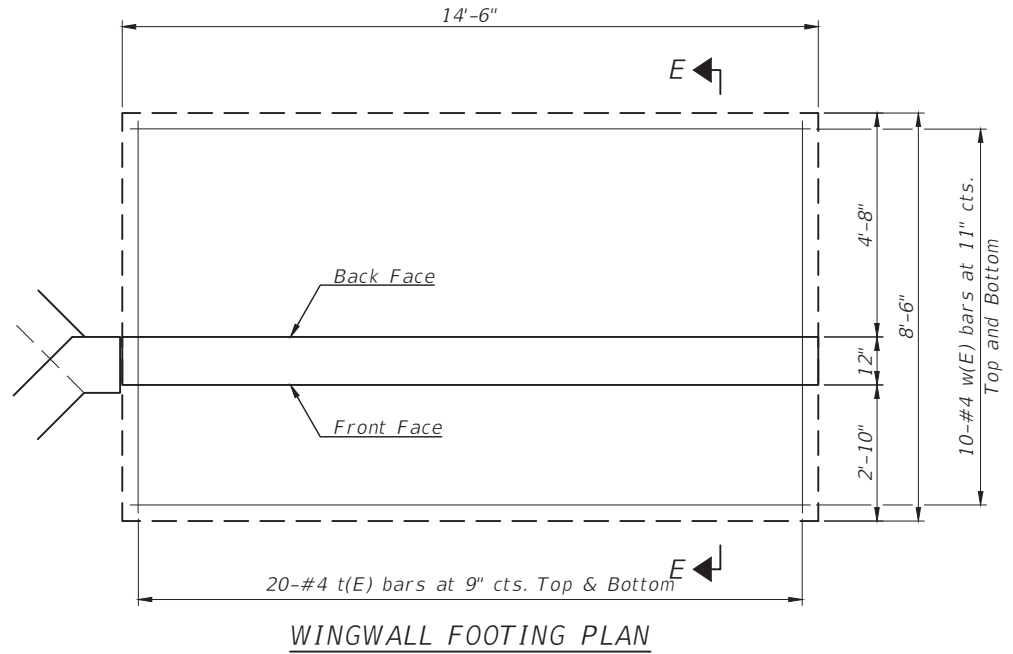
PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

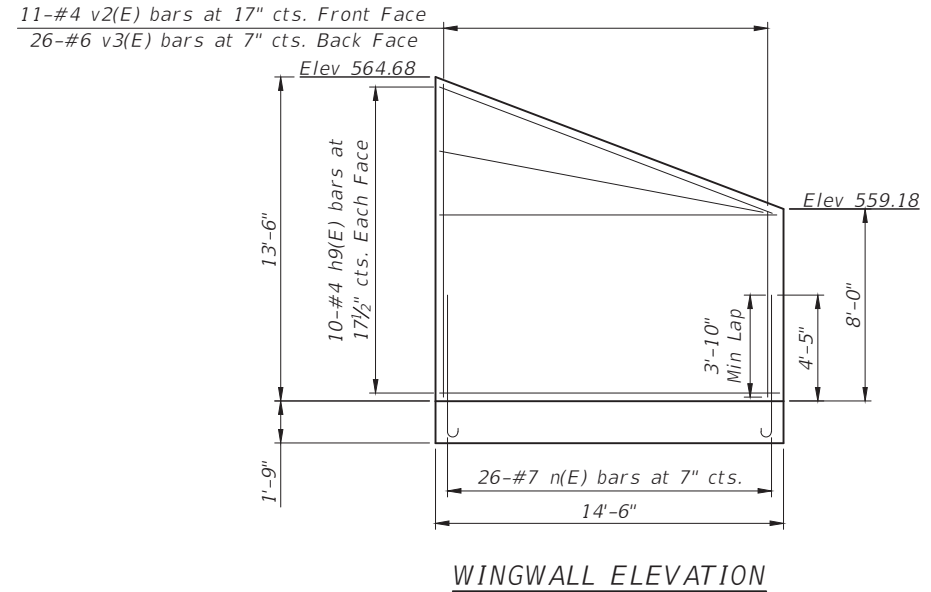
**BOX CULVERT DETAILS**  
**STR 032-3250 (E) 032-3251 (P)**

**BID SET**

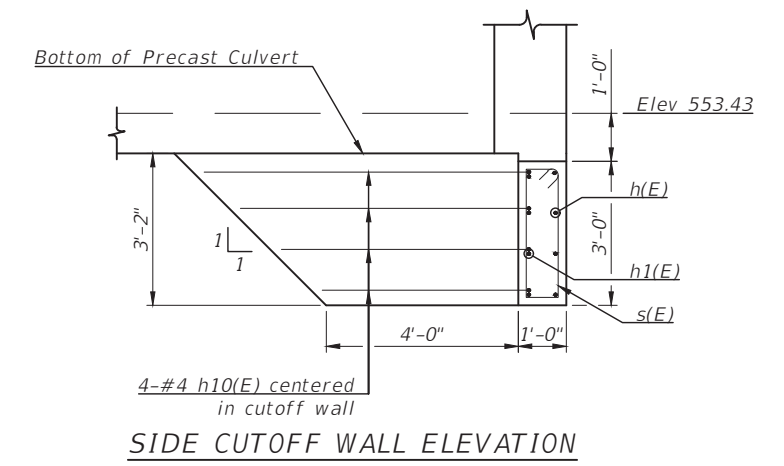
CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 17
FILE NO.: 111506.00 Y-	OF 51



**WINGWALL FOOTING PLAN**



**WINGWALL ELEVATION**

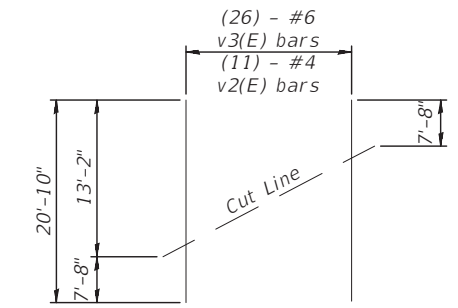


**SIDE CUTOFF WALL ELEVATION**

**ONE END SECTION  
BILL OF MATERIAL**  
(For information only)

Bar	No.	Size	Length	Shape
h(E)	8	#5	18'-10"	—
h1(E)	8	#5	19'-6"	—
h2(E)	32	#4	2'-3"	┌
h3(E)	32	#4	1'-9"	┌
h4(E)	4	#7	19'-9"	—
h5(E)	4	#7	19'-1"	—
h6(E)	20	#4	4'-1"	┌
h7(E)	12	#4	4'-3"	┌
h8(E)	12	#4	4'-3"	┌
h9(E)	40	#4	14'-2"	—
h10(E)	8	#4	8'-6"	┌
n(E)	52	#7	6'-9"	┌
s(E)	35	#4	7'-7"	┌
* s1(E)	34	#4	3'-3"	┌
* s2(E)	34	#4	3'-5"	┌
t(E)	80	#4	8'-2"	—
v(E)	34	#5	1'-9"	┌
v1(E)	18	#5	12'-1"	—
v2(E)	11	#4	20'-10"	—
v3(E)	26	#6	20'-10"	—
w(E)	40	#4	14'-2"	—
Concrete Box Culverts	Cu. Yd.		38.5	
Reinforcement Bars, Epoxy Coated	Pound		4,385	
Bar Splicers	Each		12	
Flared Coil Loop Anchors	Each		34	

\*s1(E) Upstream End Section Only  
s2(E) Downstream End Section Only



**FIELD CUTTING DIAGRAM**

Order v2(E) and v3(E) bars full length. Cut as shown and use remainder of bars in opposite wing.

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 Drawing Name: H:\ADGE\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\CAD\PLANS\018-BRACEVILLE RD - CULVERT DTLS 03.dwg  
 Last Modified: Thursday, February 22, 2024 2:52:05 PM  
 Plotted On: Monday, February 26, 2024 2:26:24 PM  
 by Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	DESCRIPTION

PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**BOX CULVERT DETAILS**  
**STR 032-3250 (E) 032-3251 (P)**

**BID SET**

CURRENT AS OF: <b>02/14/2024</b>	
SCALE: AS NOTED	SHEET <b>18</b>
FILE NO.: 111506.00 Y-	OF <b>51</b>



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 1 of 2

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

Client: Chamlin & Associates, Inc.  
 Project Name SN: 032-3250  
 Project Site: Braceville Rd. Br. W. of S. Filman Rd.  
Mazon Twp., Grundy Co., IL

Boring No. B-1  
 Surface Elev. 564.94  
 Auger Depth 36.00 Rotary Depth NA  
 Start Date 01/14/23 Finish Date 01/14/23

Location: West Abutment Station: 121+88 7' RT

(DEPTH) *ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)/KSF*	N Value (Blows)	Bulge / Shear	Moisture (%)		
564.94										Randy Safranski Diedrich D-120	
563.94	8" Asphalt over 12.5" Aggregate		1								
562.94	Medium Stiff Black/Gray Silty Clay (Fill)		2								
561.94		3	1	SS	0.8	6	B	27			
560.94			4								
559.94		5	2	SS	0.6	5	B	30			
558.94			6								
557.94		7									
556.94	Stiff Black/Gray Silty Clay		8	3	SS	1.5	9	B	25		
555.94			9								
554.94		10	4	SS	1.0	6	B	24			
553.94	Medium Stiff Gray/Brown Silty Clay		11								
552.94			12								
551.94		13	5	SS	0.4	3	B	39			
550.94	Soft Brown/Gray Black Silty Clay		14								
549.94			15								
548.94		16	6	SS	---	36	---	9			
547.94	Hard Gray Silty Clay Loam Till		17								
546.94			18	7	SS	10.0*	104* 12"	---	7		
545.94		19									
544.94	Hard Gray Sandy Loam Till		20	8	SS	---	55	S	10		

Groundwater Data: Static water level after auger removal; Elevation 552.94  
 Comments: \*Modified SPT as per IDOT



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 2 of 2

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

Client: Chamlin & Associates, Inc.  
 Project Name SN: 032-3250  
 Project Site: Braceville Rd. Br. W. of S. Filman Rd.  
Mazon Twp., Grundy Co., IL

Boring No. B-1  
 Surface Elev. 564.94  
 Auger Depth 36.00 Rotary Depth NA  
 Start Date 01/14/23 Finish Date 01/14/23

Location: West Abutment Station: 121+88 7' RT

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)/KSF*	N Value (Blows)	Bulge / Shear	Moisture (%)		
543.94											Randy Safranski Diedrich D-120
542.94	Hard Gray Sandy Loam Till		22								
541.94		23	9	SS	---	55	---	14			
540.94	Hard Gray Gravely Loam Till with Shale Fragments		24								
539.94		25	10	SS	---	85	---	16			
538.94			26								
537.94		27									
536.94			28	11	SS	11.0*	113* 12"	---	10		
535.94		29									
534.94	Hard Gray Sandy Shale		30								
533.94		31	12	SS	12.0*	125* 12"	---	9			
532.94			32								
531.94		33	13	SS	20.7*	240* 12"	---	8			
530.94			34								
529.94		35	14	SS	41.1*	433* 12"	---	7			
528.94	Auger Refusal Boring Terminated		36								
527.94		37									
526.94			38								
525.94		39									
524.94			40								
523.94		41									

Groundwater Data: Static water level after auger removal; Elevation 552.94  
 Comments: \*Modified SPT as per IDOT

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 Drawing Name: H:\AUGER\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\ROAD\PLANS\019-BRACEVILLE RD - BORINGS 01.dwg  
 Last Modified: Thursday, February 22, 2024 2:44:18 PM  
 Plotted On: Monday, February 26, 2024 2:26:30 PM  
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CONTRACT NO. 87791

DRAWN BY: KED	REVISIONS		
CHECKED BY: DAH	LEVEL	BY	DATE
DATE: 02/2023			



PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**SOIL BORINGS**  
**STR 032-3250 (E) 032-3251 (P)**

<b>BID SET</b>	CURRENT AS OF: <b>02/14/2024</b>	
	SCALE: AS NOTED	SHEET <b>19</b>
	FILE NO.: 111506.00 Y-	OF <b>51</b>





**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 1 of 2

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

Client: Chamlin & Associates, Inc.  
 Project Name SN: 032-3250  
 Project Site: Braceville Rd. Br. W. of S. Filman Rd.  
Mazon Twp., Grundy Co., IL

Boring No. B-2  
 Surface Elev. 565.11  
 Auger Depth 31.00 Rotary Depth NA  
 Start Date 01/14/23 Finish Date 01/14/23

Location: East Abutment Station: 122+50 5' LT

(DEPTH) *ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)/KSF*	N Value (Blows)	Bulge / Shear	Moisture (%)		
565.11										Randy Safranski Diedrich D-120	
564.11	9" Asphalt over 10" Aggregate		1								
563.11	Medium Stiff Black/Brown/Gray Silty Clay (Fill)		2								
562.11		1 SS 0.8 6 B 27									
561.11			4								
560.11		2 SS 0.6 5 B 29									
559.11			6								
558.11		3 SS 1.0 7 B 25									
557.11	Medium Stiff Black/Gray Silty Clay		10								
556.11		4 SS 0.8 5 B 23									
555.11	Soft Black/Gray Silty Clay		13								
554.11		5 SS 0.4 3 B 37									
553.11	Hard Gray Silty Clay Loam Till		15								
552.11		6 SS --- 39 S 10									
551.11	Hard Gray Sandy Loam Till		18								
550.11		7 SS 10.0* <sup>90*</sup> / <sub>12"</sub> --- 8									
549.11			19								
548.11		8 SS --- 52 S 11									
547.11			20								
546.11											
545.11											

Groundwater Data: Static water level after auger removal; Elevation 552.94  
 Comments: \*Modified SPT as per IDOT



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 2 of 2

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

Client: Chamlin & Associates, Inc.  
 Project Name SN: 032-3250  
 Project Site: Braceville Rd. Br. W. of S. Filman Rd.  
Mazon Twp., Grundy Co., IL

Boring No. B-2  
 Surface Elev. 565.11  
 Auger Depth 31.00 Rotary Depth NA  
 Start Date 01/14/23 Finish Date 01/14/23

Location: East Abutment Station: 122+50 5' LT

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)/KSF*	N Value (Blows)	Bulge / Shear	Moisture (%)		
544.11											Randy Safranski Diedrich D-120
543.11	Hard Gray Sandy Loam Till		22								
542.11		9 SS --- 54 --- 12									
541.11	Hard Gray Gravelly Loam Till with Shale Fragments		24								
540.11		10 SS -- 77 --- 15									
539.11			26								
538.11		11 SS 12.0* <sup>125*</sup> / <sub>12"</sub> --- 11									
537.11	Hard Gray Sandy Shale		28								
536.11		12 SS 20.7* <sup>240*</sup> / <sub>12"</sub> --- 10									
535.11	Auger Refusal Boring Terminated		30								
534.11			31								
533.11			32								
532.11			33								
531.11			34								
530.11			35								
529.11			36								
528.11			37								
527.11			38								
526.11			39								
525.11			40								
524.11			41								

Groundwater Data: Static water level after auger removal; Elevation 552.94  
 Comments: \*Modified SPT as per IDOT

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 Drawing Name: H:\AUGER\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\ROAD\PLANS\020-BRACEVILLE RD - BORINGS 02.dwg  
 Last Modified: Thursday, February 22, 2024 2:44:35 PM  
 Plotted On: Monday, February 26, 2024 2:26:34 PM  
 by Kurt Decker

CONTRACT NO. 87791

DRAWN BY: KED	REVISIONS		
CHECKED BY: DAH	LEVEL	BY	DATE
DATE: 02/2023			



PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**SOIL BORINGS**  
**STR 032-3250 (E) 032-3251 (P)**

<b>BID SET</b>	CURRENT AS OF: <b>02/14/2024</b>	
	SCALE: AS NOTED	SHEET <b>20</b>
	FILE NO.: 111506.00 Y-	OF <b>51</b>



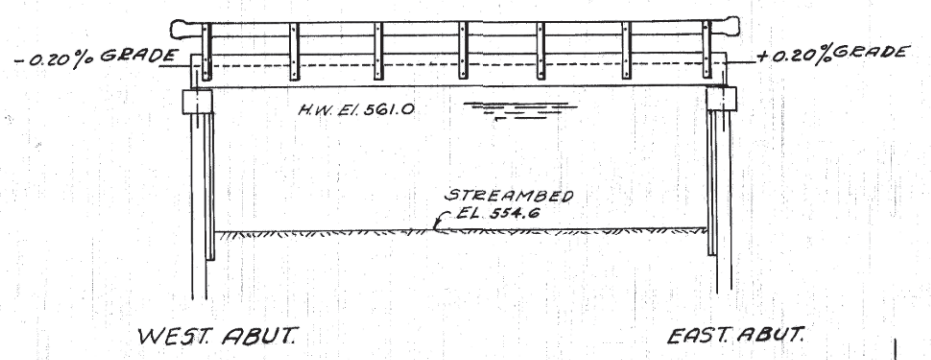
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
272	42G	GRUNDY	31	19
ILLINOIS			PROJECT S-272-1-(1)	

BRIDGE 5H NO. 1 OF 5

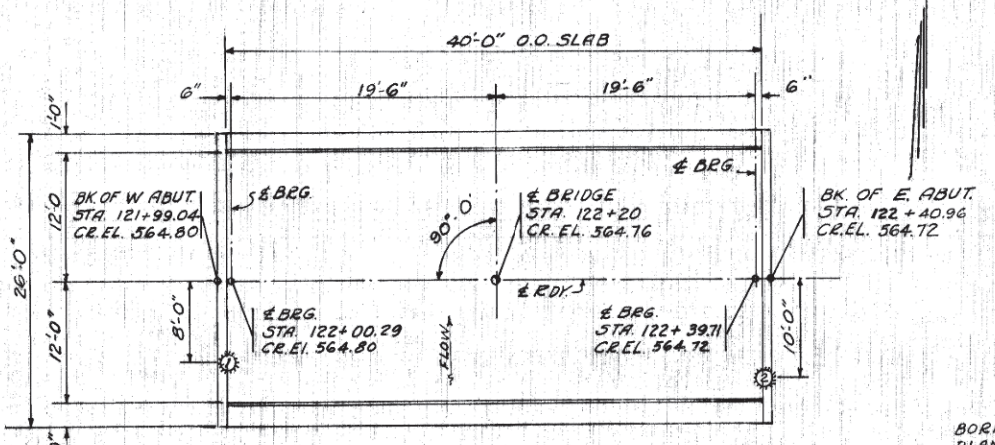
**B.M.:** #2 - SPIKE IN POWER POLE - LEFT OF STA. 2+22  
ELEV. 563.66

**EXIST. STRUCT.:** I-BEAM 13' ROADWAY 1-SPAN @ 26.6' CL. MASONRY ABUTS. & WINGS CONCRETE FLOOR } TO BE REMOVED BY CONTRACTOR

**SALVAGE:** NO SALVAGE



**ELEVATION**



**PLAN**  
NOT TO SCALE

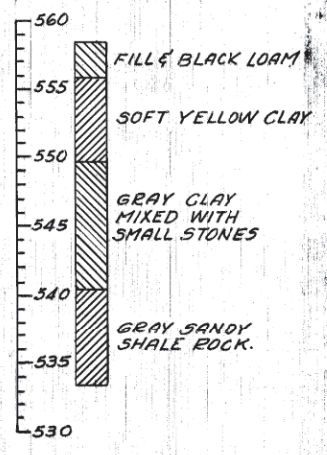
⊙ BORING LOCATION AND NUMBER

**STATION 122+20**  
BUILT 196 BY  
STATE OF ILLINOIS  
F.A.S. RTE. 272 - SEC. 42G  
F.A. PROJ. S-272-1-(1)  
LOADING H-15-S-12

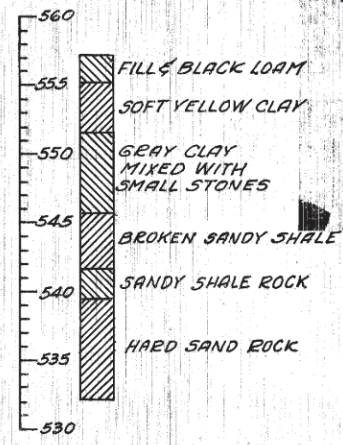
**LETTERING FOR NAME PLATE**  
SEE BRIDGE SHEET NO. FOR NAME PLATE DETAILS

**BORING DATA**

**BORING NO. 1**  
8' RT. STA. 122+00



**BORING NO. 2**  
10' RT. STA. 122+40



BORING DATA ARE SHOWN ON THE PLANS AS A GUIDE ONLY IN ESTIMATING SOIL CONDITIONS WHICH MAY BE ENCOUNTERED IN THE WORK.

State of Illinois  
Department of Public Works and Buildings  
Division of Highways  
BUREAU OF LOCAL ROAD AND BRIDGE

**PRELIMINARY FOR METAL PLATE BRIDGE BIDS.**

- DESCRIPTION:** This work shall consist of furnishing, erecting and painting metal plate bridge rails, including top plates, web plates, fasteners, curved and section plates, pins, and anchor bolts, as shown on the plans and as specified herein.
- CONTRACTOR:** The Contractor shall use only such types and designs of metal plate bridge rails as have been approved by the Engineer and those which approved plans and specifications are on file with the Department.
- DESIGN:** The general requirements and details of design, material and workmanship shall be in accordance with all applicable provisions and Sections 54 and 55 of the Standard Specifications, adopted January 8, 1958, except as shown on the plans or as specified herein.
- MATERIAL:** Metal plates shall be of one steel of the same strength and shape as specified for Special Field Beam Guard Rail in Section 54 of the Standard Specifications. All steel components not galvanized shall be painted after fabrication with a rust inhibitive primer. After erection, the entire bridge rail shall be given 2 coats of aluminum paint conforming to Articles 105.1 - 105.5 and 105.22 of the Standard Specifications.
- METHOD OF MEASUREMENT:** Metal Plate Bridge Rail shall be measured in linear feet. The longest laid rail shall be the gross rail length along the top edge of the rail plates from center to center of end rail posts. End sections will not be measured for payment.
- UNIT OF PAYMENT:** This work will be paid for on the unit basis, and shall be listed for METAL PLATE BRIDGE RAILS measured as specified herein.

**GENERAL NOTES**

- THE APPLICABLE PROVISIONS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 2, 1958, AND THE SUPPLEMENTAL SPECIFICATIONS TO THE ABOVE SAID SPECIFICATIONS, ADOPTED APRIL 2, 1962, SHALL GOVERN THE EXECUTION OF THIS WORK.
- CLASS X CONCRETE SHALL BE USED IN THE CURBS, PILE CAPS AND DEADMEN.
- ALL PAINT SHALL BE FURNISHED AND APPLIED BY THE CONTRACTOR.
- ALL HANDRAIL POSTS SHALL BE VERTICAL AND RAIL SHALL BE ADJUSTED TO TRUE ALIGNMENT AND GRADE.
- ALL COSTS FOR PROVIDING LIFTING INSERTS; FURNISHING, PLACING, AND GROUTING OF ANCHOR DOWELS; FURNISHING AND PLACING OF JOINT MATERIALS AND TIE BAR ASSEMBLIES, ARE INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR SHALL ADJUST ROADSIDE DITCHES TO DRAIN FOR A DISTANCE OF NOT LESS THAN FIFTY (50) FEET BEYOND THE ENDS OF THE WINGWALLS, AS DIRECTED BY THE ENGINEER.
- THE PRECAST PRESTRESSED CONCRETE BRIDGE DECK SLABS SHALL BE CONSTRUCTED AND ERECTED IN ACCORDANCE WITH SECTION 518 OF THE SAID SUPPLEMENTAL SPECIFICATIONS.
- THE MORTAR TO BE USED IN THE LONGITUDINAL JOINTS, AND OTHER PLACES WHERE GROUTING IS REQUIRED, SHALL BE AS SPECIFIED ON THE DETAILS.

**BILL OF MATERIAL**

ITEM	UNIT	SUPER.	SUBSTR.	TOTAL
CLASS X CONCRETE	CUYDS	2.7	22.3	25.0
REINFORCEMENT BARS	LBS.	420	2030	2450
PRECAST PRESTRESSED CONC. OR DECK	SQ. FT.	1040	-	1040
METAL PLATE BRIDGE RAIL	LIN. FT.	75	62	137
PRECAST PRESTRESSED CONC. PLANK	SQ. FT.	-	1333	1333
HARDWARE	LBS.	-	1710	1710
UNTREATED TIMBER	F.B.M.	-	440	440
TEST PILES - CREOSOTED TIMBER	EA.	-	2	2
FURNISHING CREOSOTED PILES-UP TO 20	LIN. FT.	-	320	320
FURNISHING CREOSOTED PILES-20.1 TO 38	LIN. FT.	-	176	176
DRIVING TIMBER PILES	LIN. FT.	-	496	496
METAL PILE SHOES	EA.	-	26	26
NAME PLATES	EA.	-	-	1
REMOVAL OF EXISTING STRUCTURES	EA.	-	-	1

**F.A. PROJECT NO. S-272-1-(1)**  
**F.A.S. ROUTE 272 - SECTION 42-G**  
**GRUNDY COUNTY**  
**STATION 122+20**

**PLANS PREPARED BY**  
**CORDES**  
**CONSULTING ENGINEERS**  
2415 CHARLES STREET  
ROCKFORD, ILLINOIS

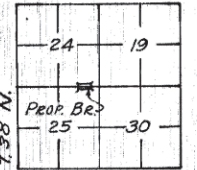


FOR INFORMATION ONLY

**WATERWAY INFORMATION**

DRAINAGE AREA	AC.	4,480
CHARACTER	LEVEL, CULTIVATED	
ASSUMED "C"		0.3
PRESENT OPENING	SQ. FT.	170
REQUIRED OPENING	SQ. FT.	225
PROPOSED OPENING	SQ. FT.	236

R.T.E. R.B.E. OF 300 P.M.



**LOCATION MAP**

**DESIGN STRESSES**

- fs = 20,000 REINFORCEMENT BARS
- fb = 160,000 PRESTRESS WIRES
- ft = 18,000 STRUCTURAL STEEL
- fc = 1,400 SUPERSTRUCTURE
- fc = 800 SUBSTRUCTURE
- n = 10
- ft = 1,000 TIMBER PILES

LOADING H-15-S-12

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CONTRACT NO. 87791

LEVEL	BY	DATE	DESCRIPTION

**CA**  
PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS  
Chamlin & Associates

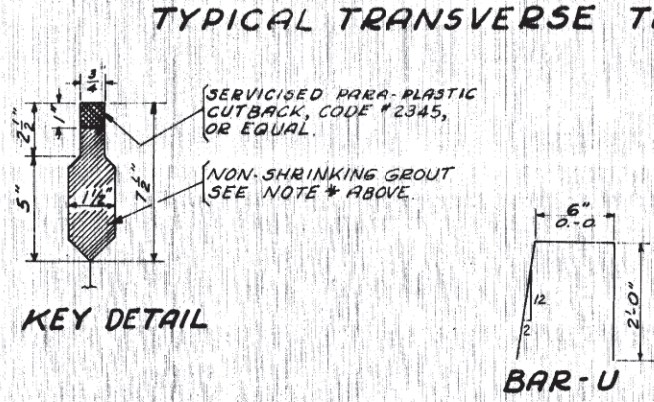
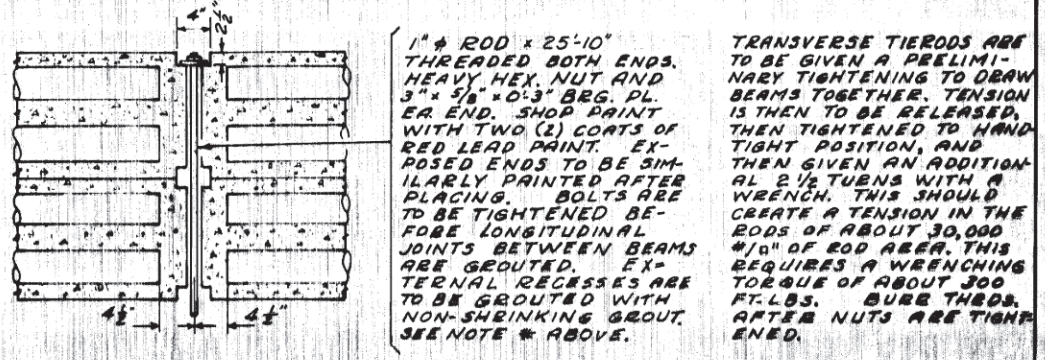
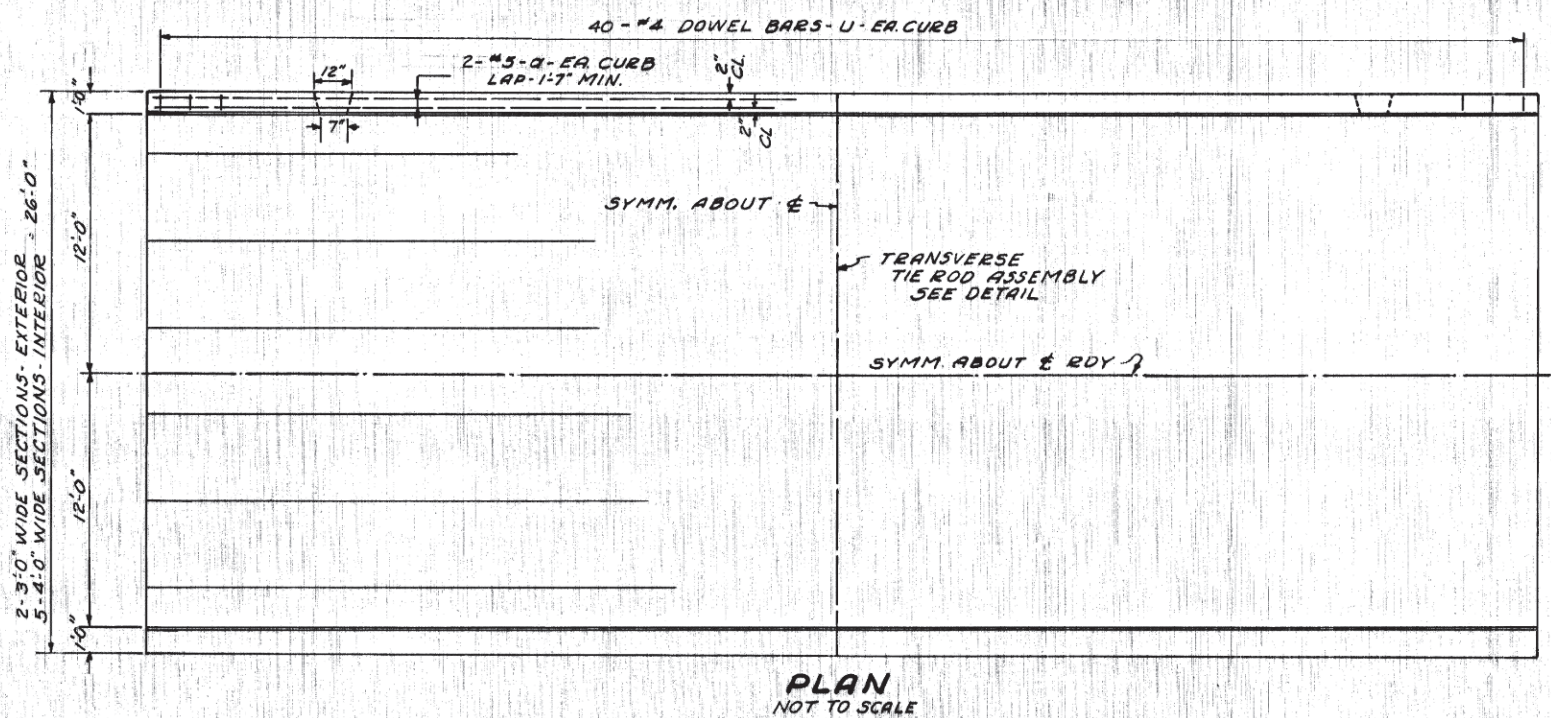
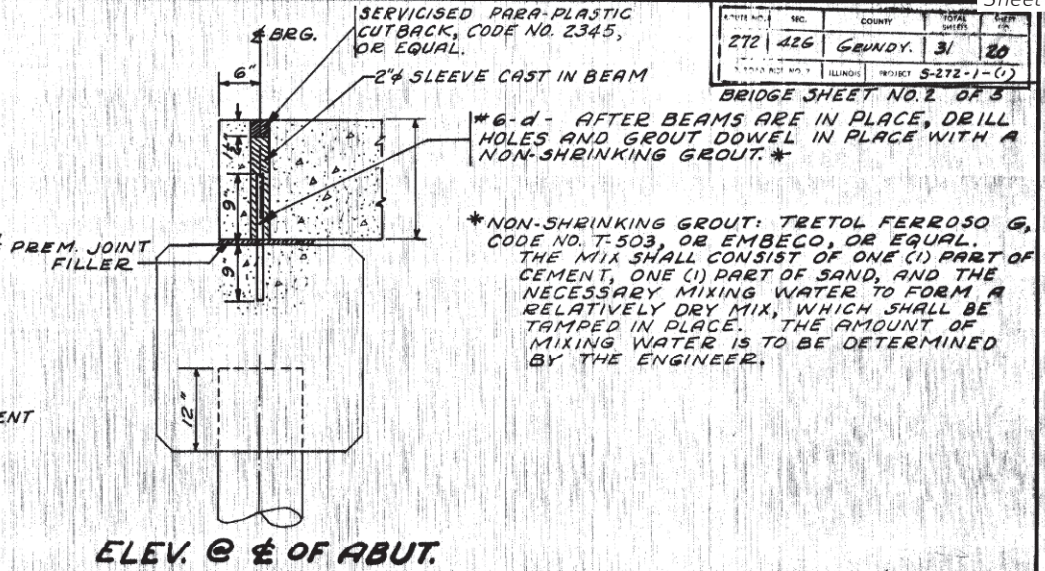
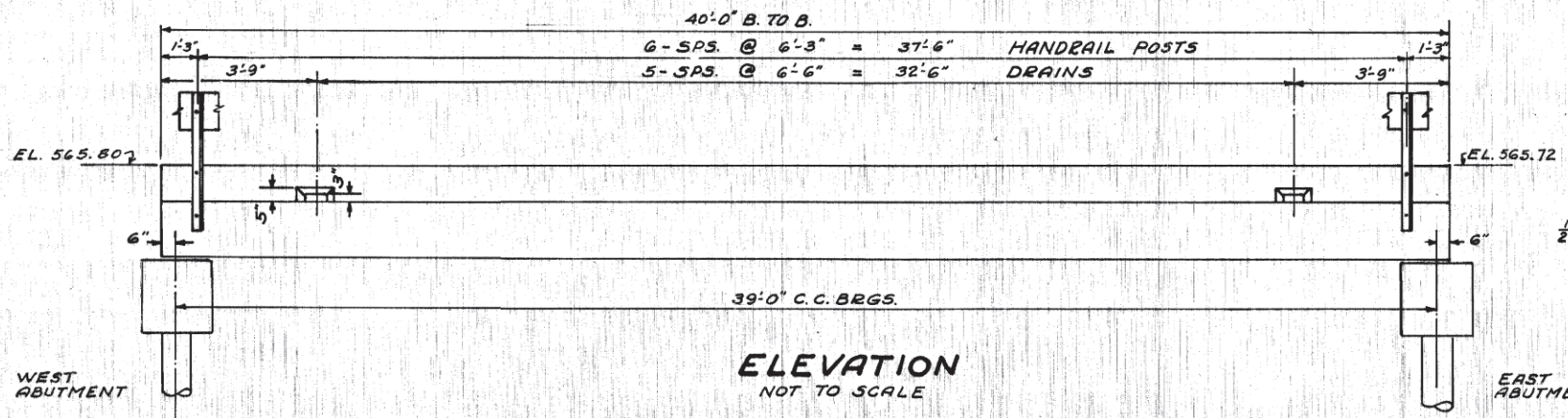
CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

EXISTING PLANS  
STR 032-3250 (E) 032-3251 (P)

BID SET

CURRENT AS OF: 02/14/2024	SHEET 21
SCALE: AS NOTED	OF 51
FILE NO.: 111506.00 Y-	



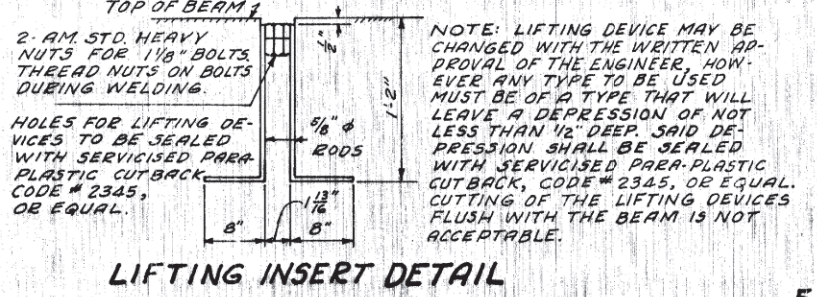
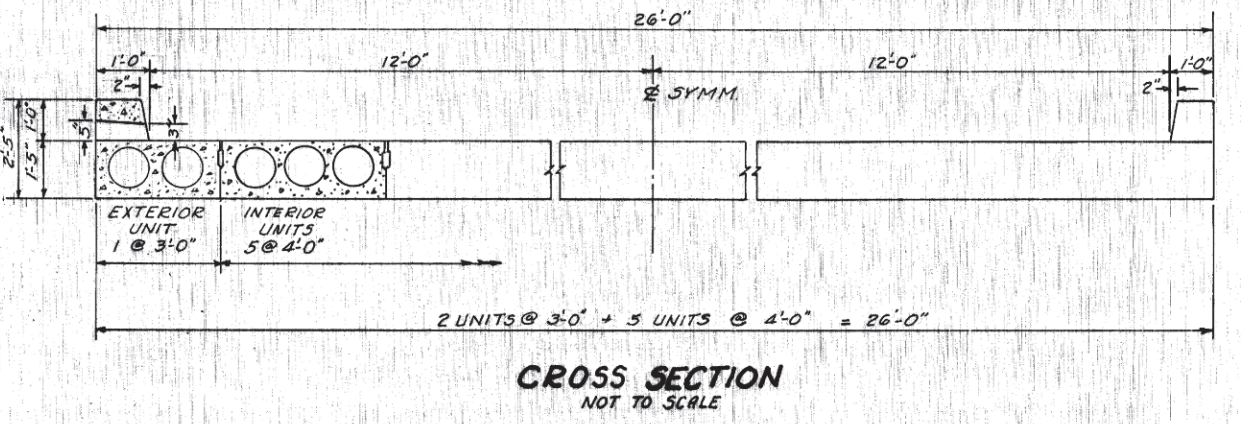


**SUPERSTRUCTURE BILL OF MATERIAL**

BAR NO.	SIZE	LENGTH	SHAPE
A	#5	20'-7"	—
U	#4	4'-6"	U

CLASS X CONCRETE	CYBS	2.7
REINFORCEMENT BARS	LBS	820
PRECAST PRESTRESSED CONCRETE BRIDGE DECK	SOFT.	1040
METAL PL. BRIDGE RAIL	SOFT.	75



NOTE: BITUMINOUS SEALERS, GROUT, LIFTING DEVICES, AND TRANSVERSE TIES ARE INCIDENTAL TO THE BRIDGE DECK COMPLETE IN PLACE.

F.A. PROJECT - 272-1-(1)  
F.A.S. RTE. 272 - SEC. 42-6  
GRUNDY COUNTY

FOR INFORMATION ONLY

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Last Modified: Thursday, February 22, 2024 3:12:33 PM  
Plotted On: Monday, February 26, 2024 2:28:51 PM  
By: Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	DESCRIPTION

PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

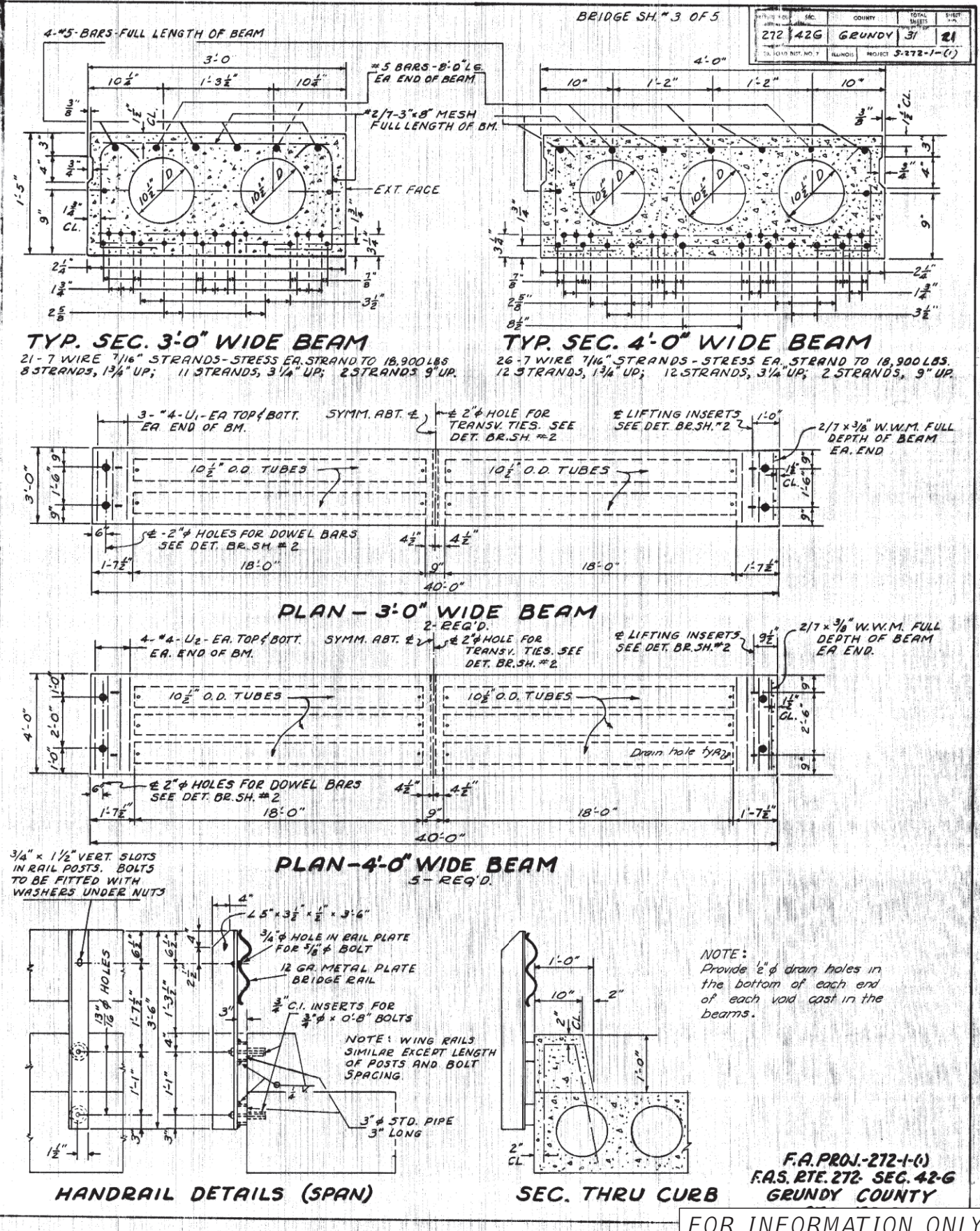
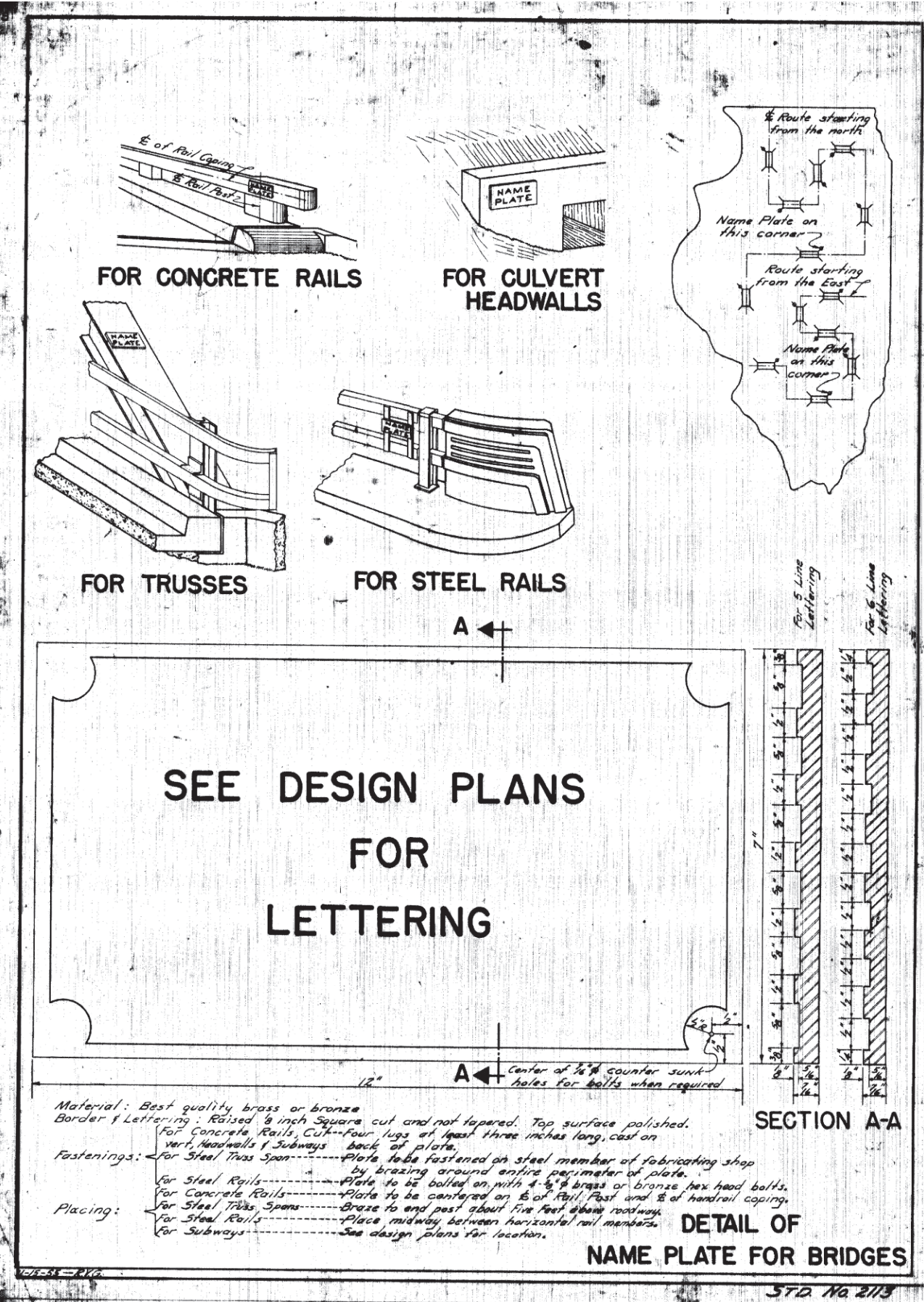
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FILE NO.: 111506.00 Y-	



272	42G	GRUNDY	31	21
F.A.S. PROJ. 272-1(1)		CONTRACT NO. 87791		



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 Drawing Name: H:\AUG\1111506\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\CAD\PLANS\023-BRACEVILLE RD - EX PLAN 03.dwg  
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 Plotted On: Monday, February 26, 2024 2:27:01 PM  
 by: Kurt Decker

CONTRACT NO. 87791

REVISIONS	LEVEL	BY	DATE	DESCRIPTION

**CA**  
 Chamlin & Associates  
 PERU MORRIS  
 OTTAWA MENDOTA  
 ILLINOIS

CH 34V SECTION 19-00178-00-BR  
 FAS 272 SECTION 22-00192-00-BR  
 GRUNDY COUNTY

EXISTING PLANS  
 STR 032-3250 (E) 032-3251 (P)

**BID SET**

FOR INFORMATION ONLY

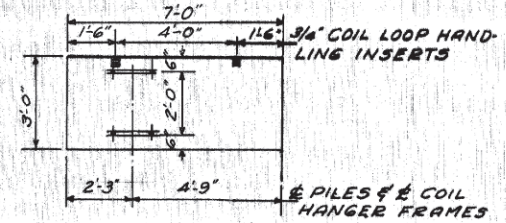
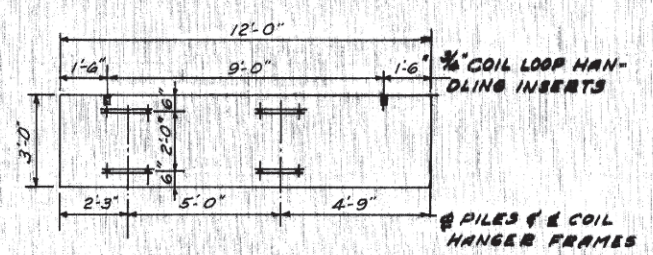
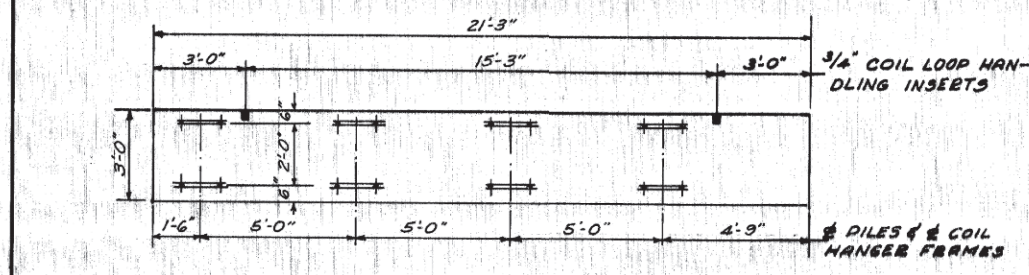
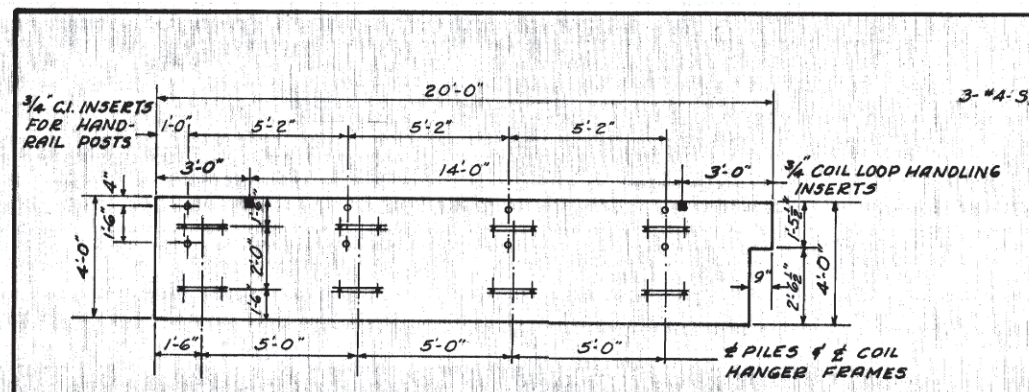
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 SHEET 23 OF 51



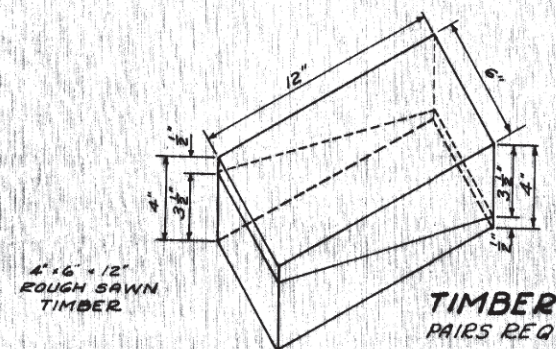




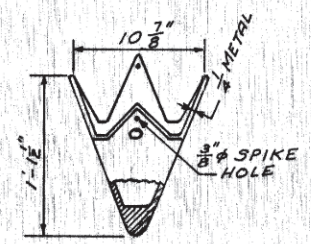
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272	426	GRUNDY	51	23
BRIDGE SH. NO. 5 OF 5				



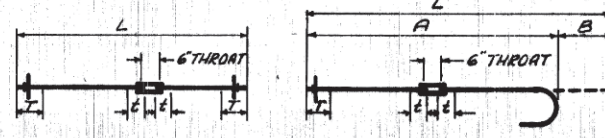
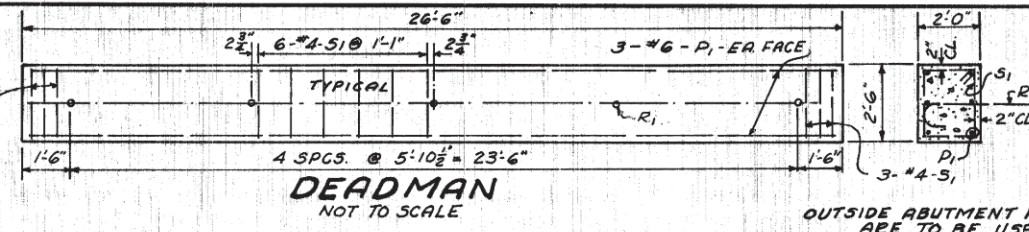
**PRECAST PRESTRESSED CONCRETE WING PLANK**  
SHOWING INSIDE OR NEAR FACE  
NOT TO SCALE  
SEE CROSS SECTIONS BR. SH. NO. 4 FOR REINF. DETAILS



**TIMBER WEDGES**  
PAIRS REQ'D. 220



**METAL PILE SHOE**



ROD SIZE	NO.	L	A	B	T	z	TURN BUCKLE NO.	WASHER SIZE	NUT	
R1	1/4	4	5'-9"	-	-	9"	-	2	6" x 3/8" x 0.6"	2
R2	1/4	10	18'-11"	17'-6"	1'-5"	9"	6"	1	6" x 7/8" x 0.6"	1
R2	1/4	2	26'-3"	-	-	9"	6"	1	6" x 5/8" x 0.6"	2
R3	1/4	2	28'-0"	-	-	9"	6"	1	6" x 3/8" x 0.6"	2
R4	3/4	2	29'-8"	-	-	9"	6"	1	6" x 1/2" x 0.6"	2
R5	7/8	2	31'-3"	-	-	9"	6"	1	6" x 1/2" x 0.6"	2

\*RODS SHALL BE FULLY EXTENDED IN TURNBUCKLES TO PROVIDE MAXIMUM TAKEUP.  
\*\*NUTS SHALL BE AMERICAN STANDARD HEAVY.  
ALL RODS SHALL BE BURNED OFF WHICH EXTEND MORE THAN ONE-HALF (1/2) INCH BEYOND NUT.

**ROD DETAILS**

LOCATION	NO.	LENGTH	CAPACITY	MIN. PENETRN TO ELEV.
BREASTWALLS	8*	22'-0"	18 TONS	±540.0
WINGS	16	20'-0"	10 TONS	544.6

\*PLUS TWO (2) TEST PILES

**BILL OF CONCRETE PLANKS**

LOCATION	WIDTH	LENGTH	NO.
WINGS	4'-0"	20'-0"	4
WINGS	3'-0"	21'-3"	4
WINGS	3'-0"	12'-0"	4
WINGS	3'-0"	7'-0"	4
BREASTWALL	4'-0"	26'-5"	2
BREASTWALL	3'-0"	26'-5"	4

**SUBSTR. NOTES**

OUTSIDE ABUTMENT PILES AND END WING PILES ARE THE CONTROL PILES AND ARE TO BE USED IN ESTABLISHING PLUMB FACES OF THE PRECAST CONCRETE PLANK. TIMBER WEDGES BETWEEN THESE SLABS AND THE PILES ARE USED TO ESTABLISH AND MAINTAIN THOSE VERTICAL FACES. TIMBER WEDGES ARE ALSO USED BETWEEN THE PLANK AND INTERMEDIATE PILES TO MAINTAIN THE VERTICAL FACES AND ALIGNMENT AT THOSE POINTS. SEE DETAILS ON BRIDGE SH. NO. 4.

ALL SURFACES OF CONCRETE PLANK ARE TO BE FORMED EXCEPT NEAR FACE, WHICH IS TO BE FLOAT FINISHED.

CLASS X CONCRETE SHALL BE USED IN THE CURBS, DEADMEN, AND PILE CAPS.

THE CONTRACTOR SHALL DRIVE TWO (2) CREOSOTED TIMBER TEST PILES IN PERMANENT LOCATION, WHERE, AND AS, DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.

THE CONTRACTOR SHALL MAKE PROVISION FOR PREBORING HOLES FOR THE BREASTWALL PILES IF FOUND NECESSARY AND WHEN SO DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL MAKE PROVISION FOR JETTING ALL PILING, BUT NO PILE SHALL BE JETTED UNLESS SO INSTRUCTED BY THE ENGINEER. SEE ARTICLE 60.9 (J) OF THE STANDARD SPECIFICATIONS.

THE PILES MAY BE DAPPED TO PROVIDE A FLAT SURFACE ON THE PILES FOR THE WEDGES.

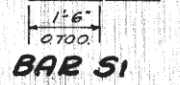
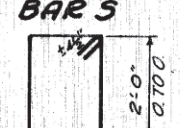
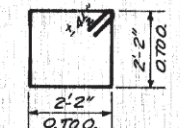
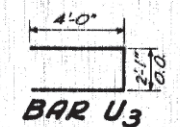
SEE SPECIAL PROVISIONS FOR THE MANUFACTURE AND PLACING OF THE PRECAST PRESTRESSED CONCRETE PLANKS

**SUBSTR. BILL OF MATERIALS**

BAR	NO.	SIZE	LENGTH	SHAPE
P	12	#7	26'-6"	—
U3	16	#6	10'-1"	—
S	52	#4	9'-5"	—
P1	12	#6	26'-2"	—
S1	60	#4	7'-9"	—

CLASS X CONCRETE	CYD.	22.3
REINFORCEMENT BARS	LBS.	2030
PRECAST PRESTRESSED CONC. PLANK	SQ. FT.	1333
UNTREATED TIMBER	F.B.M.	440
TEST PILES (CREOSOTED TIMBER)	EA.	2
FURNISHING CREOSOTED PILES - UP TO 20'	LIN. FT.	320
FURNISHING CREOSOTED PILES - 20.1 TO 38'	LIN. FT.	176
DRIVING TIMBER PILES	LIN. FT.	496
METAL PILE SHOES	EA.	26
METAL PLATE BRIDGE RAIL	LIN. FT.	62
HARDWARE	LBS.	1710



F.A. PROJECT - 272-1-(1)  
F.A.S. RTE. 272 - SEC. 42-G  
GRUNDY COUNTY

FOR INFORMATION ONLY

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Drawing Name: H:\A\02\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\ROAD PLANS\025-BRACEVILLE RD - EX PLAN 05.dwg  
Last Modified: Thursday, February 22, 2024 4:51:37 PM  
Plotted On: Monday, February 26, 2024 4:51:37 PM  
By: Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	DESCRIPTION

PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

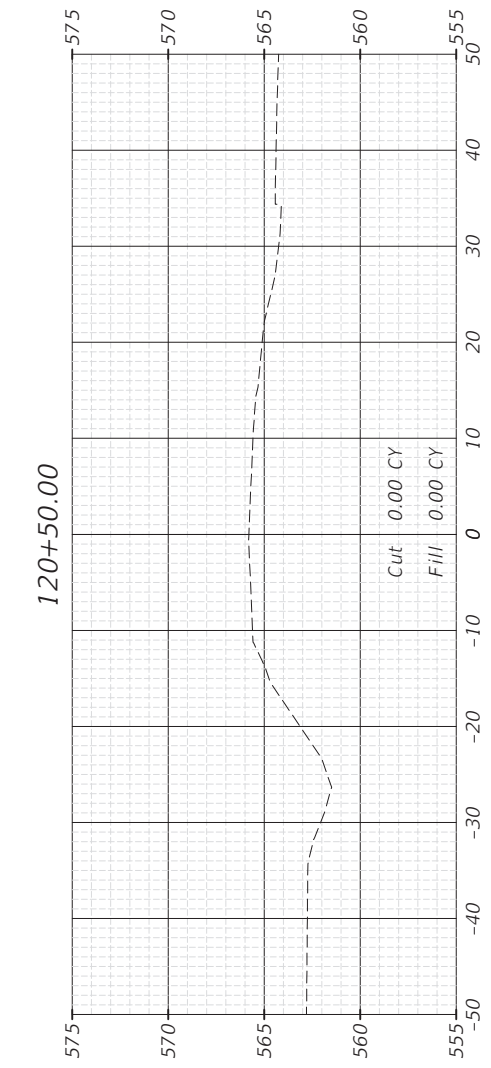
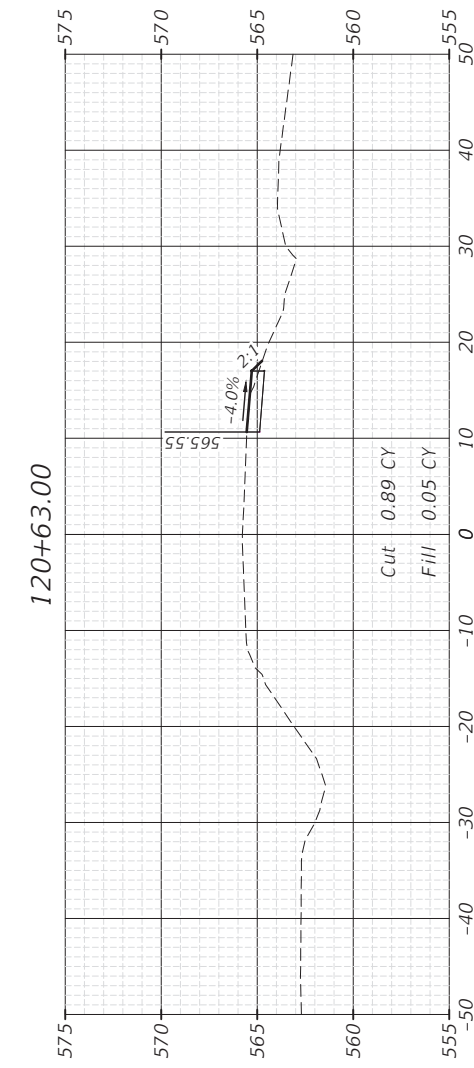
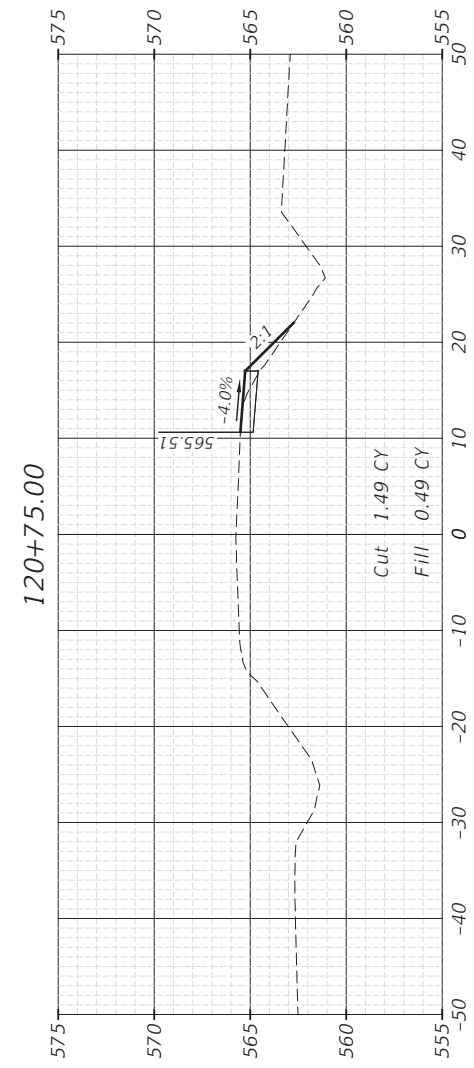
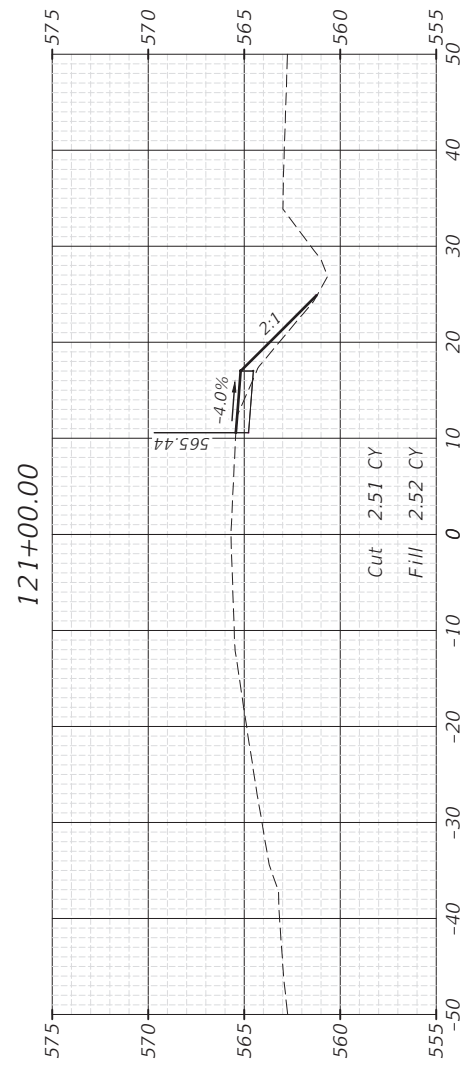
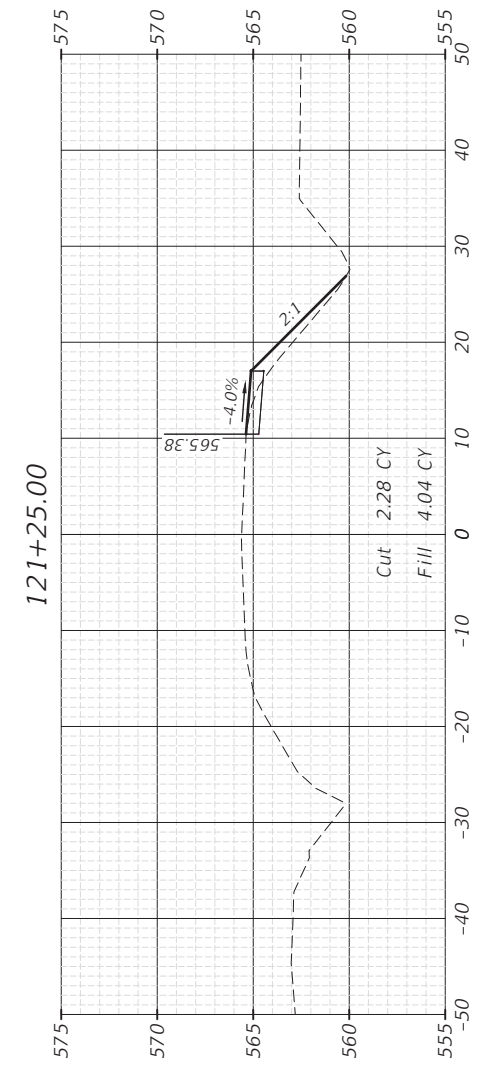
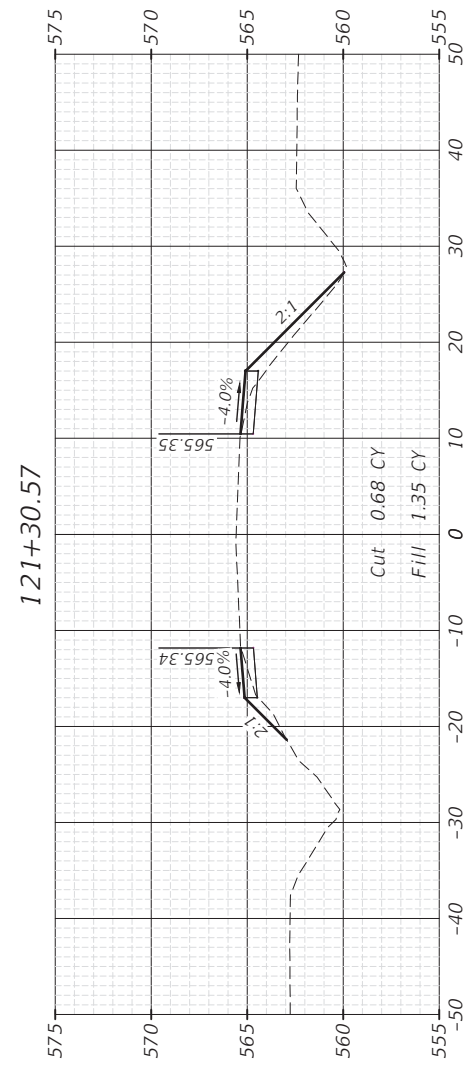
CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

EXISTING PLANS  
STR 032-3250 (E) 032-3251 (P)

BID SET	CURRENT AS OF: 02/14/2024
SCALE: AS NOTED	SHEET 25
FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	26
	ILLINOIS	CONTRACT NO. 87791		



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CONTRACT NO. 87791

DRAWN BY: NET	REVISIONS			
CHECKED BY: DAH	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2023				



CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

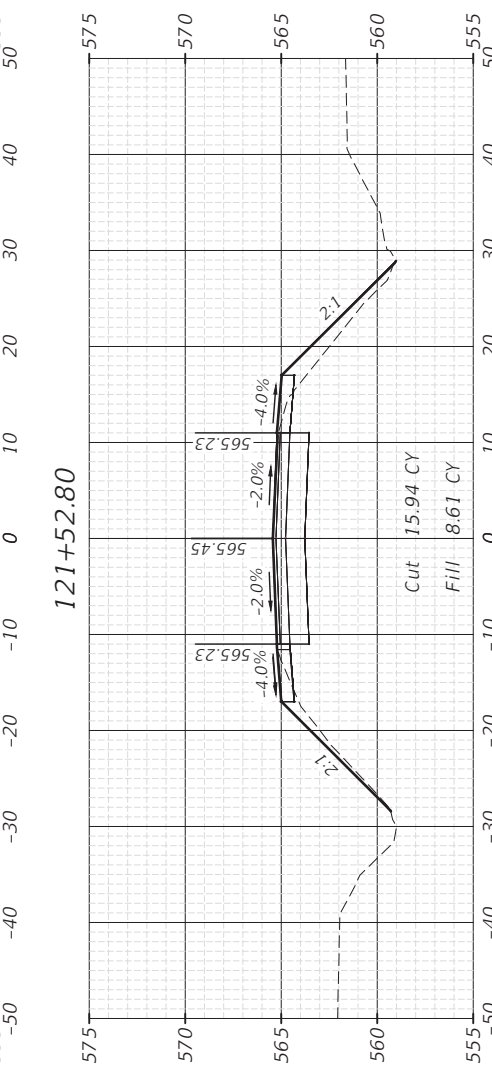
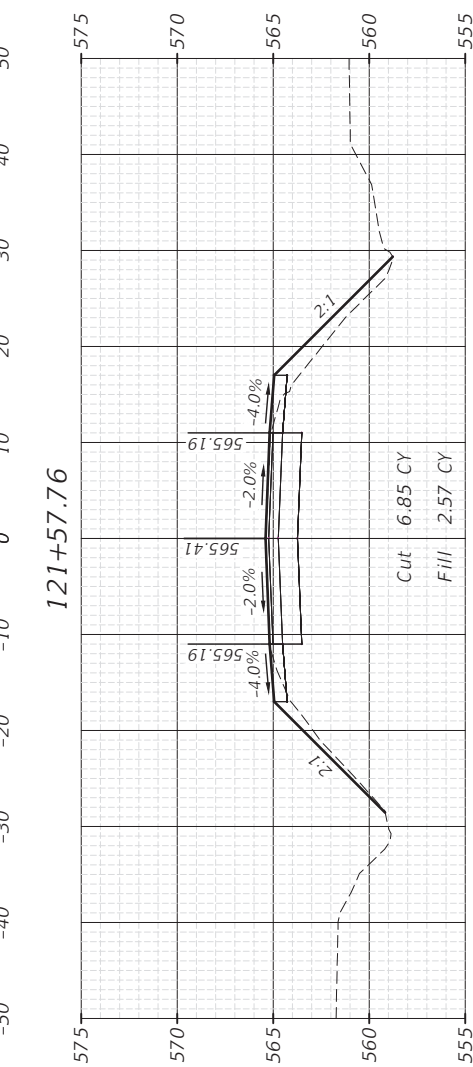
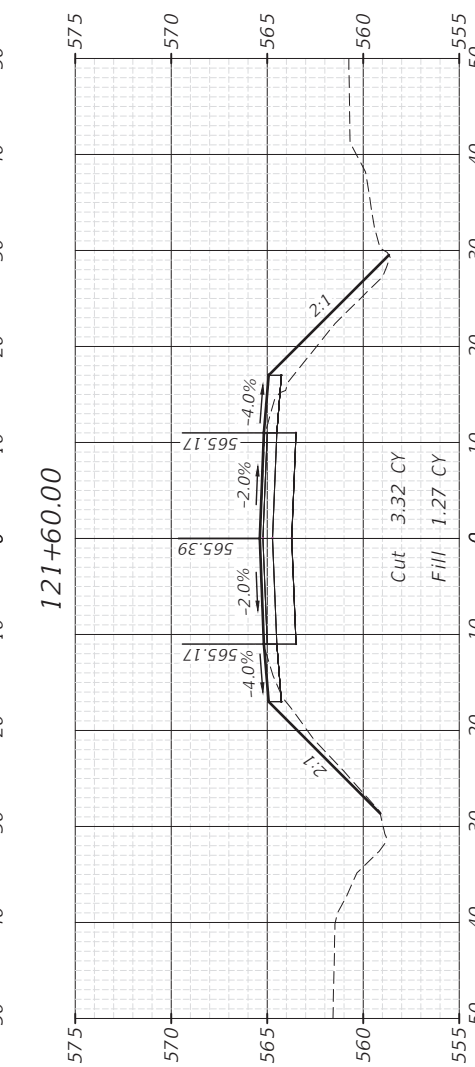
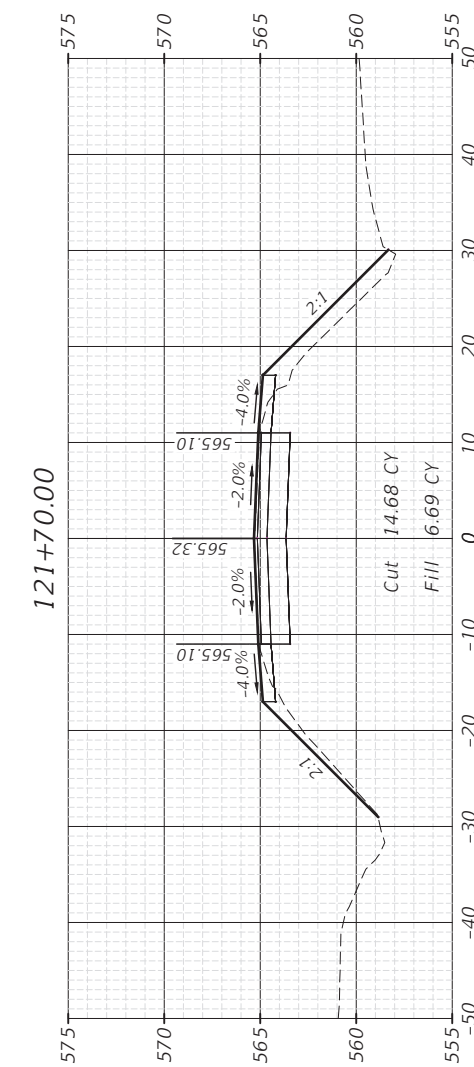
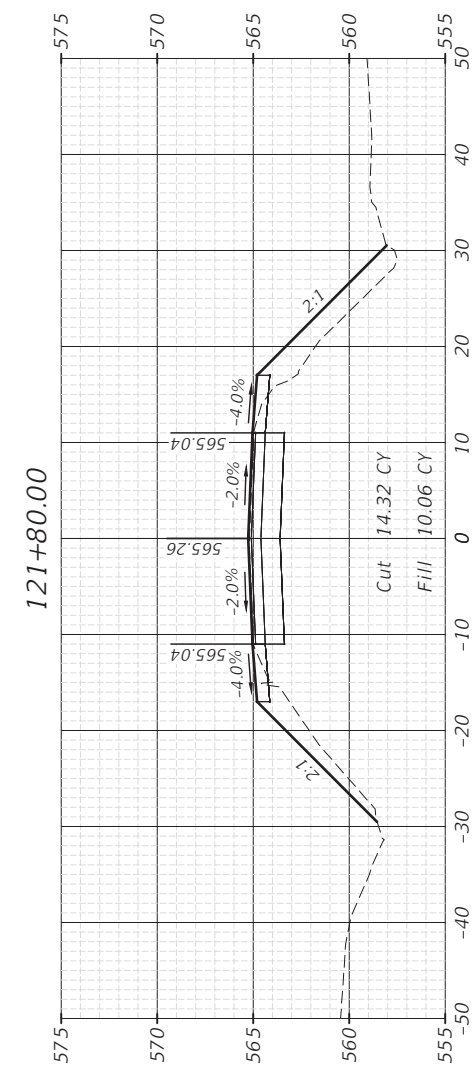
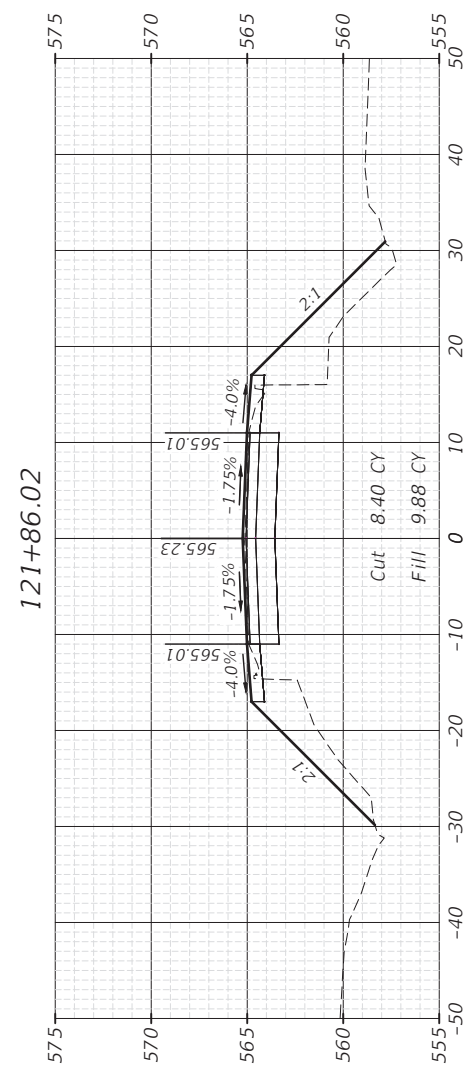
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FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	27
	ILLINOIS	CONTRACT NO. 87791		



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 Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\ROAD\PLANS\02E-BRACEVILLE RD - XSEC.dwg Last Modified: Thursday, February 15, 2024 4:32:04 PM Plotted On: Monday, February 26, 2024 2:27:46 PM by Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	DESCRIPTION



CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

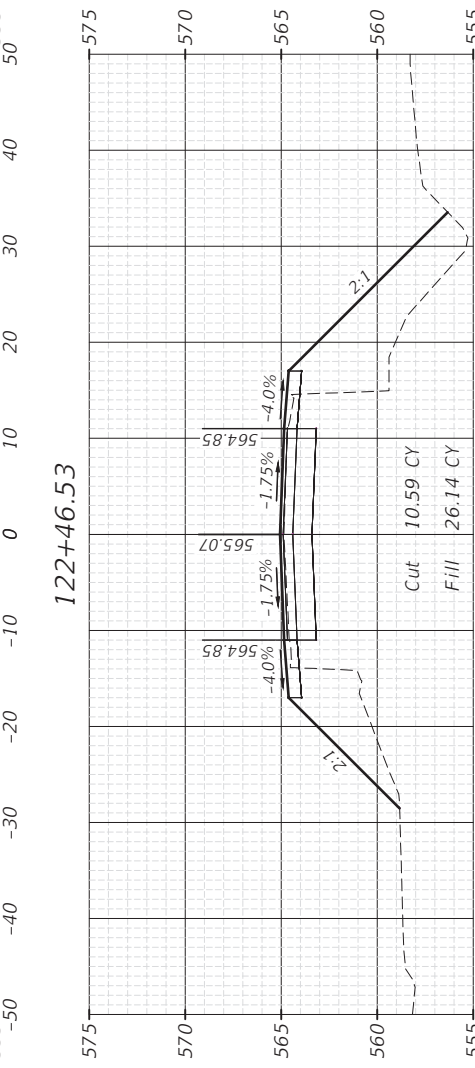
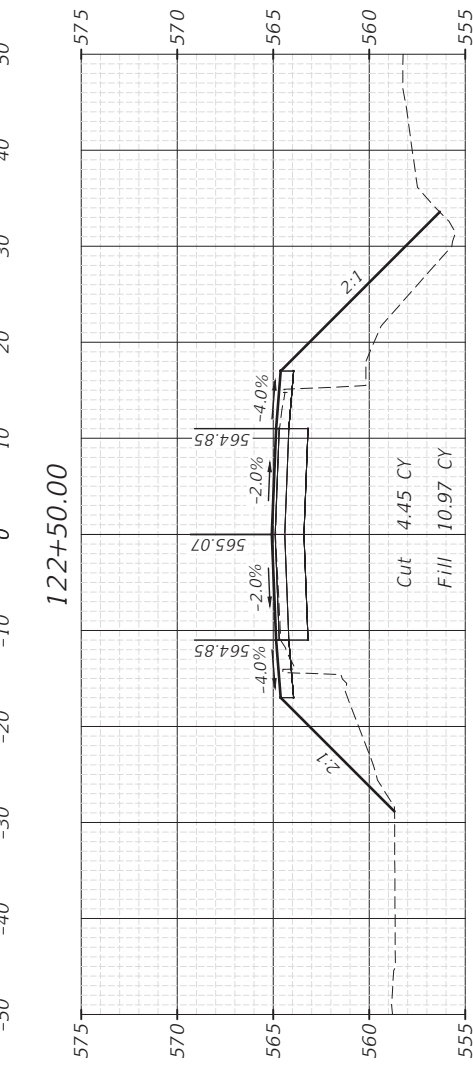
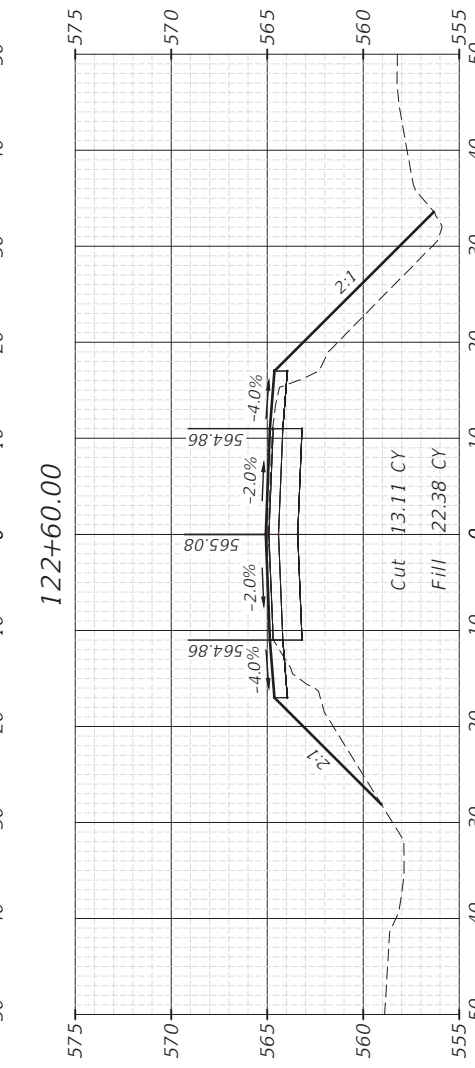
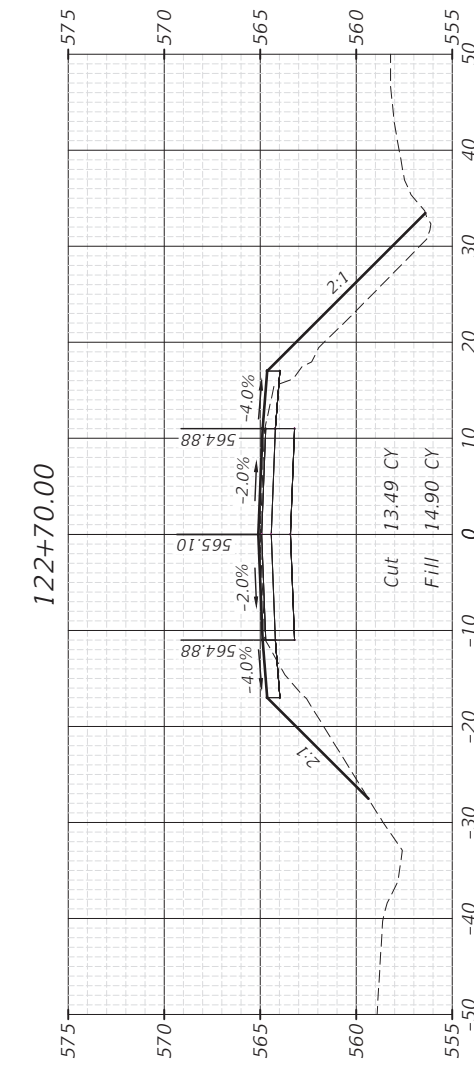
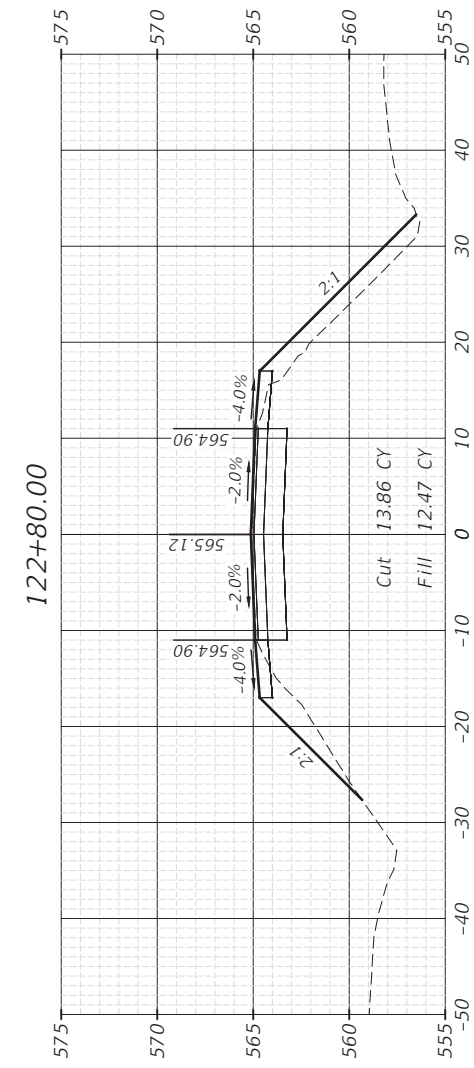
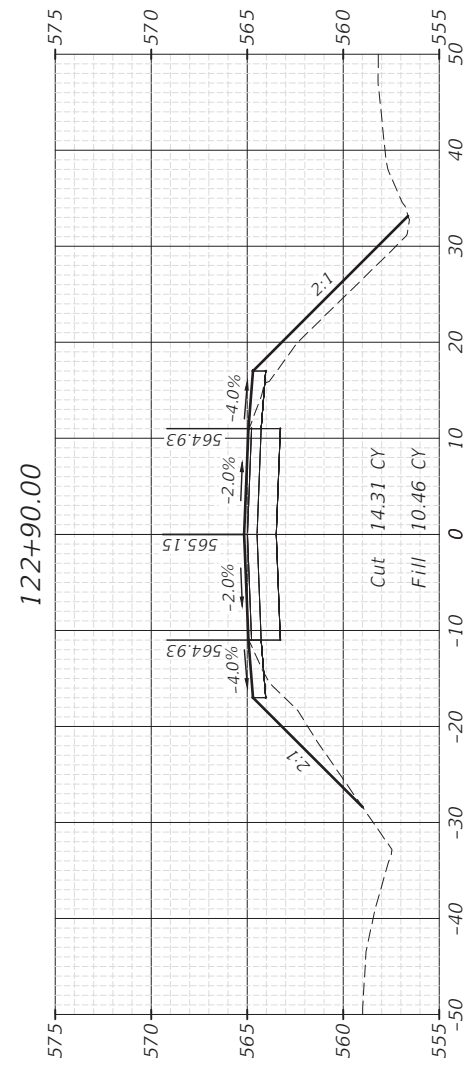
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BID SET

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 27
FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22-00192-00-BR	19-00178-00-BR	GRUNDY	51	28
34	ILLINOIS	CONTRACT NO. 87791		



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 Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\ROAD PLANS\02E-BRACEVILLE RD - XSEC.dwg Last Modified: Thursday, February 15, 2024 4:32:04 PM Plotted On: Monday, February 26, 2024 2:27:51 PM by Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	
			DESCRIPTION	



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 OTTAWA MENDOTA  
 ILLINOIS

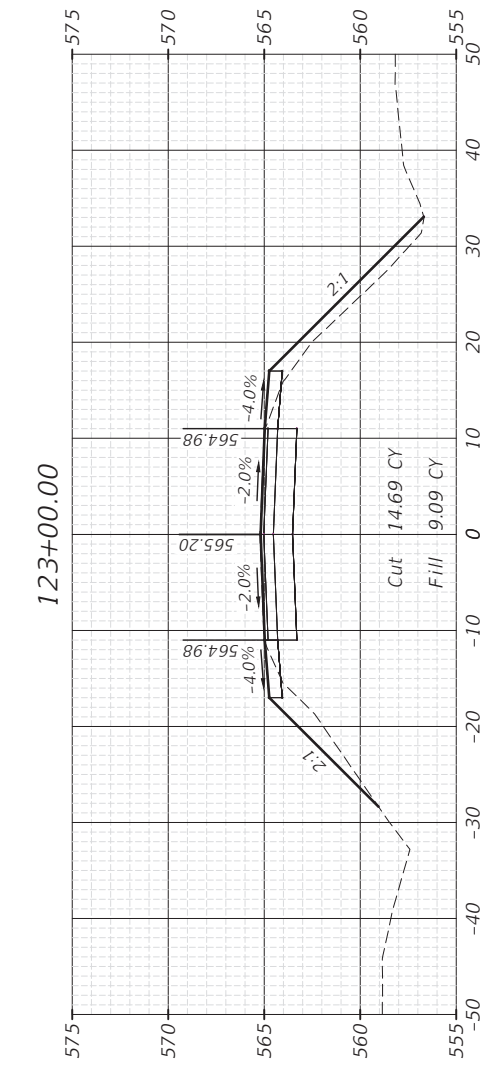
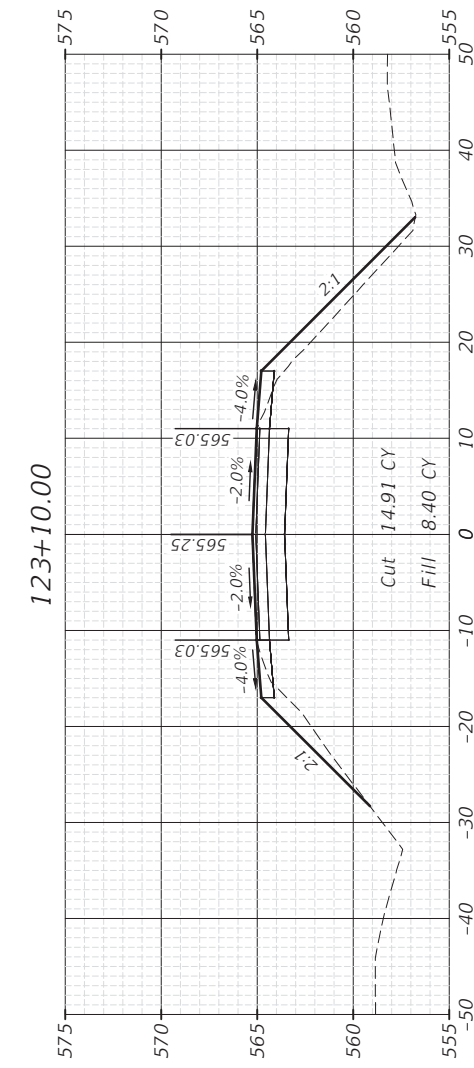
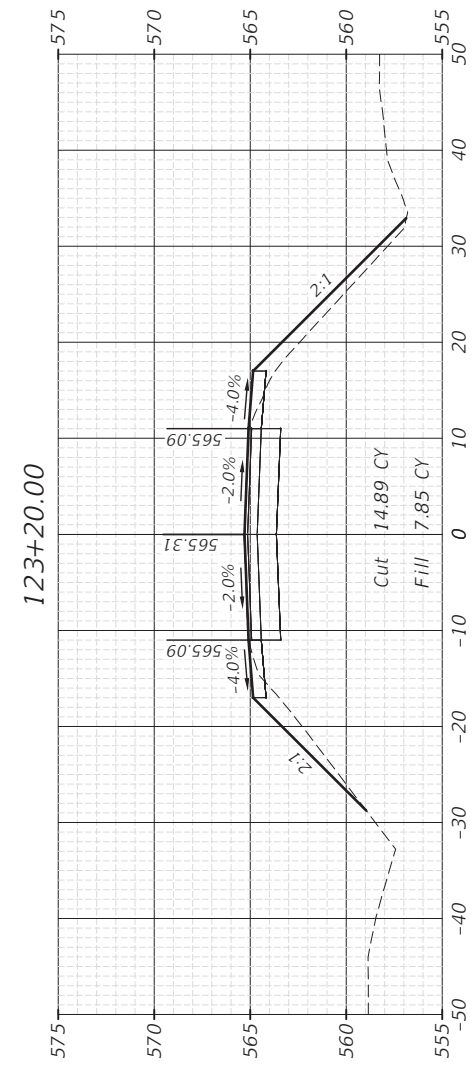
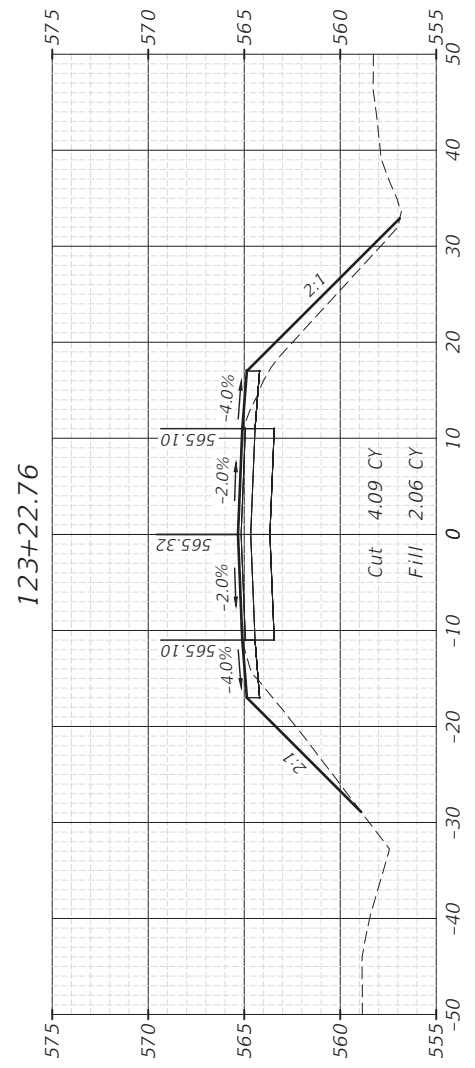
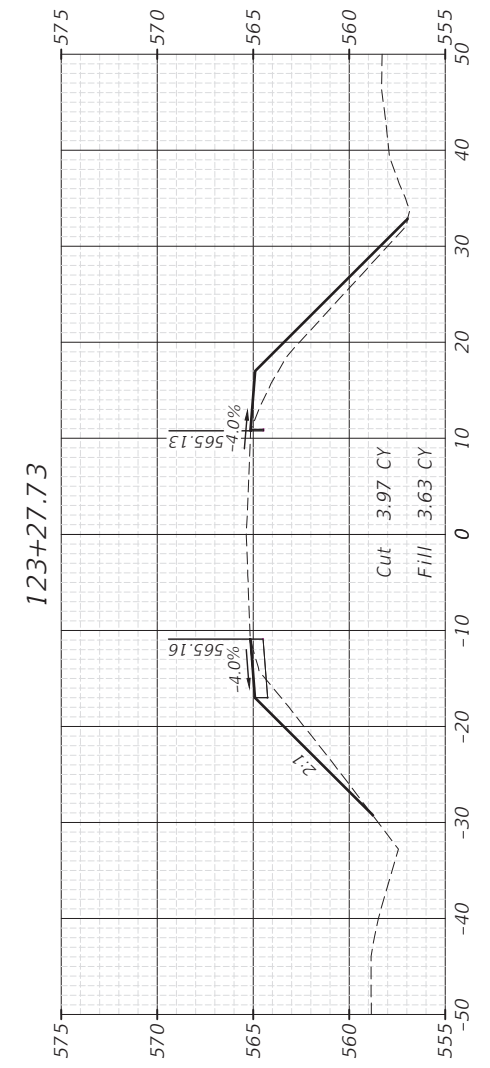
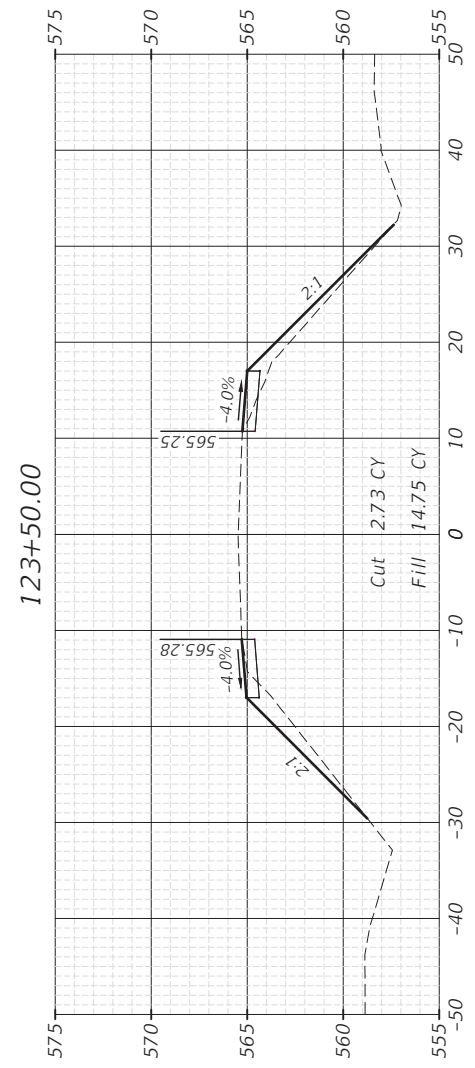
**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**CROSS SECTIONS**  
**STR 032-3250 (E) 032-3251 (P)**

<b>BID SET</b>	CURRENT AS OF: 02/14/2024	
	SCALE: AS NOTED	SHEET 28
	FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	29
	ILLINOIS	CONTRACT NO. 87791		



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CONTRACT NO. 87791

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			DESCRIPTION	



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ILLINOIS

CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

CROSS SECTIONS  
STR 032-3250 (E) 032-3251 (P)

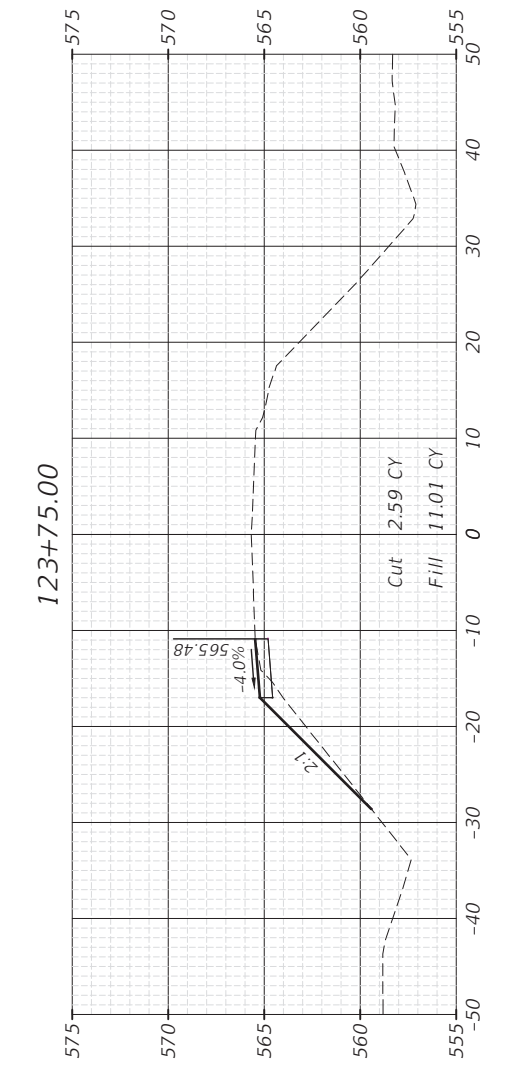
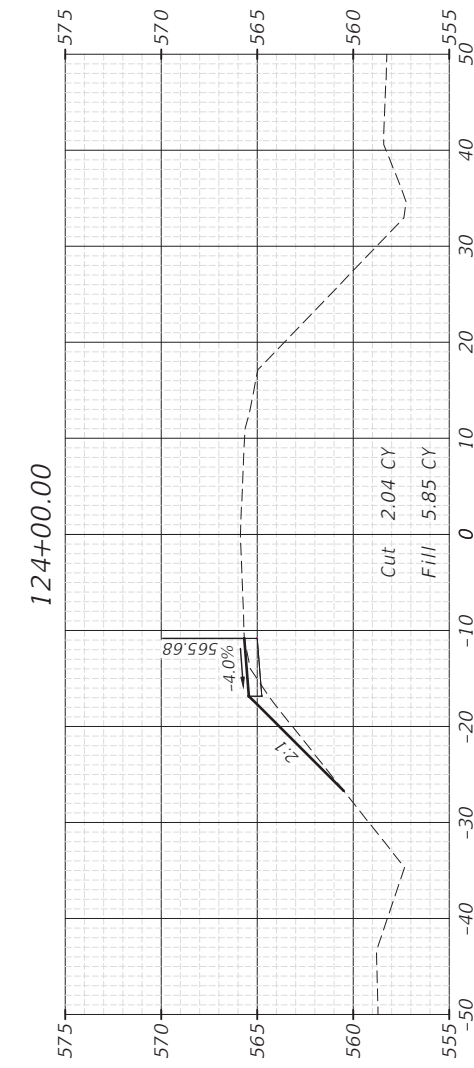
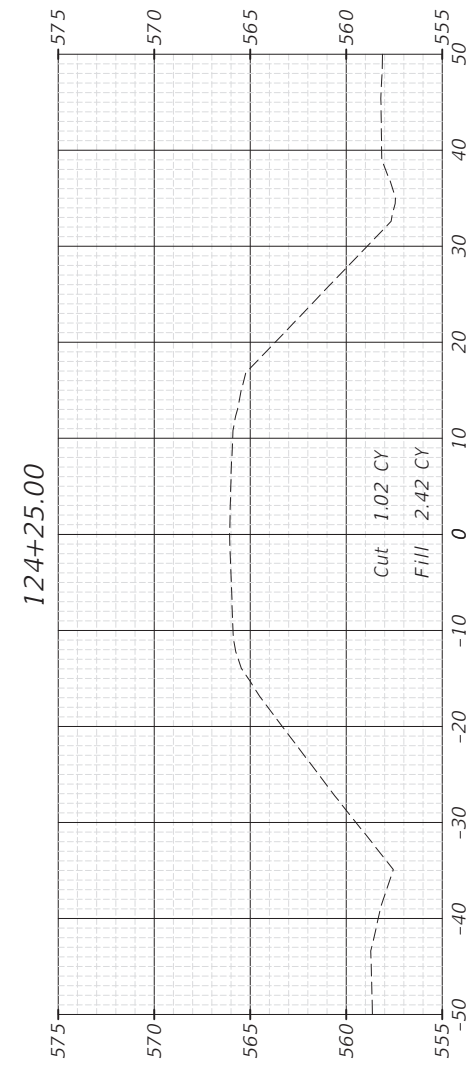
BID SET

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 29
FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	30
	ILLINOIS	CONTRACT NO. 87791		

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 Drawing Name: H:\A\026\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\CAD\PLANS\026-BRACEVILLE RD - XSEC.dwg Last Modified: Thursday, February 15, 2024 4:32:04 PM Plotted On: Monday, February 26, 2024 2:28:01 PM by Kurt Decker



CONTRACT NO. 87791

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	LEVEL	BY	DATE	DESCRIPTION
CHECKED BY: DAH				
DATE: 02/2023				



CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

CROSS SECTIONS  
STR 032-3250 (E) 032-3251 (P)

BID SET

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 30
FILE NO.: 111506.00 Y-	OF 51



EXISTING STRUCTURE NO: 032-5121

TWO SPAN (76'-6", 76'-6") PRECAST CONCRETE DECK BEAM BRIDGE  
158'-9" BACK TO BACK OF ABUTMENT, 28'-5 1/2" FACE TO FACE OF RAIL

EXISTING SUPERSTRUCTURE TO BE REMOVED

SALVAGE EXISTING SUBSTRUCTURE

**DESIGN SPECIFICATIONS**

2020 AASHTO LRFD Bridge Design Specifications  
Customary U.S. Units, 9th Edition

**LOADING HL-93**

Allow 50#/sq ft for future wearing surface

**DESIGN STRESSES**

**PRECAST UNITS**

$f'_c = 5,000$  psi  
 $f_y = 60,000$  psi (Bar Reinforcement)  
 $f_y = 65,000$  psi (Welded Wire Reinforcement)

**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 Sec ( $S_{D1}$ ) = 0.117  
Design Spectral Acceleration at 0.2 Sec ( $S_{D5}$ ) = 0.148  
Soil Site Class = D (Assumed)

**GENERAL NOTES**

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

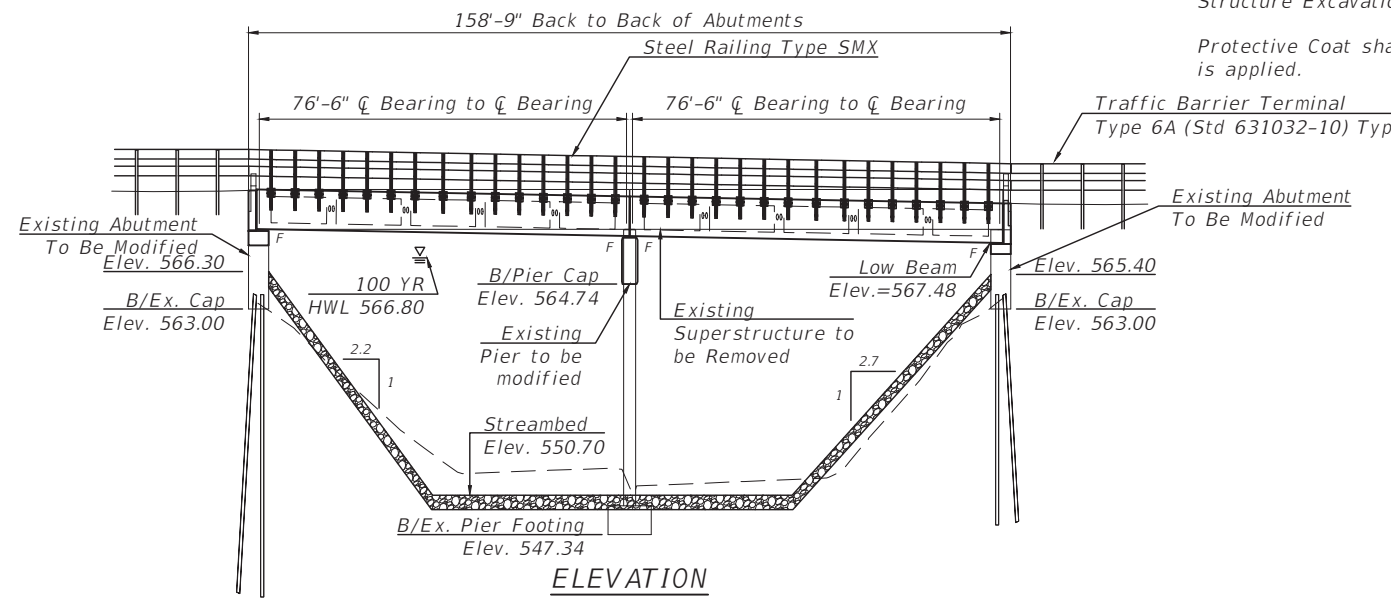
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

All bars to be epoxy coated.

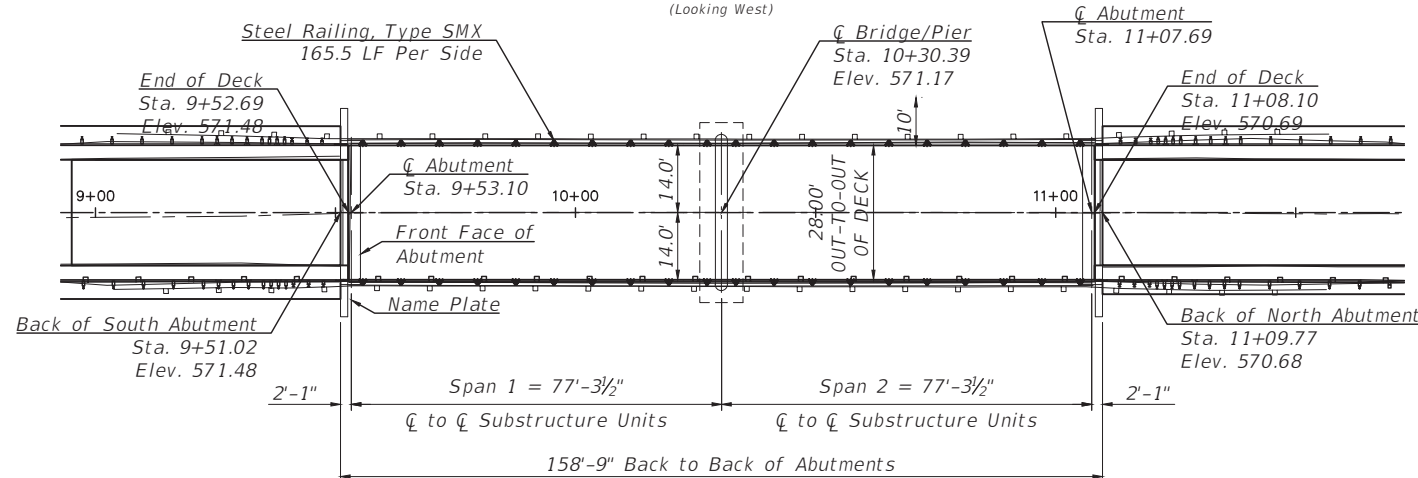
All proposed construction activities shall be in accordance with Statewide Permit 12 of the Illinois DNR Office of Water Resources and Nationwide Permit 3 of the US Army Corps of Engineers.

Structure Excavation shall be included in cost of Concrete Structures.

Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.



**ELEVATION**  
(Looking West)



**PLAN**

**WATERWAY INFORMATION**

Drainage Area = 23.49 sq. mi.											
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.				Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Total	Bridge	Total		Exist.	Prop.	Exist.	Prop.
Design	10	9,400	1,552	1,552	1,552	1,552	564.54	0.02	0.02	564.56	564.56
Design	50	12,620	1,820	1,820	1,820	1,820	566.33	0.04	0.04	566.37	566.37
Base	100	13,820	1,890	1,890	1,890	1,890	566.80	0.05	0.05	566.85	566.85
Max. Calc.	500	16,280	2,011	2,011	2,011	2,011	567.59	0.07	0.07	567.66	567.66

Exist. 10 Year Velocity: 5.90 (ft./sec.)

Prop. 10 Year Velocity: 5.91 (ft./sec.)

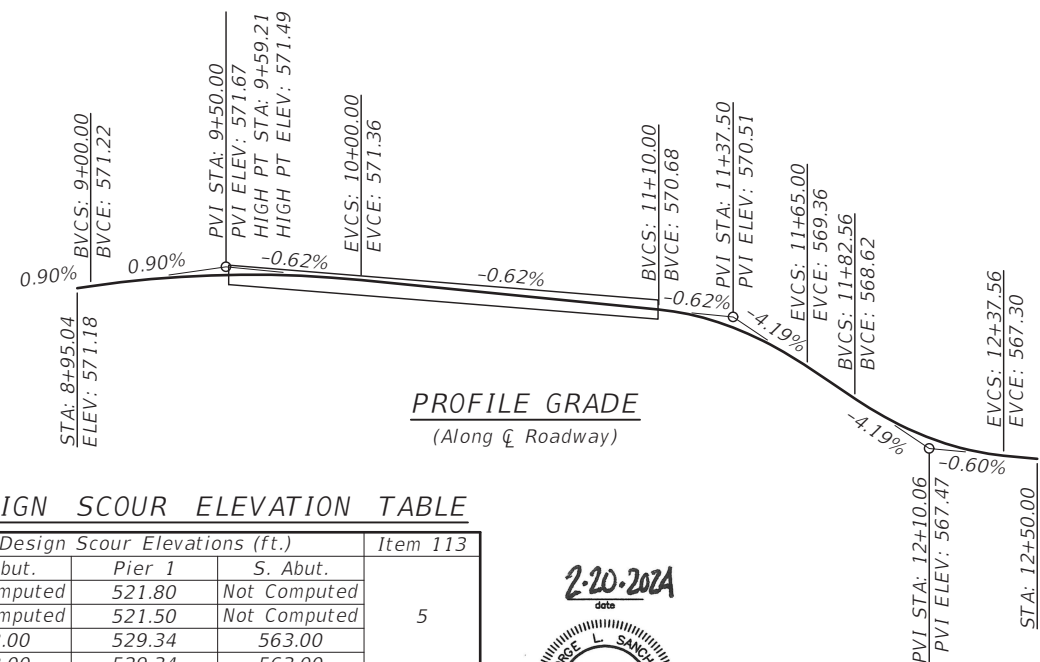
**DESIGN SCOUR ELEVATION TABLE**

Event/Limit State	Design Scour Elevations (ft.)			Item 113
	N. Abut.	Pier 1	S. Abut.	
Q100	Not Computed	521.80	Not Computed	5
Q200	Not Computed	521.50	Not Computed	
Design	563.00	529.34	563.00	
Check	563.00	529.34	563.00	

Design and check elevations for abutments taken as bottom of existing cap. Design and check elevations for pier spread footings taken as bottom of existing footing. Abutment scour elevations not computed since abutments will be protected with rip-rap. Item 113 rated as 5 per ABD 14.2 due to proposed rip-rap installation around piers.

**INDEX OF SHEETS**

- General Plan and Elevation
- Rip Rap Details
- Superstructure
- 5. Deck Beams
- Railings
- North Abutment Modification
- South Abutment Modification
- Pier Modification
- 15. Existing Plans

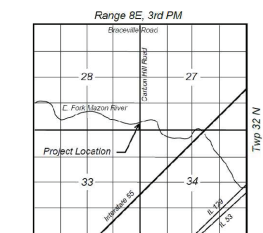


**PROFILE GRADE**  
(Along  $\bar{C}$  Roadway)

STA. 10+30.40  
RE-BUILT 2024 BY  
GRUNDY COUNTY  
CH 34V - SEC. 19-00178-00-BR  
LOADING HL-93  
STR. NO. 032-5121

**NAME PLATE**  
See Std. 515001

Clean existing name plate and install next to new name plate. Cost included with Name Plates.



**LOCATION SKETCH**

**GENERAL PLAN AND ELEVATION**  
**CARBON HILL ROAD (CH 34V)**  
**OVER E. FORK MAZON RIVER**  
**SEC. 19-00178-00-BR**  
**GRUNDY COUNTY**  
**STATION 10+30.40**  
**S.N. 032-5121 (EX & PROP)**



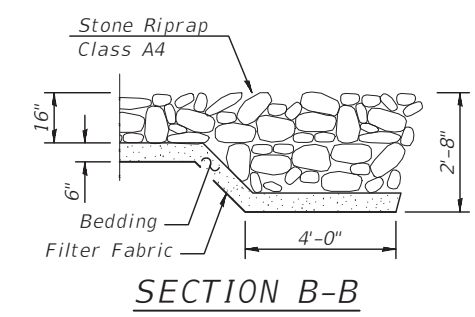
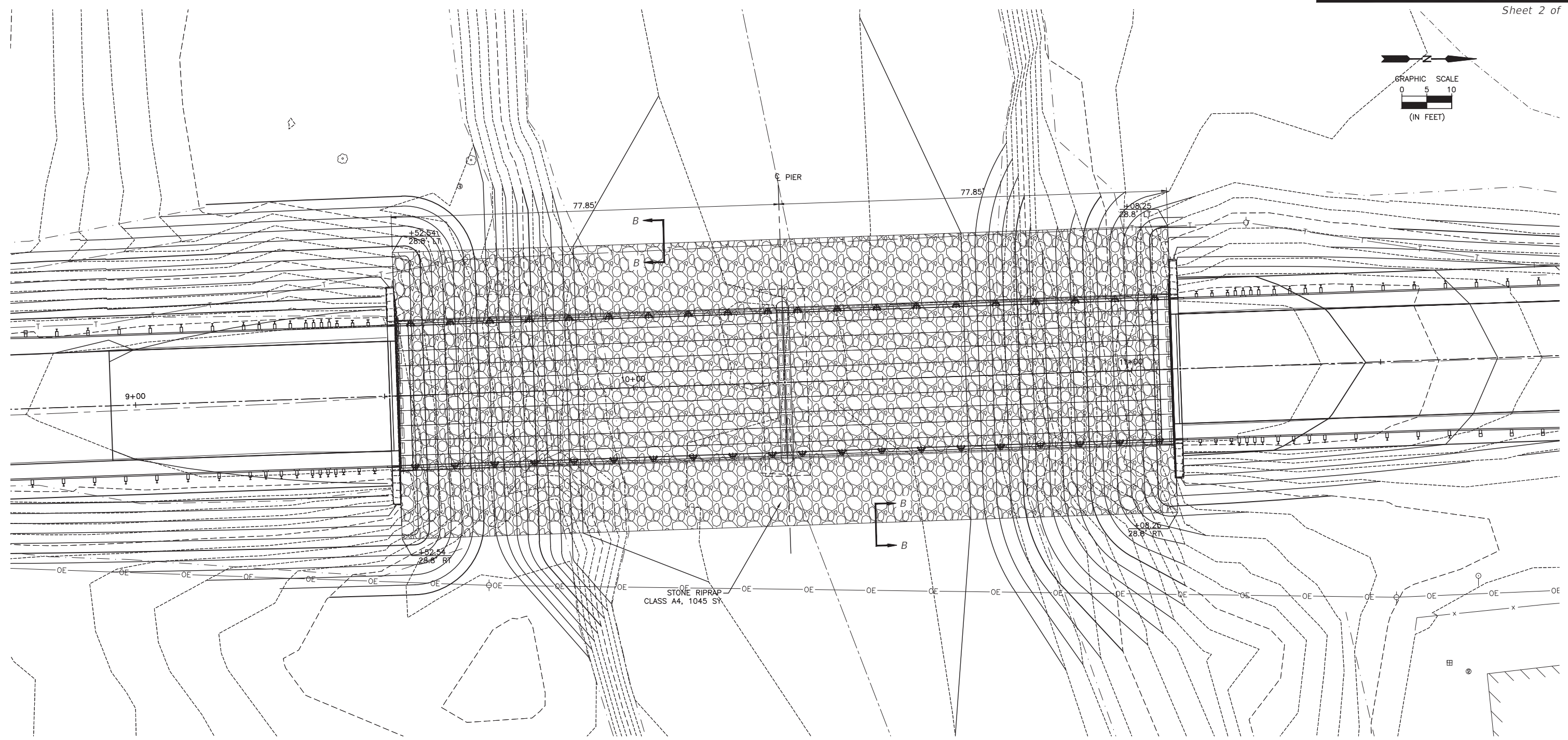
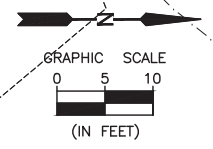
I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.

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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	32
		ILLINOIS	CONTRACT NO. 87791	

Sheet 2 of 15



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ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

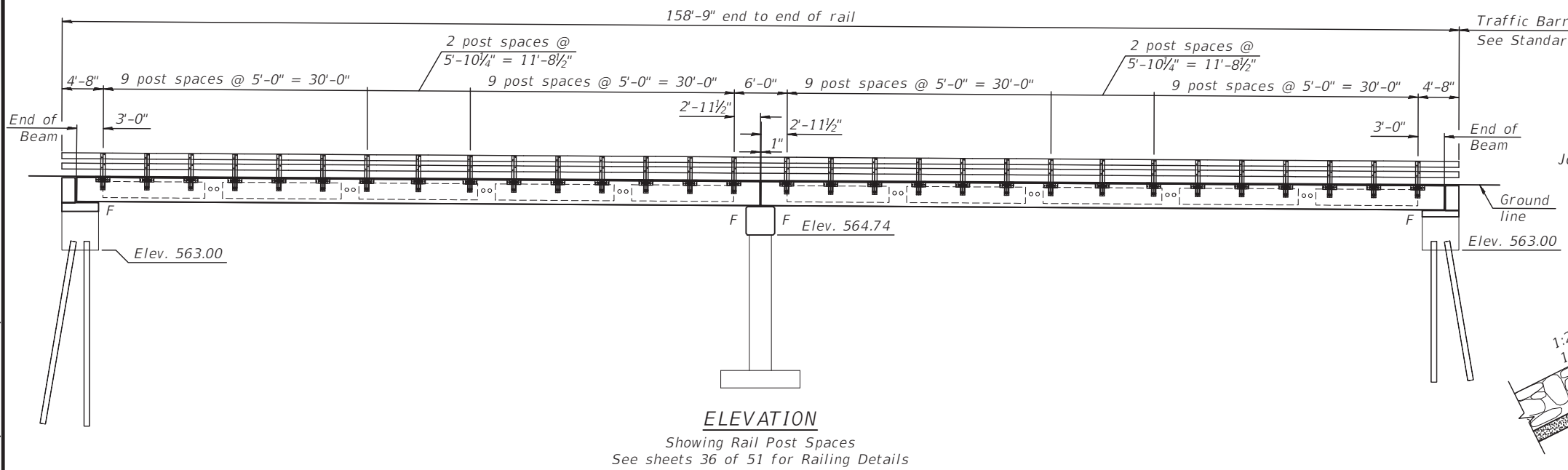
**RIP RAP PLAN AND DETAILS**  
**STR 032-5121 (E)(P)**

<b>BID SET</b>	CURRENT AS OF: 02/14/2024	
	SCALE: AS NOTED	SHEET 32
	FILE NO.: 111506.00 Y-	OF 51

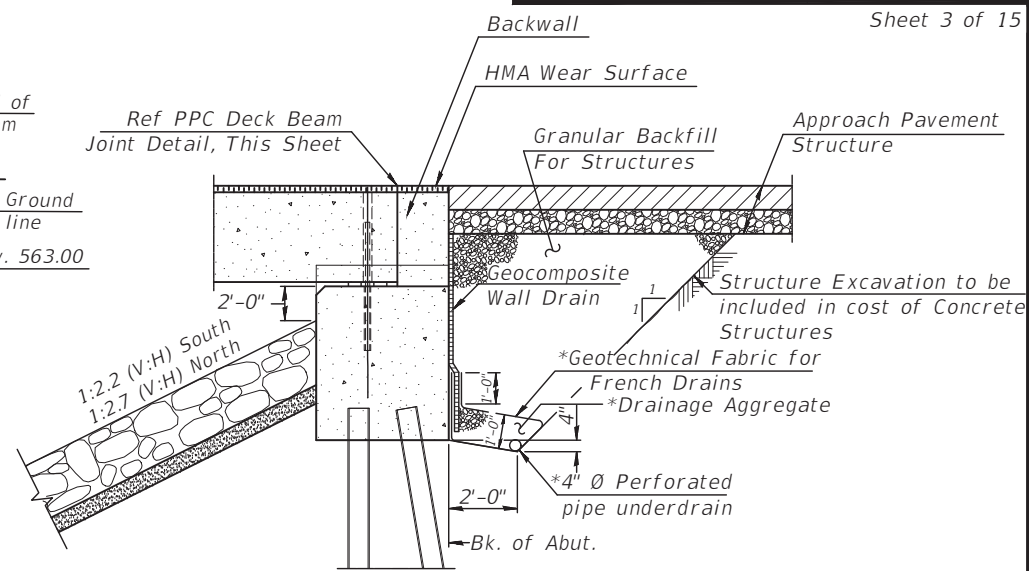


F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	33
		ILLINOIS	CONTRACT NO. 87791	

Sheet 3 of 15



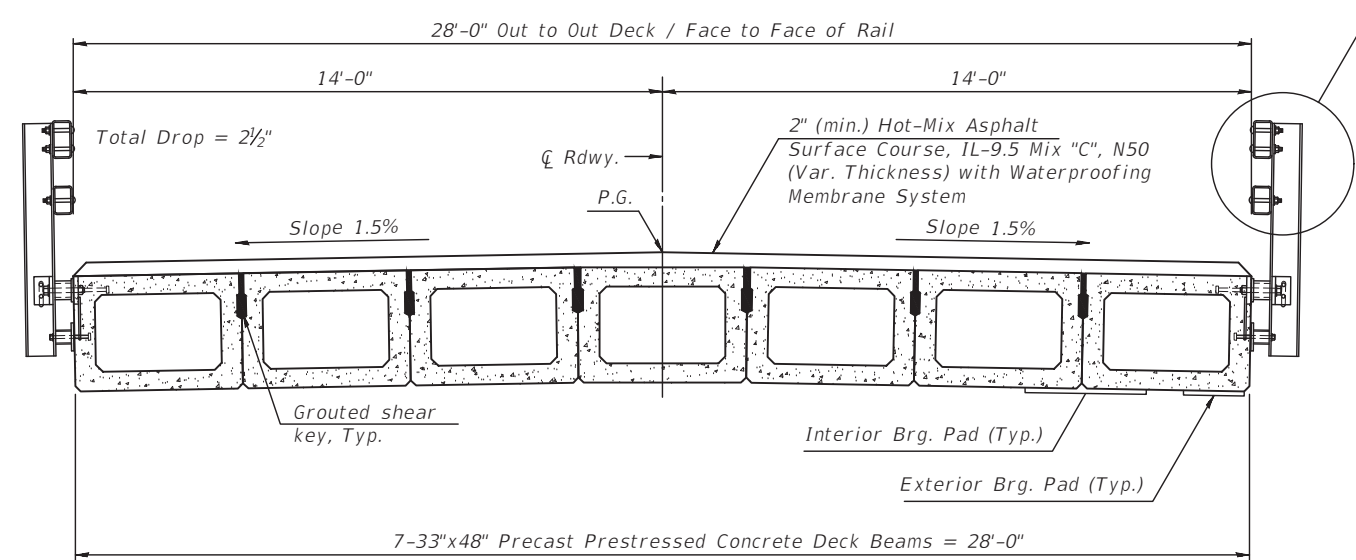
**ELEVATION**  
Showing Rail Post Spaces  
See sheets 36 of 51 for Railing Details



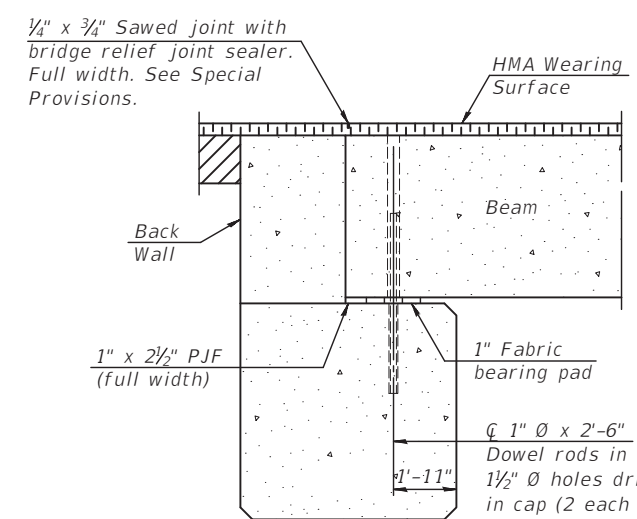
**SECTION THRU ABUTMENT**

\*Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

Note:  
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

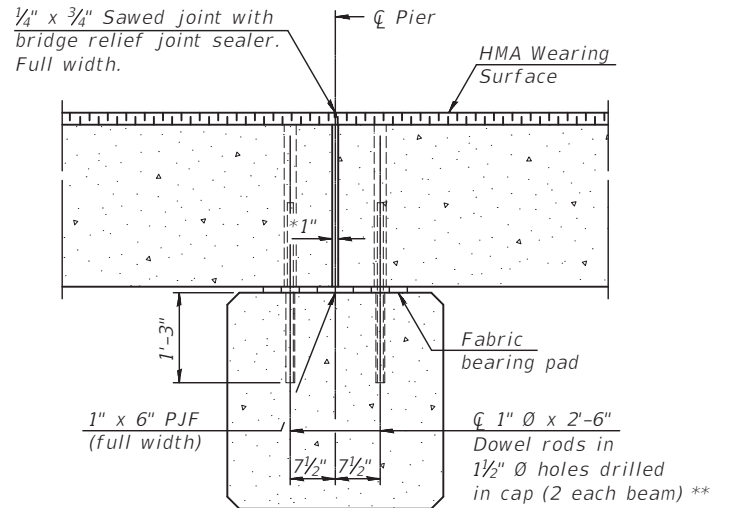


**CROSS SECTION**



**SECTION AT ABUTMENTS**

\* Rods to be grouted and allowed to cure (min. 24 hours) prior to grouting shear keys.

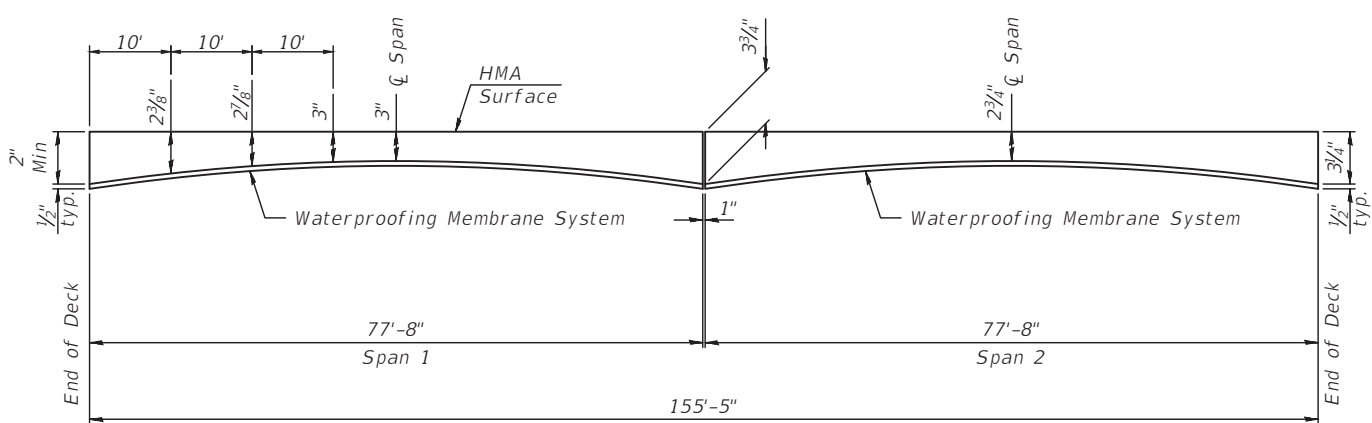


**SECTION AT PIER**

\*1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

\*\* Rods to be grouted and allowed to cure (min. 24 hours) prior to grouting shear keys.

Notes:  
See sheet 35 of 51 for fabric bearing pad details.



**ANTICIPATED HMA WEARING SURFACE PROFILE**  
(For information only - beam camber may vary in field)

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
HMA Wearing Surface	Tons	90

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DATE: 02/2023				

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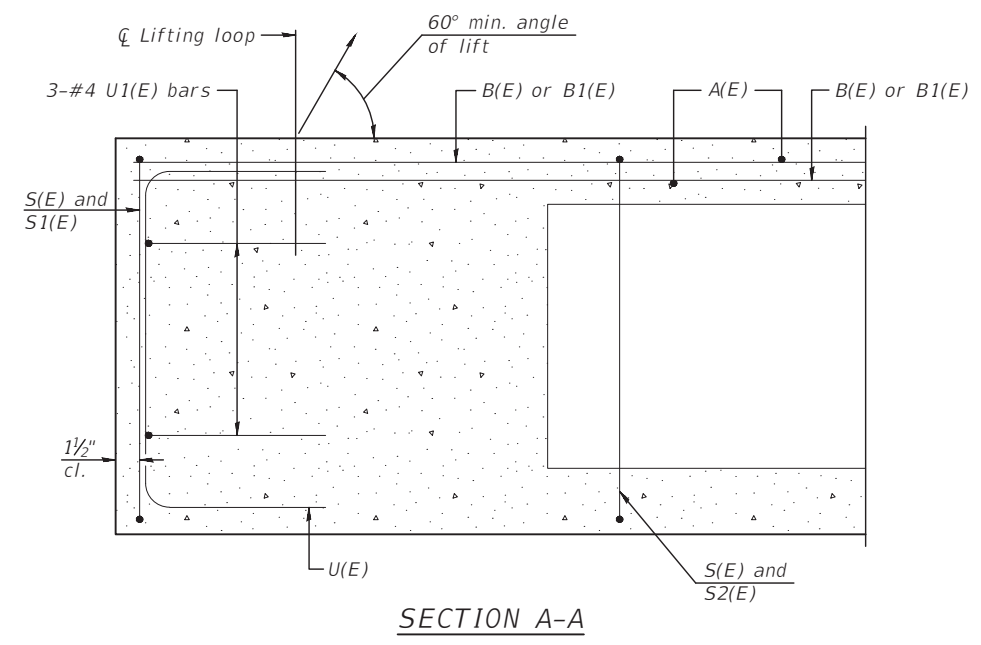
**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**SUPERSTRUCTURE**  
**STR 032-5121 (E)(P)**

**BID SET**

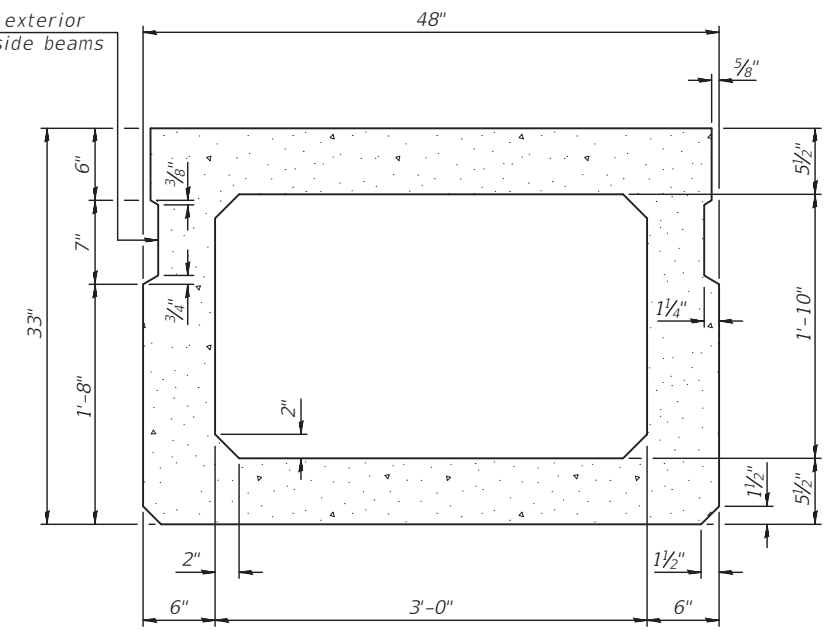
CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 33
FILE NO.: 111506.00 Y-	OF 51



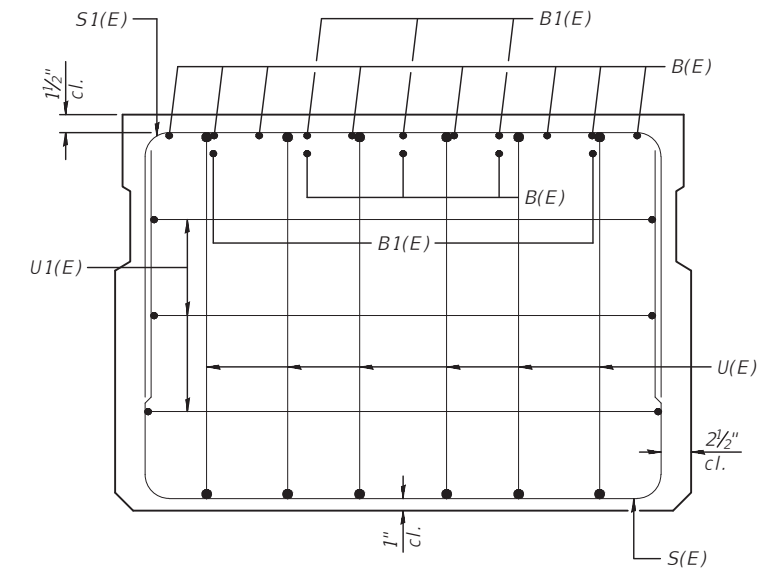


SECTION A-A

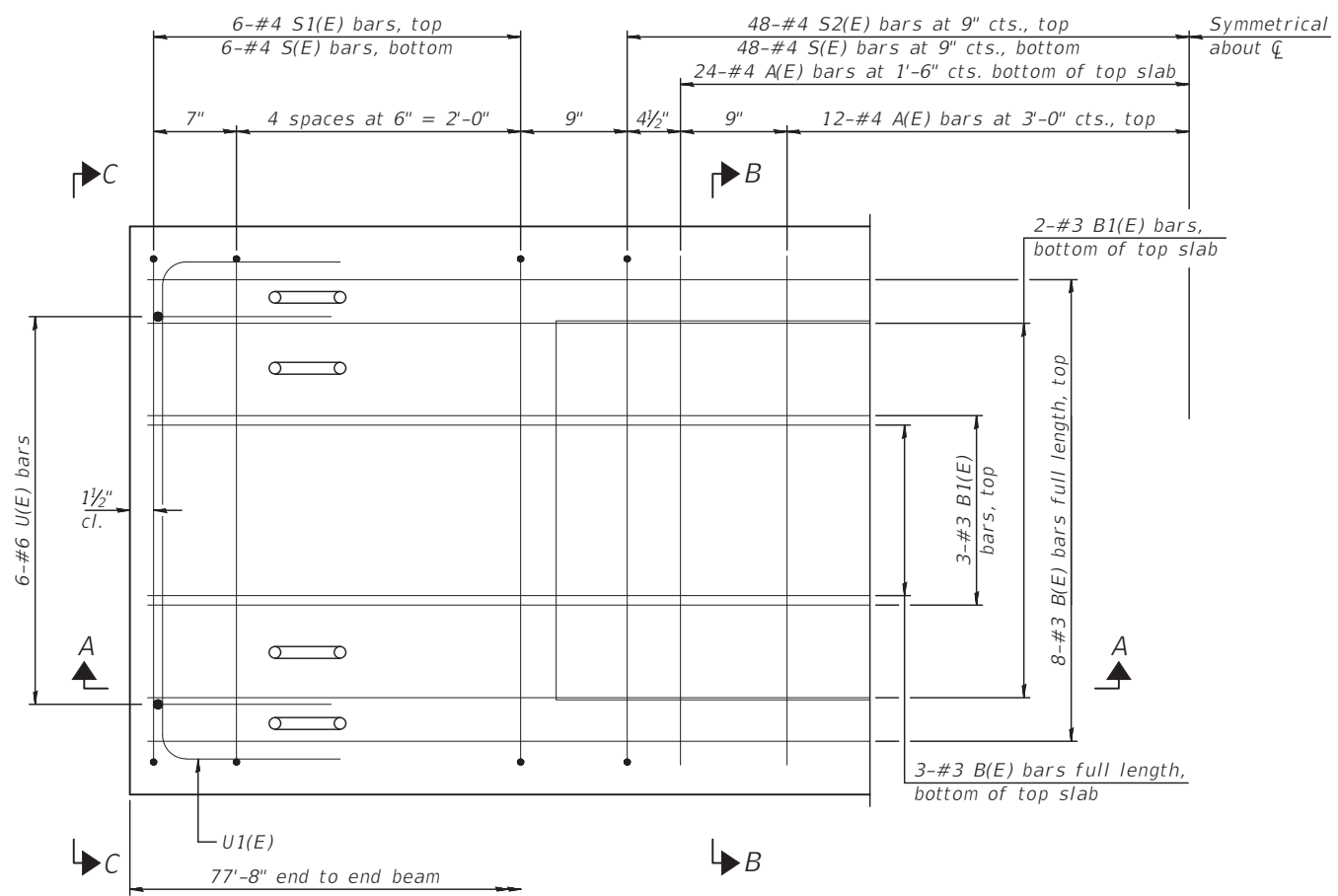
Omit key on exterior face of outside beams



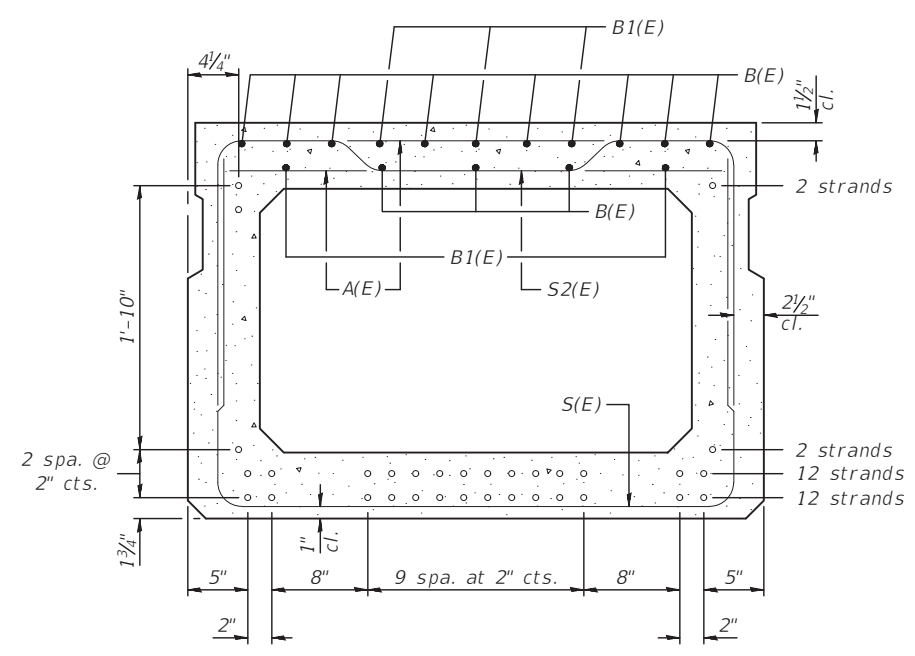
SECTION B-B  
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B  
(Showing reinforcement and permissible strand locations)

Note:  
Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown, to achieve 28 SS strand pattern.

**BAR LIST**  
**ONE BEAM ONLY**  
(For information only)

Bar	No.	Size	Length	Shape
A(E)	72	#4	3'-7"	—
B(E)	44	#3	20'-6"	—
B1(E)	10	#3	10'-0"	—
S(E)	108	#4	8'-8"	┌
S1(E)	12	#4	7'-5"	┌
S2(E)	96	#4	7'-8"	┌
U(E)	12	#6	5'-0"	┌
U1(E)	6	#4	6'-0"	┌

Note:  
See sheet 35 of 51 for additional details and Bill of Material.

**MINIMUM BAR LAP**  
#3 bar = 1'-6"

Note:  
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

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Last Modified: Thursday, February 22, 2024 2:28:45 PM  
Plotted On: Monday, February 26, 2024 3:31:52 PM  
User: Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	DESCRIPTION

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**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**33"X48" PPC DECK BEAM**  
**STR 032-5121 (E)(P)**

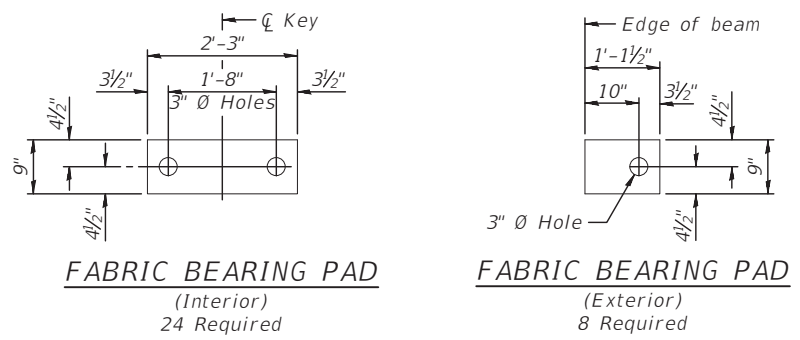
**BID SET**

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 34
FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR	GRUNDY	51	35
	ILLINOIS		CONTRACT NO. 87791	

Sheet 5 of 15

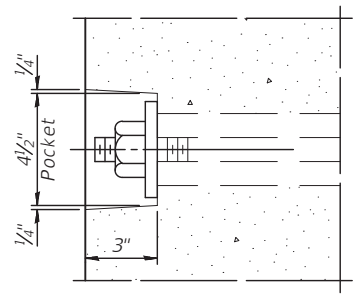


**FABRIC BEARING PAD**  
(Interior)  
24 Required

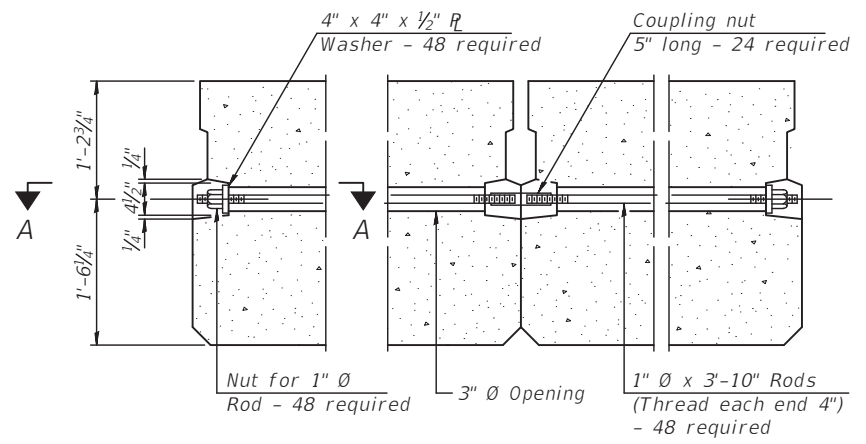
**FABRIC BEARING PAD**  
(Exterior)  
8 Required

**FIXED**

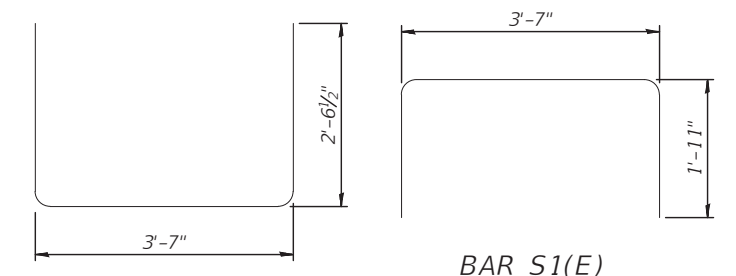
Notes:  
All bearing pads shall be 1" thick.  
Omit holes when using expansion bearings.  
Expansion bearing pads shall be bonded to the substructure.



**SECTION A-A**

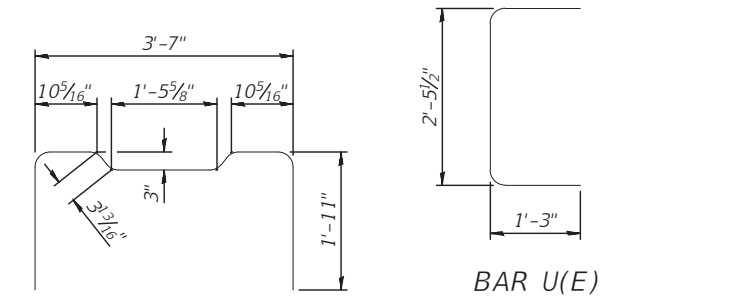


**TYPICAL TRANSVERSE TIE ASSEMBLY**



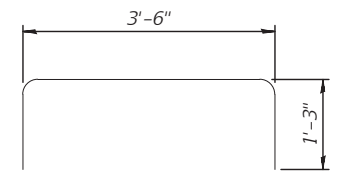
**BAR S(E)**

**BAR S1(E)**

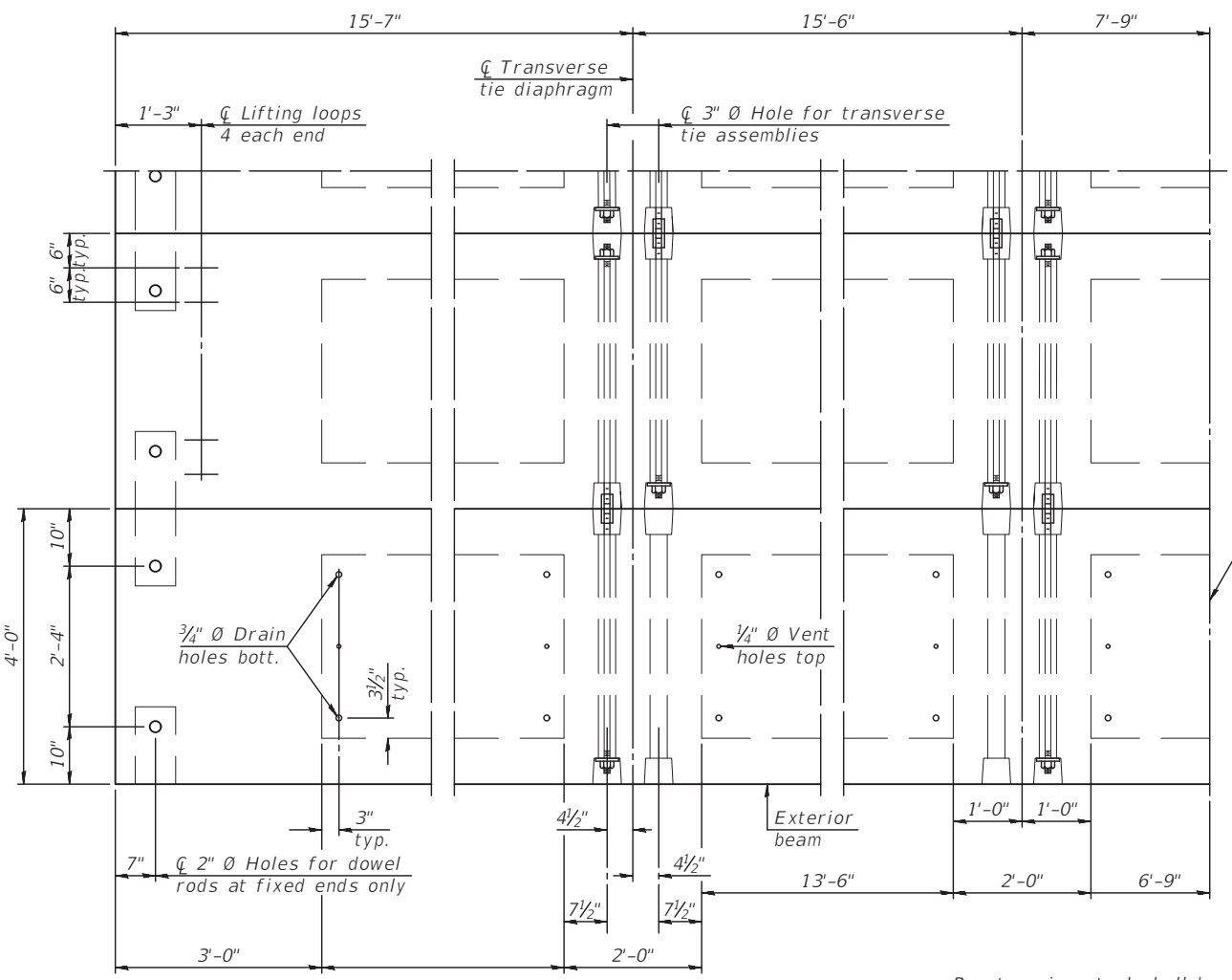


**BAR S2(E)**

**BAR U(E)**



**BAR U1(E)**

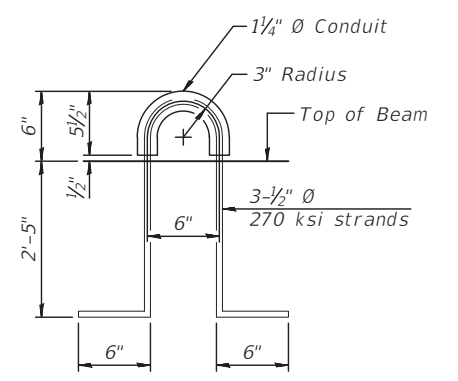


**PLAN VIEW**

Symmetric about Beam  $\bar{C}$

**NOTES**

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.  
The 1"  $\bar{O}$  rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.  
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.  
A minimum 2 1/2"  $\bar{O}$  lifting pin shall be used to engage the lifting loops during handling.  
Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.  
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.  
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



**LIFTING LOOP DETAIL**

**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (33" depth)	Sq. Ft.	4350
---	---------	------

Note:  
Connect beams in pairs with the transverse tie configuration shown.

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Drawing Name: H:\VADGE\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD - DECK BEAM DTLS.dwg  
Last Modified: Thursday, February 22, 2024 3:31:35 PM  
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by: Kurt Decker

CONTRACT NO. 87791

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DATE: 02/2023				

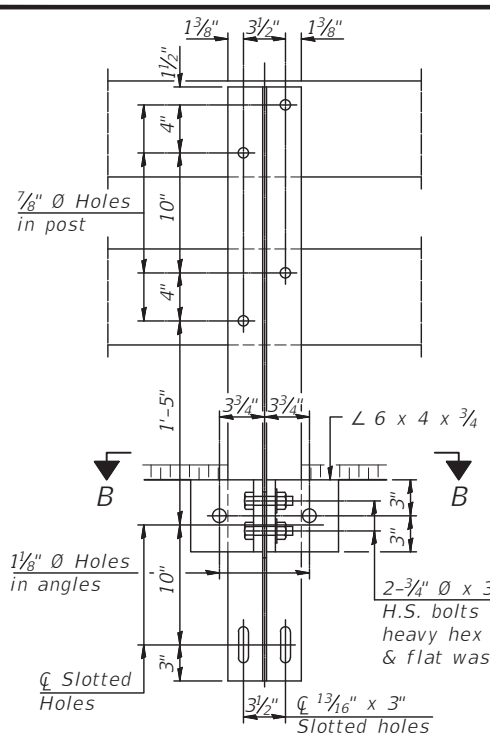
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ILLINOIS

**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

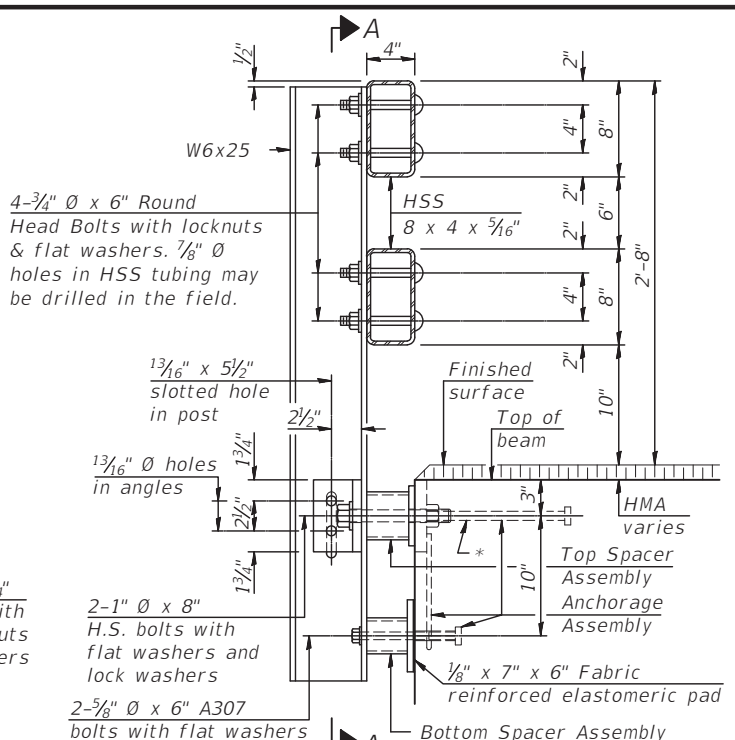
**33"X48" PPC DECK BEAM DETAILS**  
**STR 032-5121 (E)(P)**

<b>BID SET</b>	CURRENT AS OF: 02/14/2024	
	SCALE: AS NOTED	SHEET 35
	FILE NO.: 111506.00 Y-	OF 51

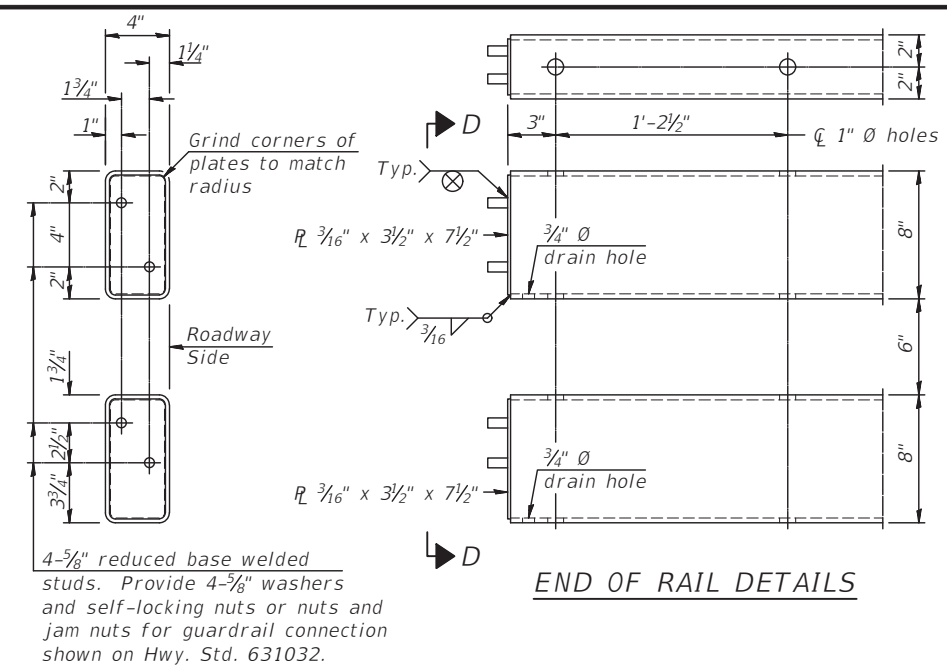




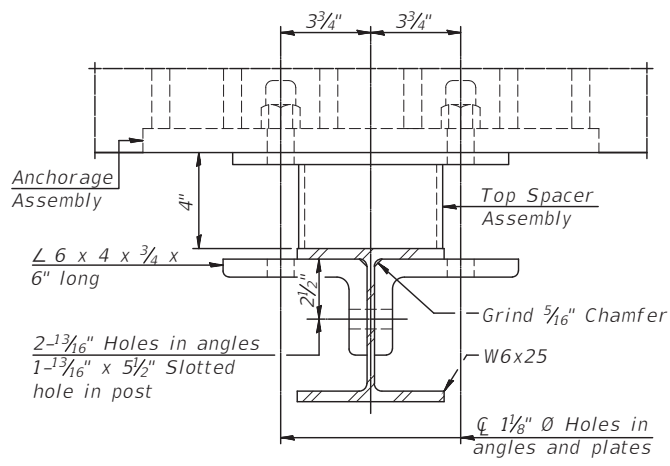
SECTION A-A



SECTION AT RAIL POST

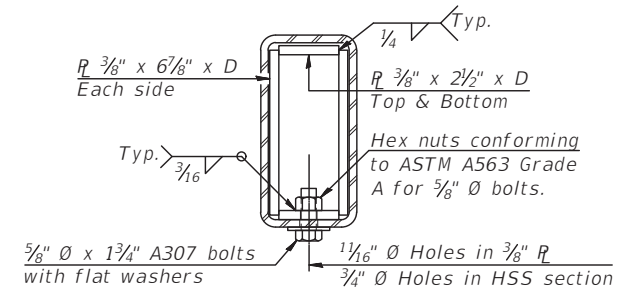


VIEW D-D

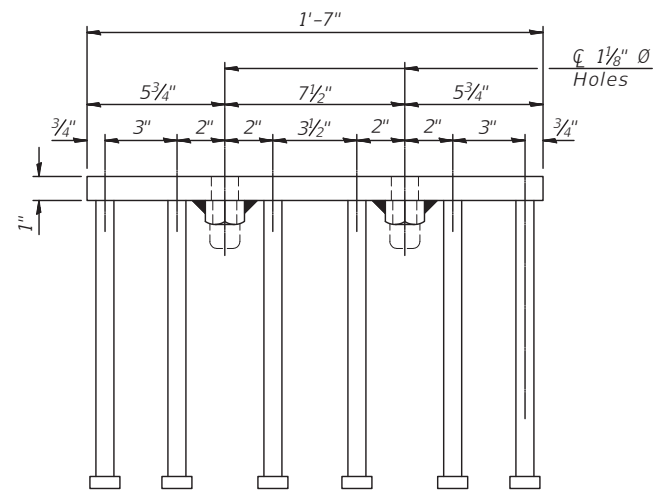


SECTION B-B

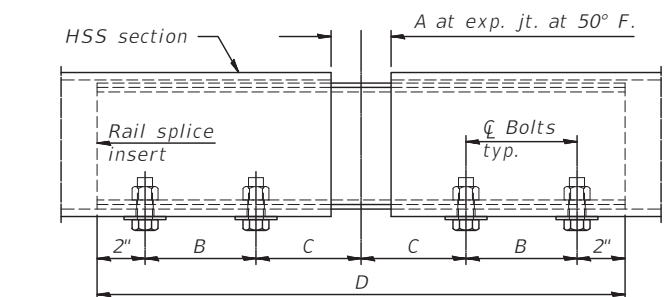
\* The outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchorage assembly. The anchorage studs may be bent down 1/2" to accommodate the top reinforcement bar placement.



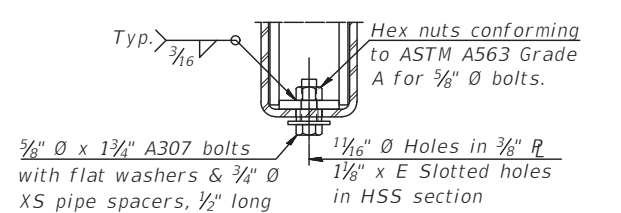
SECTION AT RAIL SPLICE



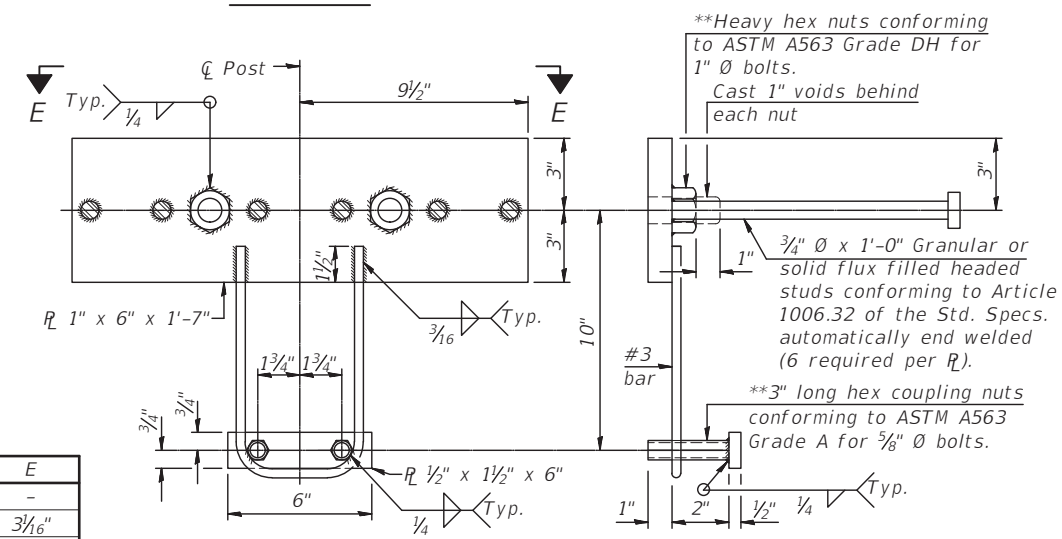
VIEW E-E



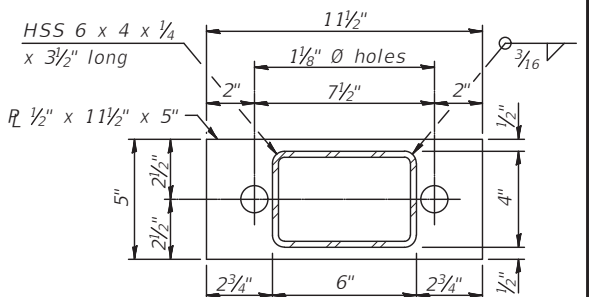
RAIL SPLICE ELEVATION



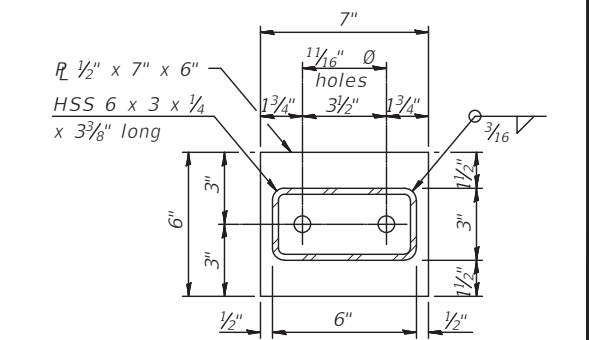
RAIL SPLICE CONNECTION AT EXPANSION JT.



ANCHORAGE ASSEMBLY



TOP SPACER ASSEMBLY

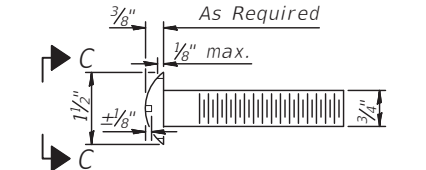


BOTTOM SPACER ASSEMBLY

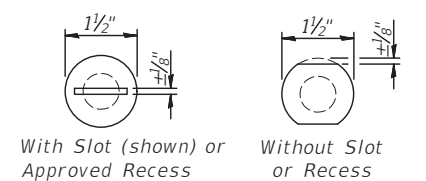
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SMX	Foot	331

Notes:  
 A sufficient number of shims of various thicknesses, sized to fit behind the top spacer assembly, 5" x 1 1/2", and bottom spacer assembly, 6" x 7", shall be provided to adjust posts for proper alignment. If the summation of shims is greater than 1/4" (top) or 1/2" (bottom), longer bolts are required. Cost included with Steel Railing, Type SMX.  
 All steel rail elements including shims shall be galvanized according to Article 509.05 of the Standard Specifications.  
 All HSS tubing serving as railing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.  
 Rail splice inserts may be built out of 2 - 3/8" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.  
 All round head bolts shall be ASTM A307 with locknuts according to ASTM A563 grade A.



ROUND HEAD BOLT DETAIL



VIEW C-C

**RAILING CRITERIA**

MASH 2016 Conditional Test Level	3
Railing Weight (plf)	90
Min f'c (psi)	5,000
Max Post Spacing	6'-3"
HMA thickness range (in)	1 1/4" - 3 3/8"

**SPLICE DIMENSIONS**

Location	T	A	B	C	D	E
All locs. not over exp. jts.	0	1/4"	4"	4"	1'-8"	-
Over Strip Seal Jt.	≤4"	2 1/2"	4 5/8"	4 3/8"	1'-10"	3 1/4"
Over Finger or Modular Jt.	≤9 1/2"	5 1/2"	7 3/8"	7 1/4"	2'-9 1/4"	5 1 3/16"
Over Finger or Modular Jt.	≤15"	8 1/4"	10 1/8"	10"	3'-8 1/4"	8 1/16"

T = ; total movement along centerline of roadway at expansion joint.

CHAMLIN & ASSOCIATES, INC. © 2024  
 Drawing Name: HVA03E\11.11506-00 GRUNDY HILL RD\ROAD\PLANS\03E-CARBON HILL RD - RAILINGS 01.dwg  
 Last Modified: Thursday, February 22, 2024 3:31:19 PM  
 Plotted On: Monday, February 26, 2024 2:28:55 PM  
 by Kurt Decker

CONTRACT NO. 87791

REVISIONS	LEVEL	BY	DATE	DESCRIPTION

PERU MORRIS  
 OTTAWA MENDOTA  
 ILLINOIS

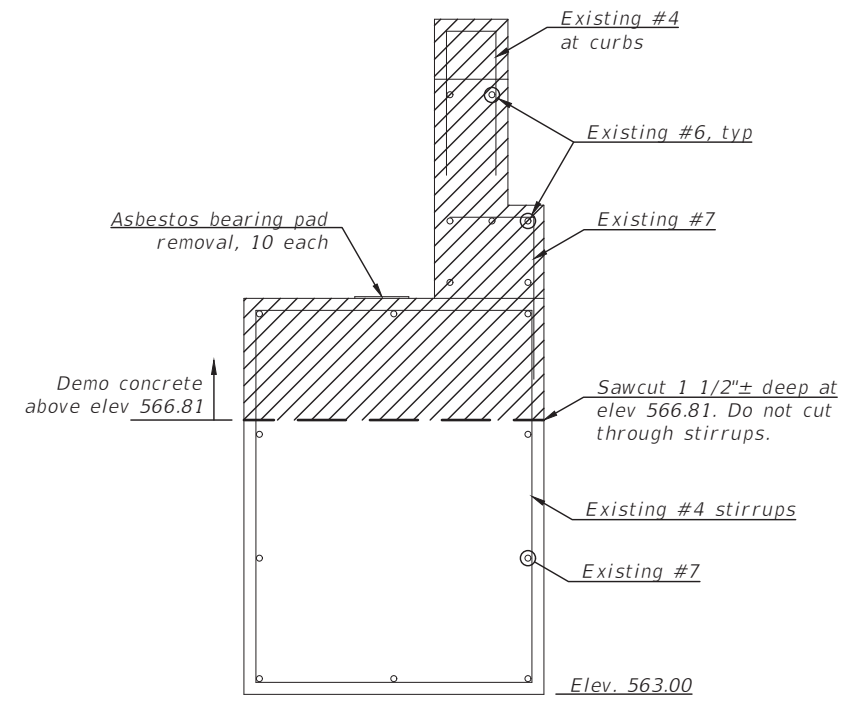
**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**STEEL RAILING TYPE SMX**  
**STR 032-5121 (E)(P)**

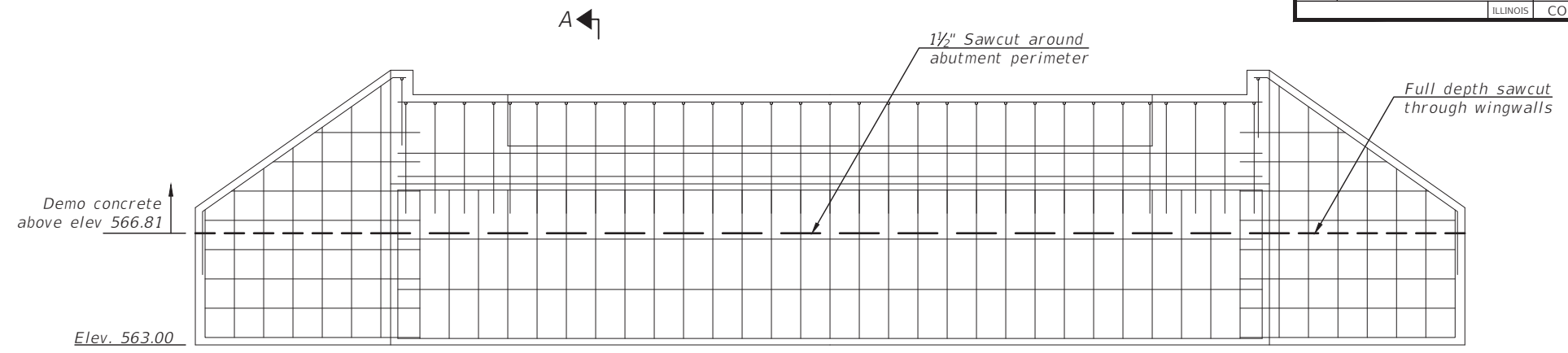
**BID SET**

CURRENT AS OF: 02/14/2024	SHEET 36
SCALE: AS NOTED	OF 51
FILE NO.: 111506.00 Y-	

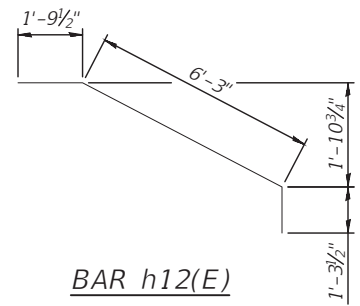




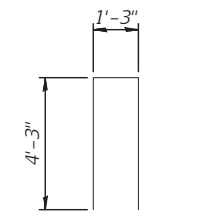
EXISTING SECTION ABUTMENT A-A & DEMO



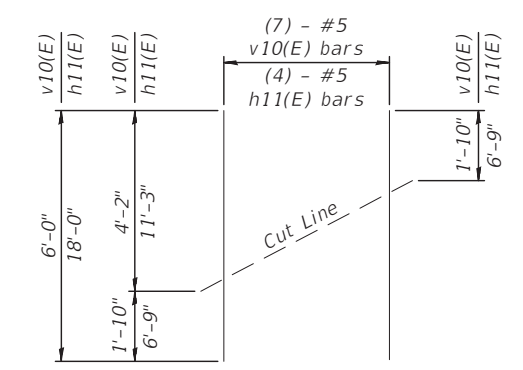
EXISTING ABUTMENT ELEVATION & DEMO



BAR h12(E)



BAR u10(E)

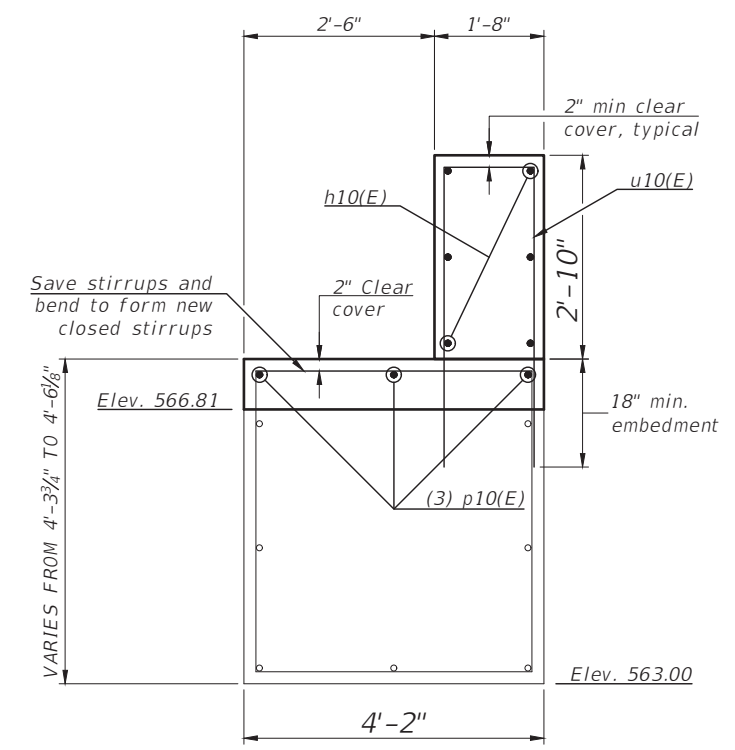


FIELD CUTTING DIAGRAM

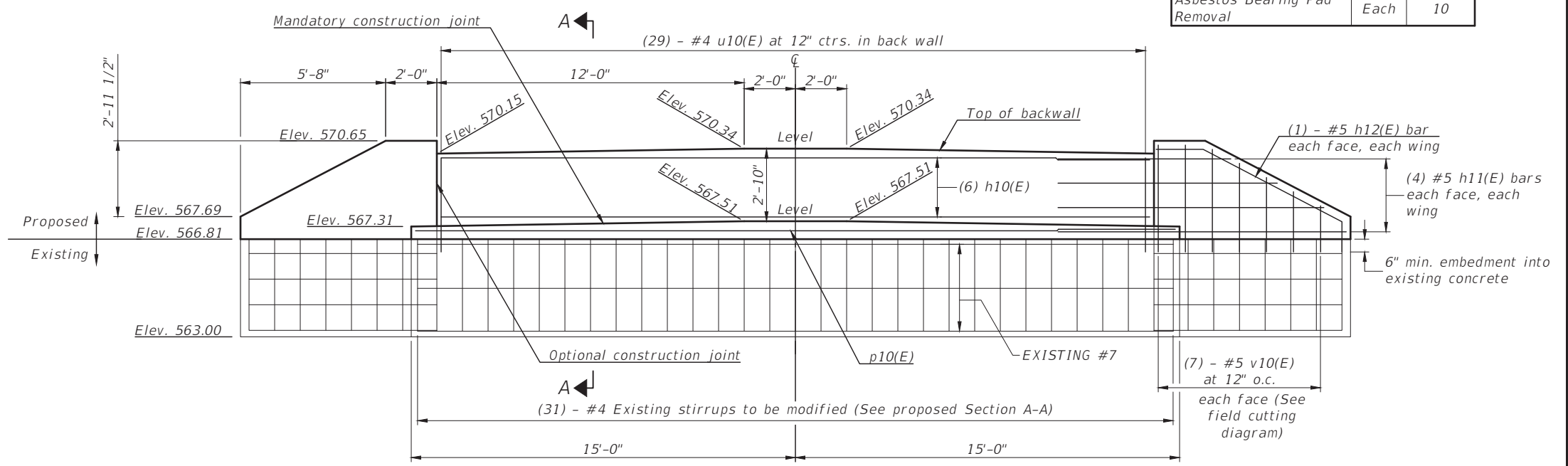
Order v10(E) and h11(E) bars full length. Cut as shown and use remainder of bars in opposite wing.

**NORTH ABUTMENT BILL OF MATERIAL**  
(For information only)

Bar	No.	Size	Length	Shape
h10(E)	6	#4	27'-8"	—
h11(E)	8	#5	18'-0"	—
h12(E)	4	#5	9'-4"	⌋
p10(E)	3	#7	29'-8"	—
u10(E)	29	#4	9'-9"	⌐
v10(E)	14	#5	6'-0"	—
Concrete Removal		Cu. Yd.	14.2	
Concrete Structures		Cu. Yd.	8.4	
Reinforcement Bars, Epoxy Coated		Pound	759	
Asbestos Bearing Pad Removal		Each	10	



PROPOSED SECTION ABUTMENT A-A



PROPOSED ABUTMENT ELEVATION

CHAMLIN & ASSOCIATES, INC. © 2024  
Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD - ABUT MOD NORTH.dwg  
Last Modified: Thursday, February 22, 2024 3:31:02 PM  
Plotted On: Monday, February 26, 2024 2:29:04 PM  
by Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	DESCRIPTION

PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

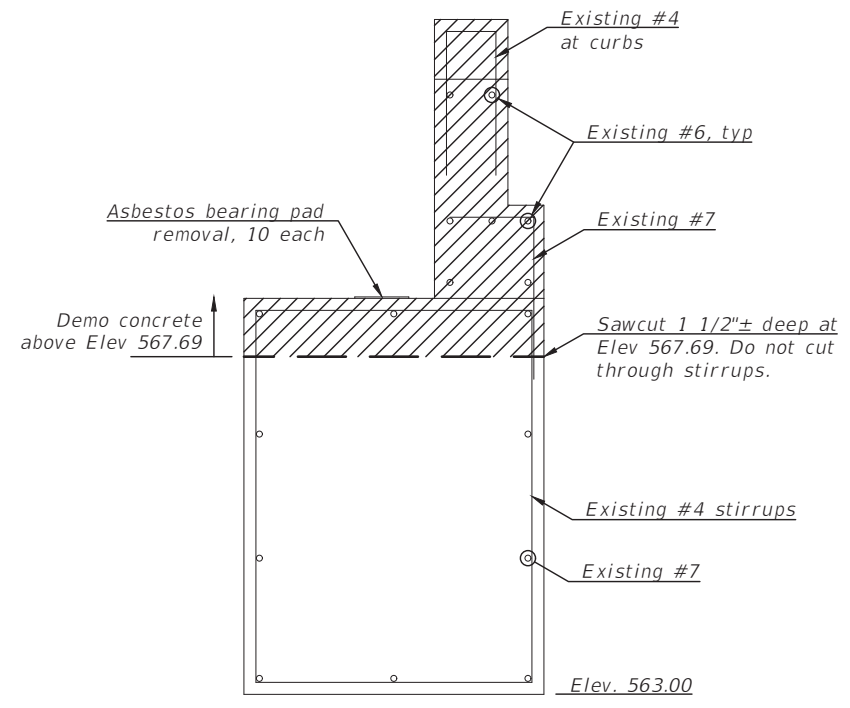
CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

NORTH ABUTMENT MODIFICATION PLAN  
STR 032-5121 (E)(P)

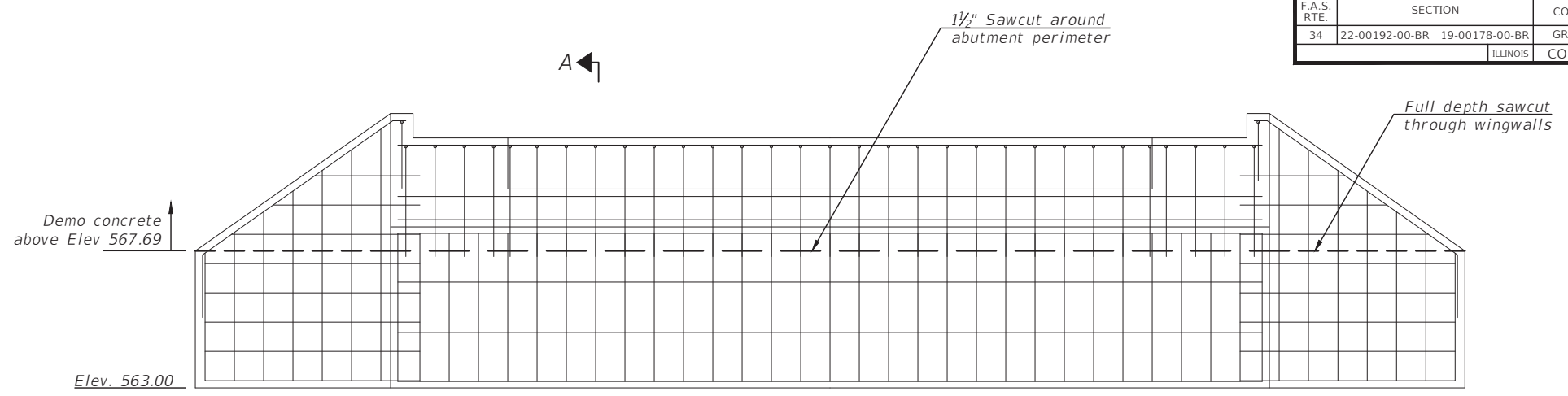
BID SET

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 37
FILE NO.: 111506.00 Y-	OF 51

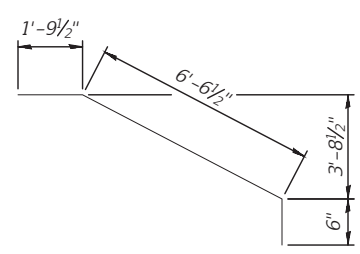




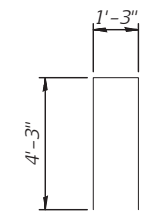
EXISTING SECTION ABUTMENT A-A & DEMO



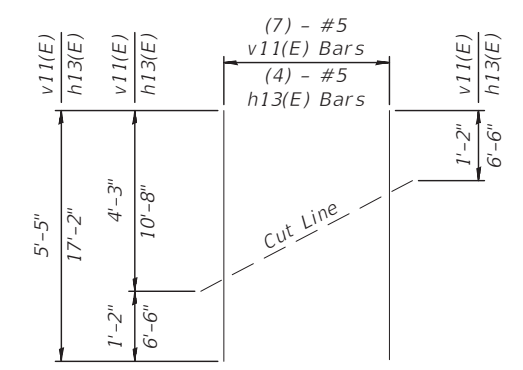
EXISTING ABUTMENT ELEVATION & DEMO



BAR h14(E)



BAR u10(E)

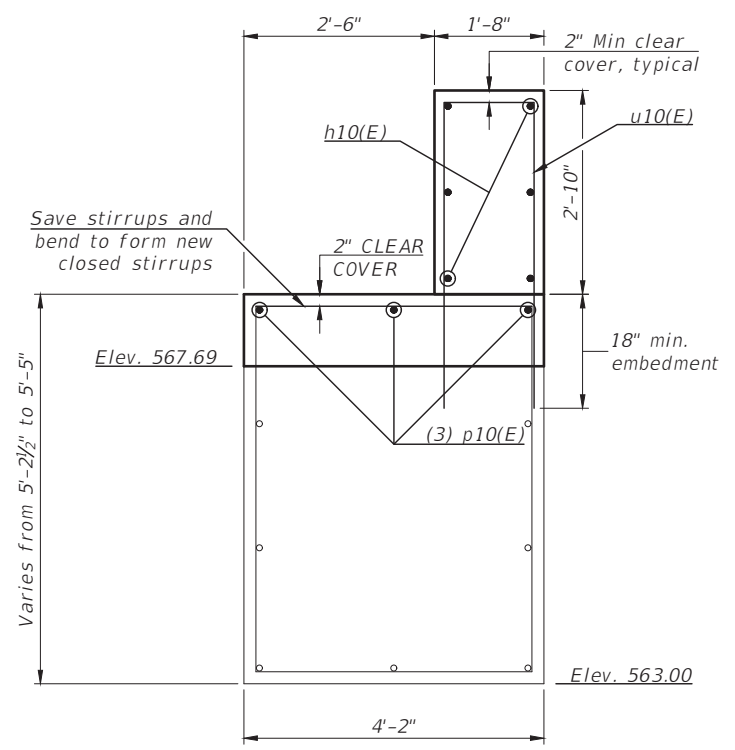


FIELD CUTTING DIAGRAM

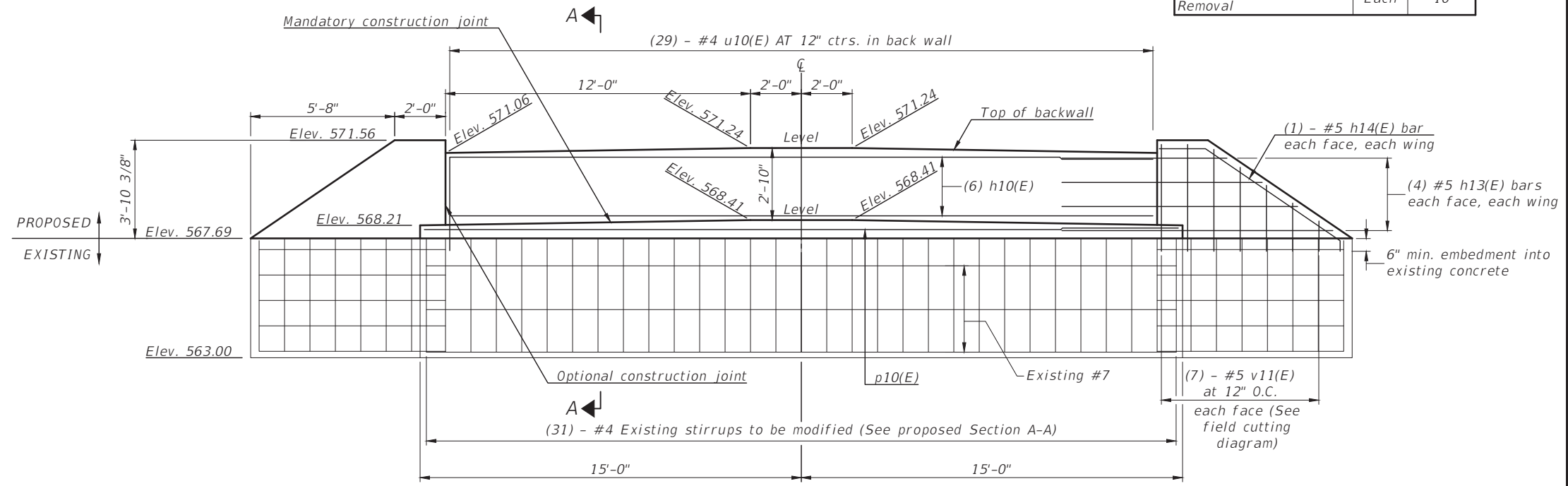
Order v11(E) and h13(E) bars full length. Cut as shown and use remainder of bars in opposite wing.

SOUTH ABUTMENT BILL OF MATERIAL  
(For information only)

Bar	No.	Size	Length	Shape
h10(E)	6	#4	27'-8"	—
h13(E)	8	#5	17'-2"	—
h14(E)	4	#5	8'-10"	⌋
p10(E)	3	#7	29'-8"	—
u10(E)	29	#4	9'-9"	⌊
v11(E)	14	#5	5'-5"	—
Concrete Removal		Cu. Yd.	9.5	
Concrete Structures		Cu. Yd.	8.4	
Reinforcement Bars, Epoxy Coated		Pound	741	
Asbestos Bearing Pad Removal		Each	10	



PROPOSED SECTION ABUTMENT A-A



PROPOSED ABUTMENT ELEVATION

CHAMLIN & ASSOCIATES, INC. © 2024. DRAWING NO. 1111506-00. GRUNDY CO BRACEVILLE RD. & CARBON HILL RD. - ABUT. MOD. SOUTH. LAST MODIFIED: THURSDAY, FEBRUARY 22, 2024, 3:34:17 PM. PLOTTED ON: MONDAY, FEBRUARY 26, 2024, 2:29:10 PM. BY: KURT DECKER.

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	DESCRIPTION

PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

SOUTH ABUTMENT MODIFICATION PLAN  
STR 032-5121 (E)(P)

BID SET

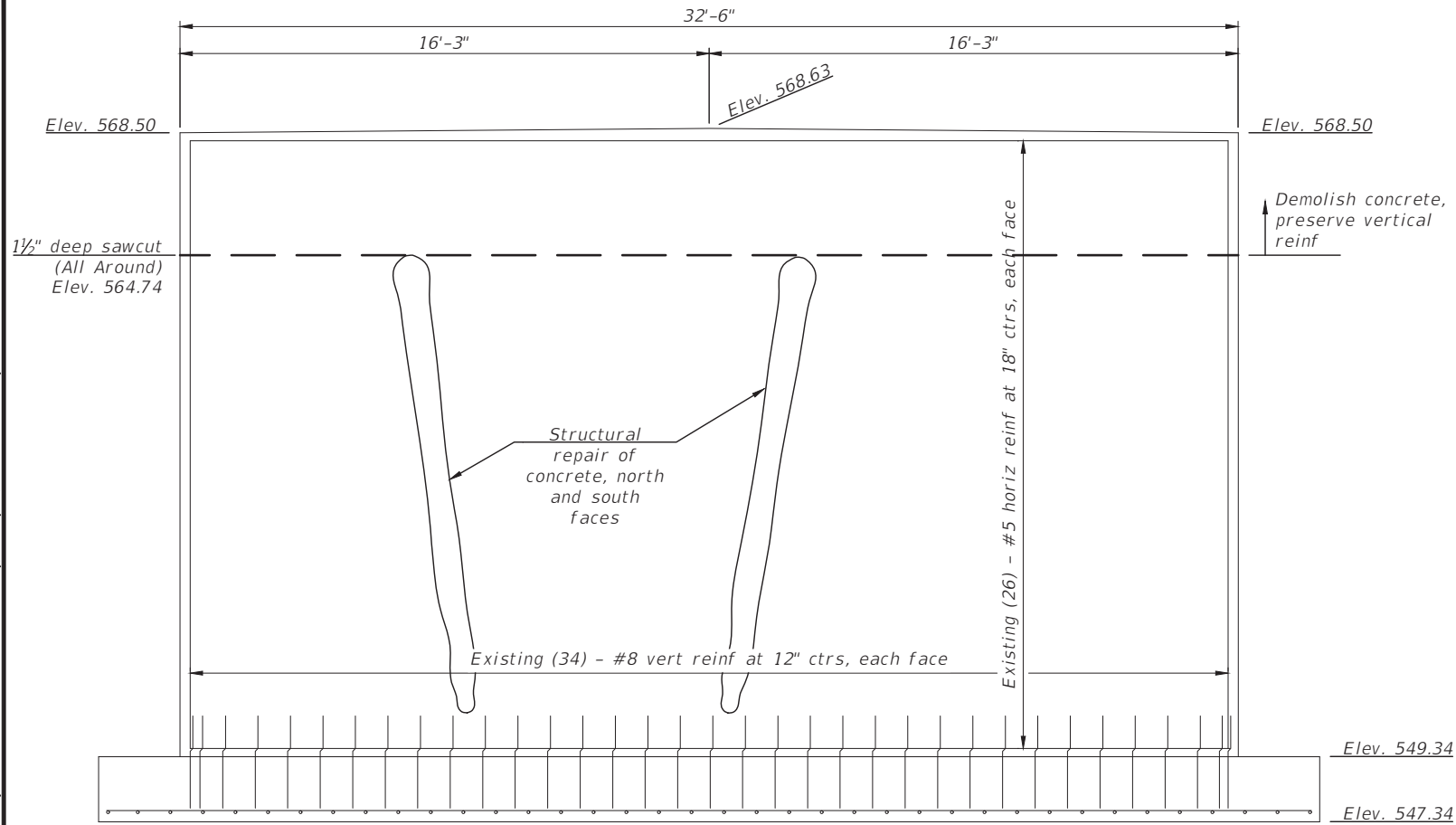
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SCALE: AS NOTED	SHEET 38
FILE NO.: 111506.00 Y-	OF 51



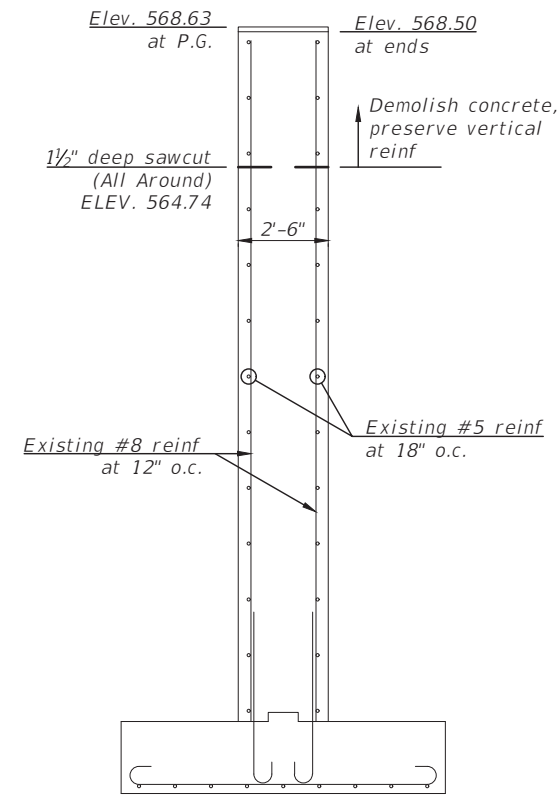
Note: Space reinforcement in cap to miss anchor bolts.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	39
ILLINOIS		CONTRACT NO. 87791		

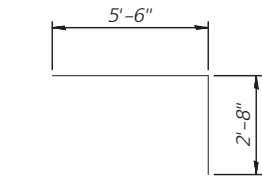
Sheet 9 of 15



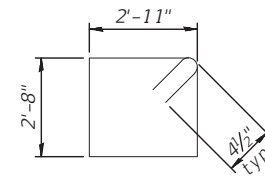
EXISTING PIER ELEVATION & DEMO



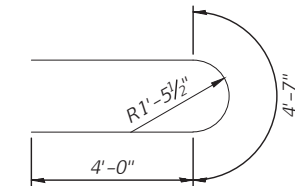
EXISTING PIER END VIEW & DEMO



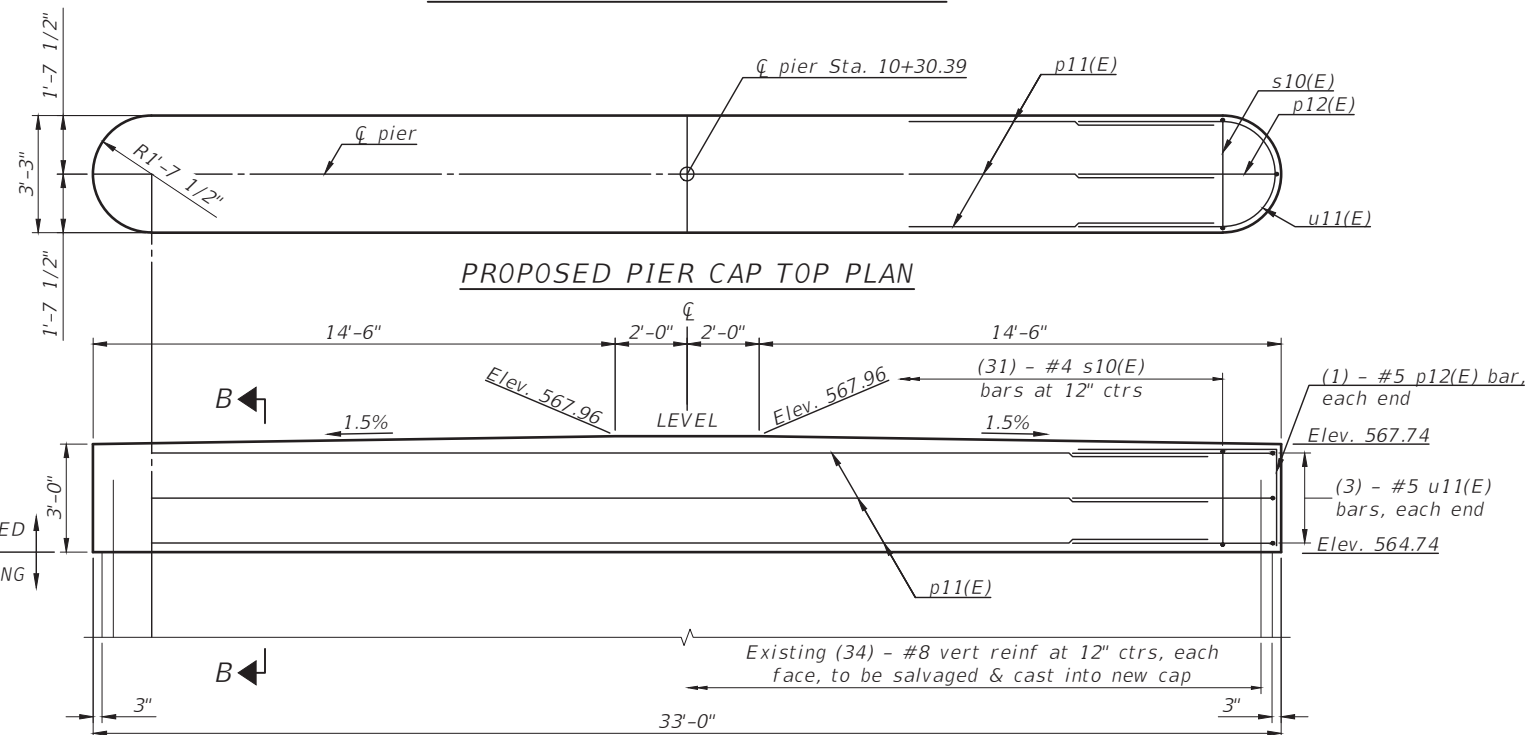
BAR p12(E)



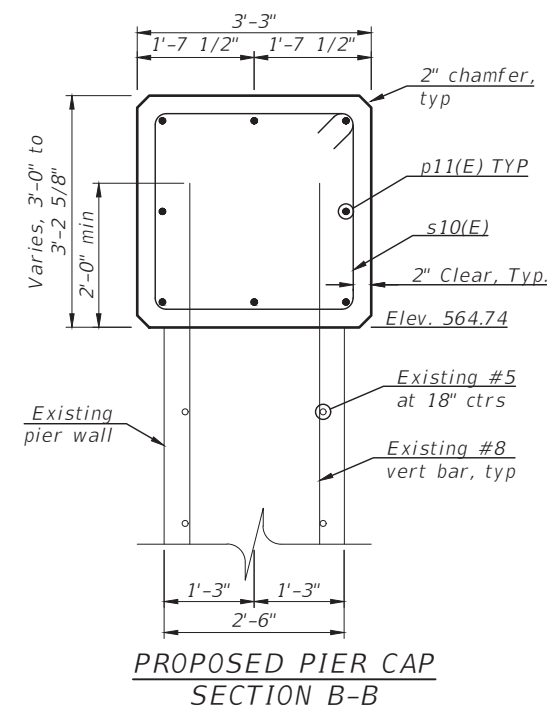
BAR s10(E)



BAR u11(E)



PROPOSED PIER CAP ELEVATION



PROPOSED PIER CAP SECTION B-B

BILL OF MATERIAL  
(For information only)

Bar	No.	Size	Length	Shape
p11(E)	8	#5	29'-9"	—
p12(E)	2	#5	6'-7"	U
s10(E)	31	#4	11'-11"	□
u11(E)	6	#5	12'-7"	U
Concrete Removal			Cu. Yd.	11.3
Concrete Structures			Cu. Yd.	12.1
Reinf Bars, Epoxy Coated			Pound	586
Structural Repair of Concrete (Depth Equal to or Less Than 5")			Sq. Ft.	100
Structural Repair of Concrete (Depth Greater Than 5")			Sq. Ft.	30

CHAMLIN & ASSOCIATES, INC. © 2024  
Drawing Name: H:\A\038\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD - PIER MOD.dwg - Last Modified: Thursday, February 22, 2024, 3:36:16 PM - Plotted On: Monday, February 26, 2024, 2:29:15 PM - by Kurt Becker

CONTRACT NO. 87791

DRAWN BY: KED	REVISIONS
CHECKED BY: DAH	LEVEL
DATE: 02/2023	BY
	DATE
	DESCRIPTION

PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

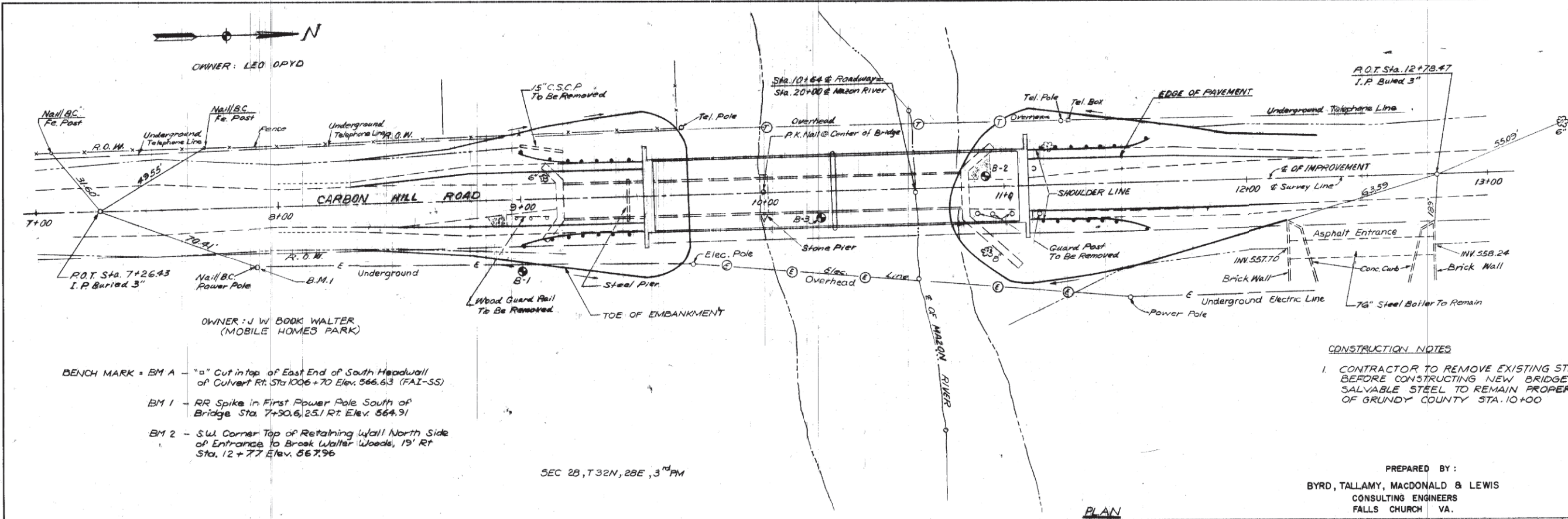
CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

PIER MODIFICATION PLAN  
STR 032-5121 (E)(P)

BID SET

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 39
FILE NO.: 111506.00 Y-	OF 51





OWNER: LEO D'PYD

OWNER: J W BOOK WALTER (MOBILE HOMES PARK)

BENCH MARK = BM A - "a" Cut in top of East End of South Headwall of Culvert Rt. Sta. 1006+70 Elev. 566.63 (FAI-SS)

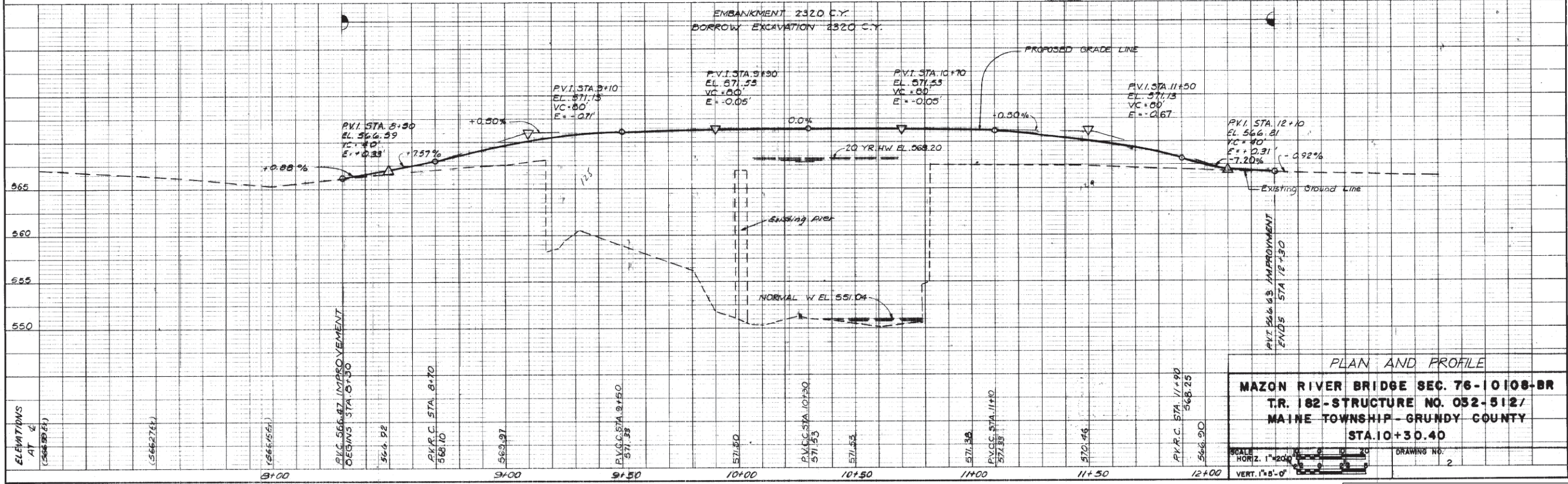
BM 1 - RR Spike in First Power Pole South of Bridge Sta. 7+30.6, 25.1 Rt. Elev. 564.91

BM 2 - S.W. Corner Top of Retaining Wall North Side of Entrance to Brook Walter Woods, 19' Rt. Sta. 12+77 Elev. 567.96

**CONSTRUCTION NOTES**

1. CONTRACTOR TO REMOVE EXISTING STRUCTURE BEFORE CONSTRUCTING NEW BRIDGE. SALVABLE STEEL TO REMAIN PROPERTY OF GRUNDY COUNTY STA. 10+00

PREPARED BY:  
 BYRD, TALLAMY, MACDONALD & LEWIS  
 CONSULTING ENGINEERS  
 FALLS CHURCH VA.



**PLAN AND PROFILE**

**MAZON RIVER BRIDGE SEC. 76-10108-BR**  
 T.R. 82-STRUCTURE NO. 032-512/  
 MAINE TOWNSHIP-GRUNDY COUNTY  
 STA. 10+30.40

SCALE: HORIZ. 1"=200'  
 VERT. 1"=5'-0"

DRAWING NO. 2

CHAMLIN & ASSOCIATES, INC. © 2024  
 Drawing Name: H:\A\08\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD - EX PLAN 01.dwg  
 Last Modified: Thursday, February 22, 2024 3:47:18 PM  
 Plotted On: Monday, February 26, 2024 2:29:23 PM  
 by Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	DESCRIPTION

**CA**  
 Chamlin & Associates

PERU MORRIS  
 OTTAWA MENDOTA  
 ILLINOIS

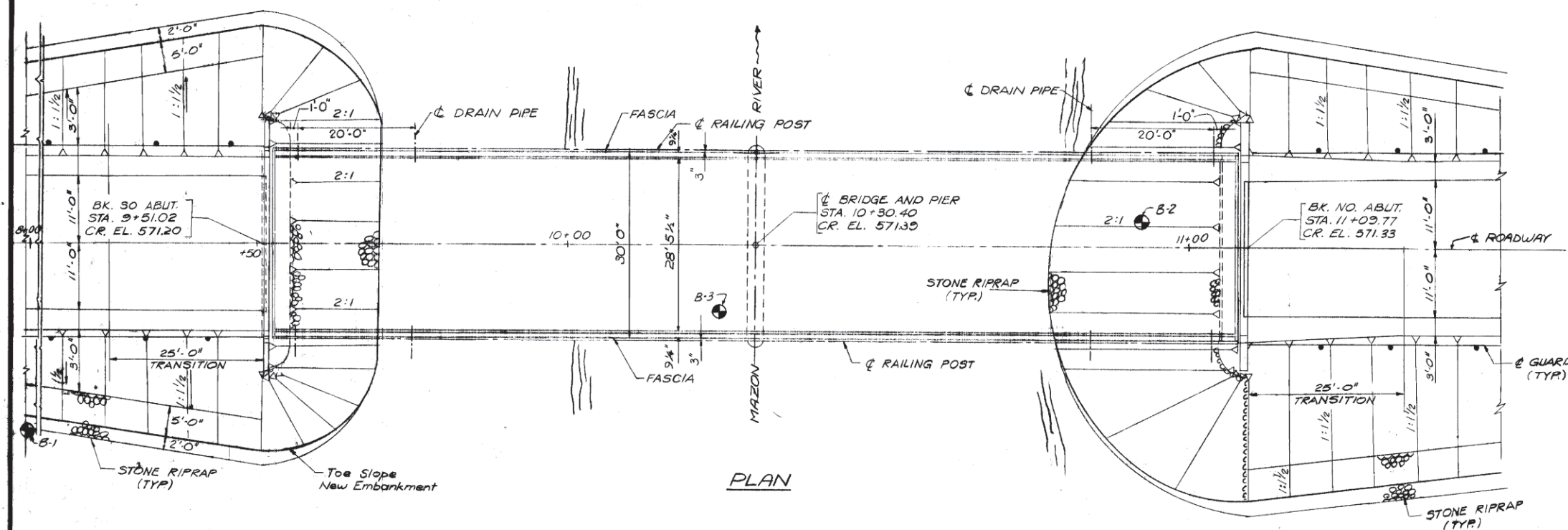
CH 34V SECTION 19-00178-00-BR  
 FAS 272 SECTION 22-00192-00-BR  
 GRUNDY COUNTY

EXISTING PLANS  
 STR 032-5121 (E)(P)

FOR INFORMATION ONLY

CURRENT AS OF: 02/14/2024	SHEET 40
SCALE: AS NOTED	OF 51
FILE NO.: 111506.00 Y-	





PLAN

- GENERAL NOTES**
1. CLASS X CONCRETE SHALL BE USED IN THE ABUTMENTS.
  2. CLASS A CONCRETE SHALL BE USED IN THE PIERS.
  3. THE CONTRACTOR SHALL DRIVE ONE TEST PILE AT EACH ABUTMENT IN A PERMANENT LOCATION AS DIRECTED BY THE ENGINEER IN CHARGE BEFORE ORDERING THE REMAINDER OF THE PILES.
  4. THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED BY THE STATE OF ILL. DEPT. OF TRANSPORTATION EFF. JULY 1, 1976, THE SUPPLEMENTAL SPECIFICATIONS EFFECTIVE FEBRUARY 4, 1977 AND SPECIAL PROVISIONS SHALL BE APPLIED TO THIS WORK.
  5. The top surface of the beams shall be finished in accordance with Article 505.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners.

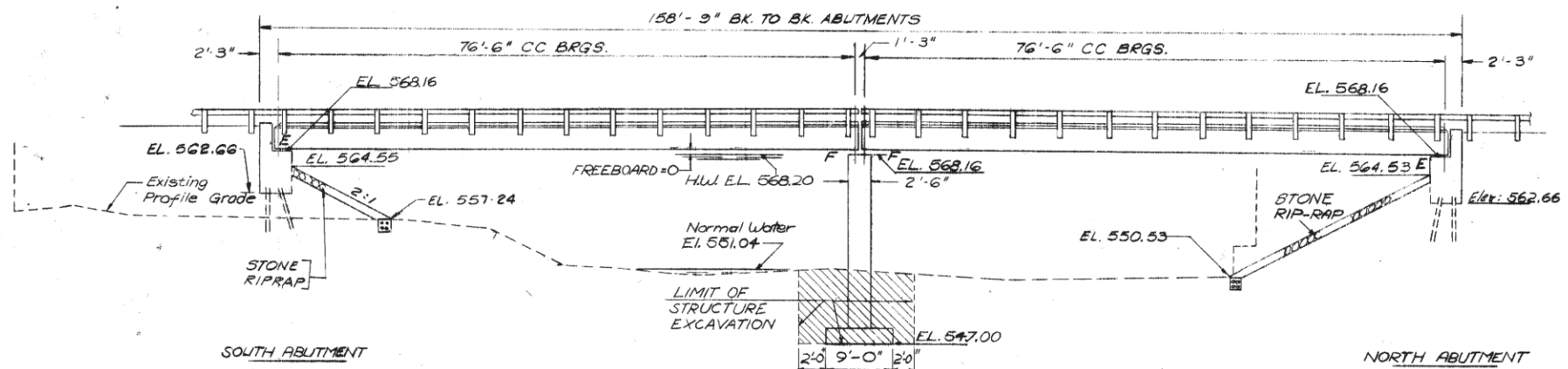
NOTE: LOCATE NAMEPLATE @ NORTHWEST CORNER OF BRIDGE

STATION 10+30.40  
MAZON RIVER  
SEC. 76-10108 BR BUILT 197-  
CARBON HILL RD.  
GRUNDY COUNTY  
LOADING HS 20  
STR. NO. 032-5121

LETTERING FOR NAMEPLATE (SEE STD. 2113)

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER	SUBSTR	TOTAL
WATERPROOFING MEMBRANE SYSTEM	S.Y.	529		529
BIT. CONC. SURFACE CRSE.-CLASSI-MIXTURED	TONS	112		112
PORTLAND CEMENT Mortar FAIRING COURSE	L.F.	500		
STRUCTURE EXCAVATION	C.Y.		92	92
CLASS A CONCRETE	C.Y.		817	817
CLASS X CONCRETE	C.Y.		70.0	70.0
REINFORCEMENT BARS	LBS.		10,880	10,880
PRECAST PRESTRESSED CONC. DECK BM.(33"DEPTH)	S.F.	4660		4660
METAL PLATE BRIDGE RAIL, CLASS A	L.F.	305.3		305.3
REMOVAL OF EXISTING STRUCTURE	EA.			1
NAME PLATE	EA.			1
FURNISHING STEEL PILES HP8x36	L.F.		444	444
DRIVING STEEL PILES HP8x36	L.F.		444	444
TEST PILES HP8x36	EA.		2	2
STONE RIP RAP	S.Y.		592	592
Preformed Joint Sealer (2 1/2")	L.F.	60		60
Structural Steel	Lbs.	2230		2230



ELEVATION

EXISTING STRUCTURE - SUPER STRUCTURE: 2 SPAN BOX TRUSS (2 CHANNEL BEAMS & 5 I BEAM STRINGERS) WITH 2" x 4" WOOD DECK AND ASPHALT OVERLAY.

SUBSTRUCTURE: ABUTMENTS ARE OF STONE BLOCK. PIERS: MAIN PIER IS OF STONE BLOCK. PIER AT STA. 9+44.4 IS OF I-BEAMS.

NOTE: CONTRACTOR TO REMOVE EXISTING STRUCTURE BEFORE CONSTRUCTING NEW BRIDGE. SALVABLE STEEL TO REMAIN PROPERTY OF GRUNDY CO.

DESIGN SPECIFICATIONS WATERWAY INFORMATION

AASHTO 1973 AND ALL APPLICABLE INTERIMS  
DRAINAGE AREA 228 SQ. MILES  
REQUIRED OPENING 2063 SQ. FT.  
PROVIDED OPENING 2063 SQ. FT.  
PRESENT OPENING 2111 SQ. FT.

DESIGNED	DATE	REVISIONS
M.S.D.	1-77	DATE BY DESCRIPTION
P.W.	2-77	
E.G.	2-77	
R.H.B.	3-77	

ROLAND H. BERGER  
3765  
REGISTERED STRUCTURAL ENGINEER  
OF ILLINOIS  
Roland H. Berger 3/31/77

**BYRD, TALLAMY, MacDONALD & LEWIS**  
CONSULTING ENGINEERS  
FALLS CHURCH, VIRGINIA

**MAZON RIVER BRIDGE SECTION 76-10108-BR**  
T.R. 182-STRUCTURE NO. 032-5121  
MAINE TOWNSHIP-GRUNDY COUNTY  
STA. 10+30.40  
SCALE NO SCALE DRAWING NO. 3

FOR INFORMATION ONLY

CHAMLIN & ASSOCIATES, INC. © 2024. Drawing Name: H:\AUG\1111506-00 GRUNDY CO BRACEVILLE RD. & CARBON HILL RD\ROAD PLANS\041-CARBON HILL RD - EX PLAN 02.dwg. Last Modified: Thursday, February 22, 2024 3:47:02 PM. Plotted On: Monday, February 26, 2024 2:29:30 PM. by Kurt Decker

CONTRACT NO. 87791

DRAWN BY	LEVEL	BY	DATE	REVISIONS
---				DATE BY DESCRIPTION
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**CA**  
PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS  
Chamlin & Associates

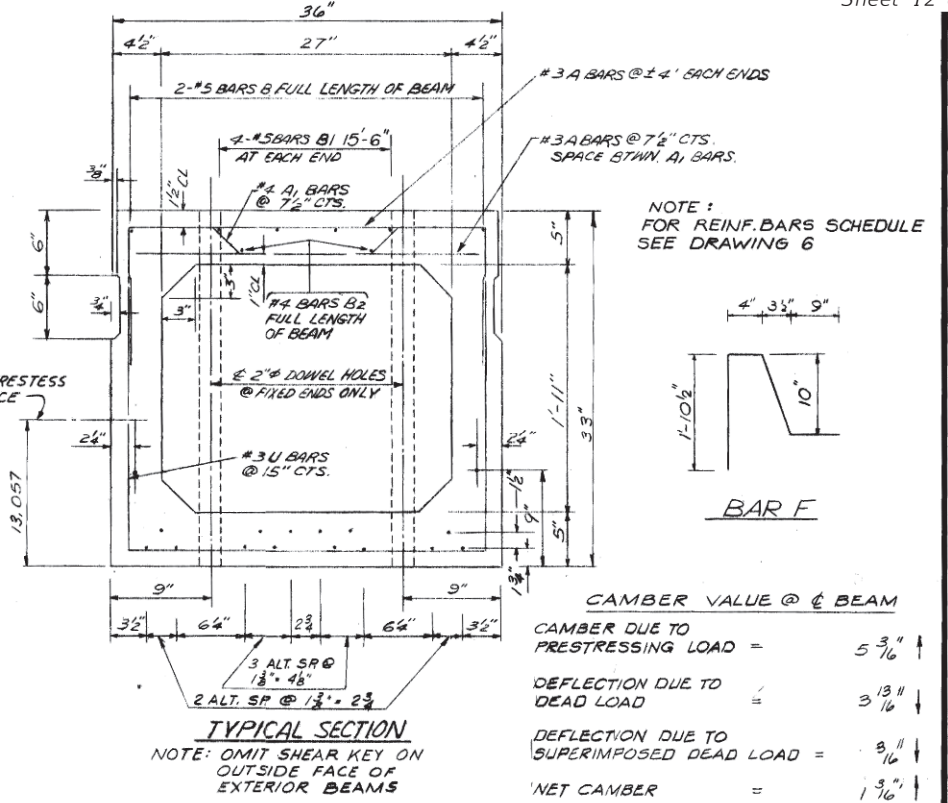
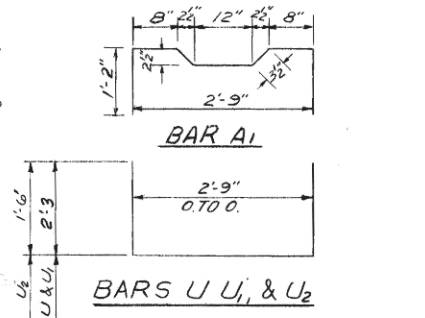
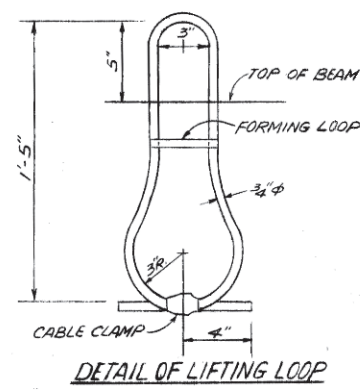
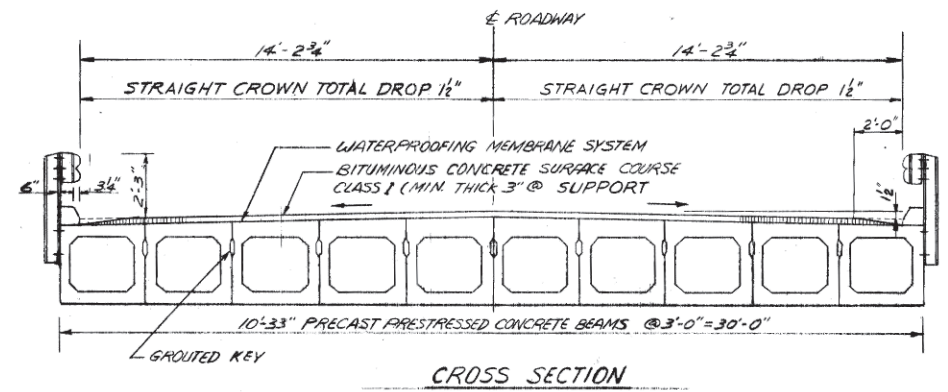
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FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

EXISTING PLANS  
STR 032-5121 (E)(P)

BID SET

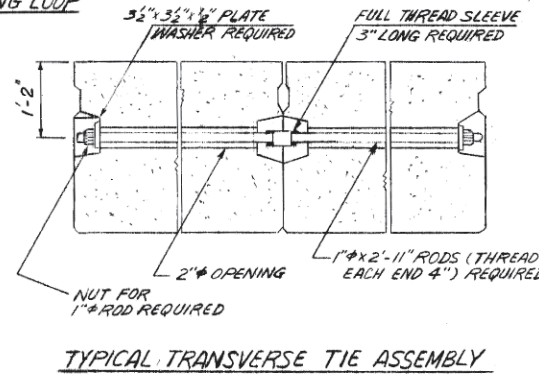
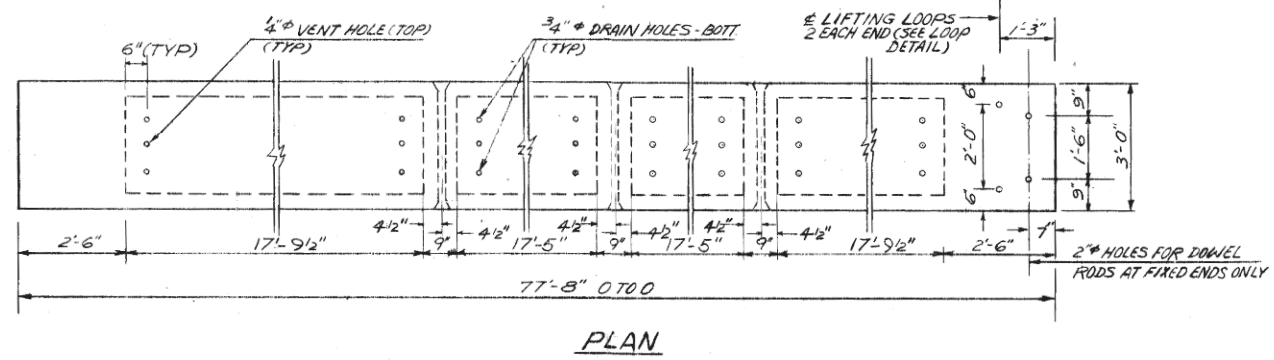
CURRENT AS OF: 02/14/2024	SHEET 41
SCALE: AS NOTED	OF 51
FILE NO.: 111506.00 Y-	





**CAMBER VALUE @ BEAM**

CAMBER DUE TO PRESTRESSING LOAD	=	5 3/16"
DEFLECTION DUE TO DEAD LOAD	=	3 1/16"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD	=	9 1/16"
NET CAMBER	=	1 3/16"



**DESIGN STRESSES**

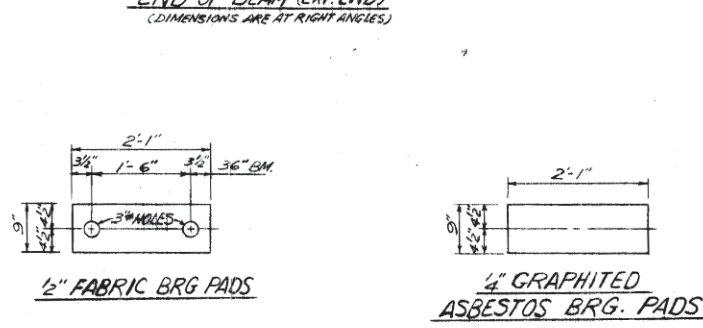
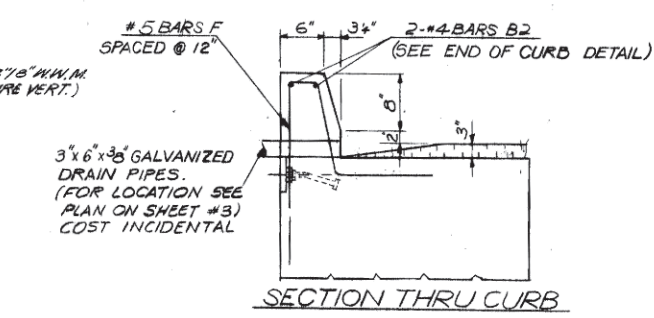
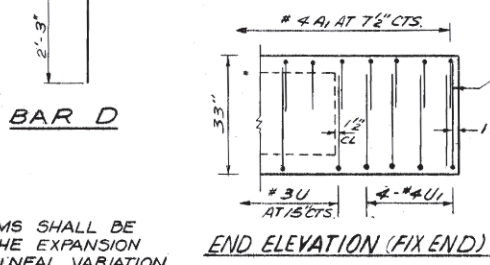
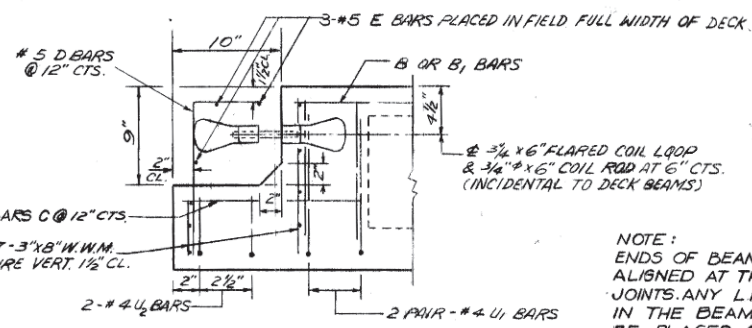
$f_c = 5000$  PSI  
 $f_{ci} = 4000$  PSI (PRESTRESSED BEAM AT RELEASE)

$f_s = 20000$  PSI (REINFORCEMENT BARS)  
 $f'_s = 270000$  PSI (PRESTRESSED STRANDS)  
 $f_{s1} = 180000$  PSI (INITIAL STRESS IN STRANDS BEFORE LOSSES)  
 $n = 9$  CLASS X CONC.  
AASHTO LOADING TYPE - HS 20-44  
16 - 7 WIRE ROUND STRESS RELIEVED 1/2" STRANDS STRESSED TO 29,300 LBS EACH.  
8 Strands 3/4" up, 6 Strands 3/4" up, 2 Strands 9" up.

**BILL OF MATERIALS**

ITEM	UNIT	QUANTITY
PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ. FT.	4660
PorFlond Cement Mortar FAIRING COURSE *	L.F.T.	500

\* SEE SPECIAL PROVISION



**NOTES**

- PRESTRESSING STEEL SHALL BE NON-GALVANIZED HIGH STRENGTH, STRESS-RELIEVED 7-WIRE STRAND, GRADE 270. THE NOMINAL DIAMETER SHALL BE 7/8" AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.155 SQ IN. LIFTING LOOPS SHALL BE 3/4" DIAMETER, 6 X 25 CLASS WIRE ROPE WITH FIBER CORE AND SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH OF 46000 LBS.
- THE 1" RODS IN THE TRANSVERSE TIE ASSEMBLY SHALL BE TIGHTENED TO A SNUG FIT AND THE THREADS SET. POCKETS THAT RECEIVE TRANSVERSE TIE BAR ON OUTSIDE SHALL BE FILLED WITH GROUT AFTER TRANSVERSE TIE ASSEMBLY IS IN PLACE.
- LONGITUDINAL SHEAR KEYS SHALL BE PACKED WITH A VERY DRY MIX OF 2:1 SAND AND P.C. MORTAR. AFTER BEAMS HAVE BEEN ERECTED, HOLES FOR THE DOWEL ANCHORS SHALL BE DRILLED INTO THE SUBSTRUCTURE AND THE ANCHOR DOWELS SHALL BE GROUTED IN PLACE.

COST OF REINFORCEMENT AND ACCESSORIES CAST INTO THE BEAM, OF BEARING PADS, OF GROUTING LONGITUDINAL SHEAR KEYS, CONCRETE CURB, REINFORCING BARS AND DRAIN PIPES, IS INCLUDED IN UNIT PRICE BID FOR "PRECAST PRESTRESSED CONC. DECK BEAM"

DESIGNED	DATE	REVISIONS
E.G.	1-77	
D.S.	2-77	
E.G.	2-77	
R.H.B.	3-77	

ROLAND H. BEYER  
3766  
REGISTERED  
STRUCTURAL  
ENGINEER  
OF  
ILLINOIS

Robert H. Beyer 3/31/77

**BYRD, TALLAMY, MacDONALD & LEWIS**  
CONSULTING ENGINEERS  
FALLS CHURCH, VIRGINIA

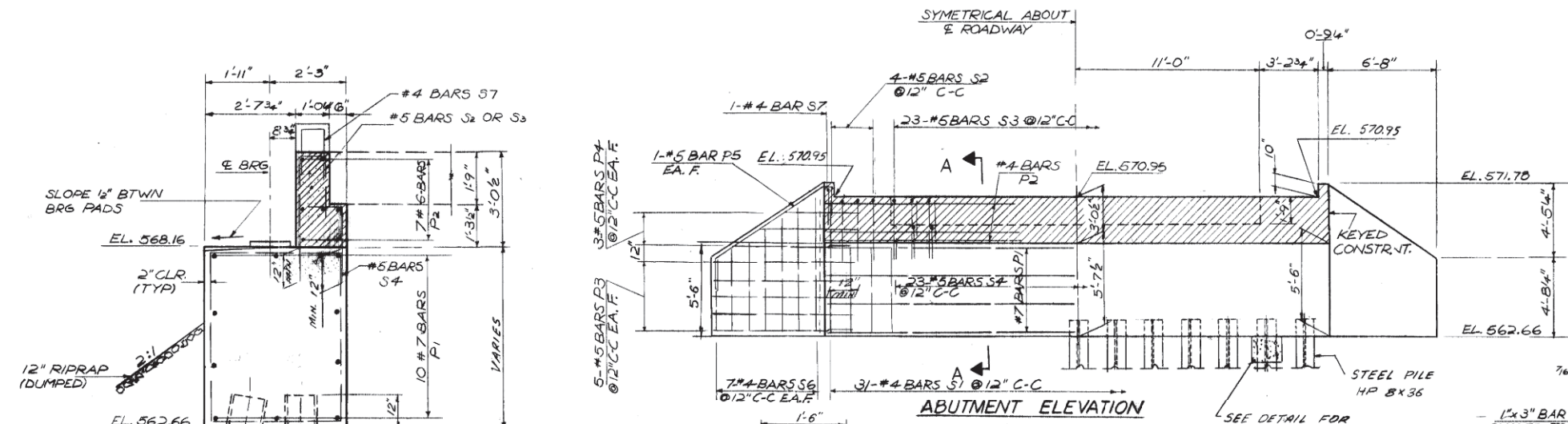
**SUPERSTRUCTURE**

**MAZON RIVER BRIDGE SECTION 76-10108-BR**  
T.R. 182-STRUCTURE NO. 032-512/  
MAINE TOWNSHIP-GRUNDY COUNTY  
STA. 10+30.40

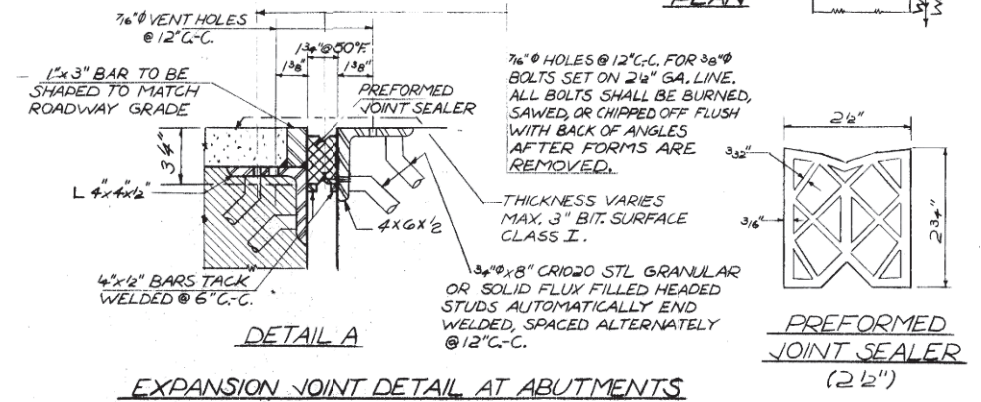
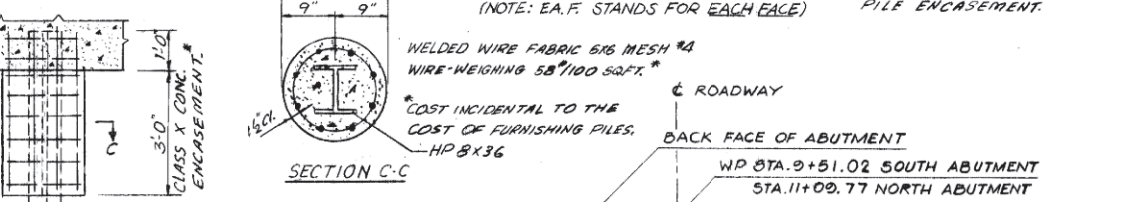
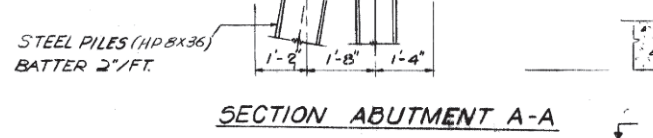
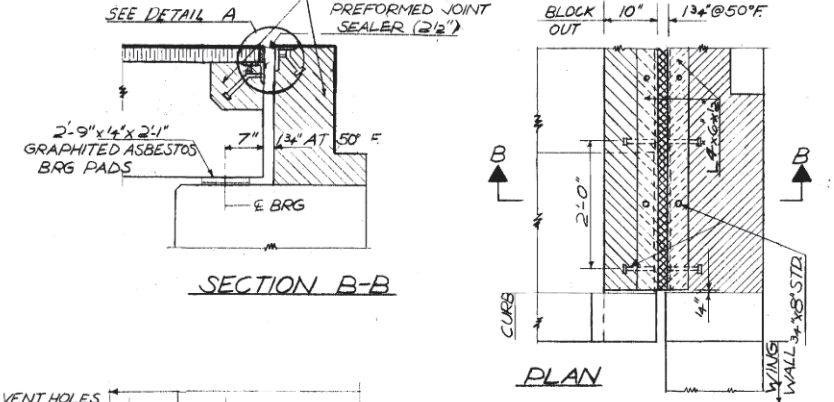
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DRAWING NO. 4

CHAMLIN & ASSOCIATES, INC. © 2024  
Drawing Name: H:\A\03\1111506-00 GRUNDY CO BRIDGE PLANS\042-512-CARBON HILL RD - EX PLAN 03.dwg  
Last Modified: Thursday, February 22, 2024 3:46:46 PM  
Plotted On: Monday, February 26, 2024 2:29:41 PM  
by: Kurt Decker



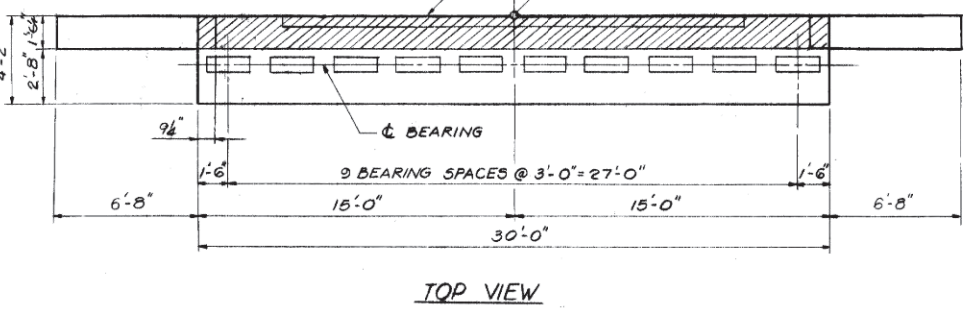


NOTE:  
HATCHED AREAS TO BE POURED AFTER BEAMS HAVE BEEN ERECTED AND JOINTS GROUTED. SEE END OF BEAM DETAIL ON SHEET 4 FOR REINF.



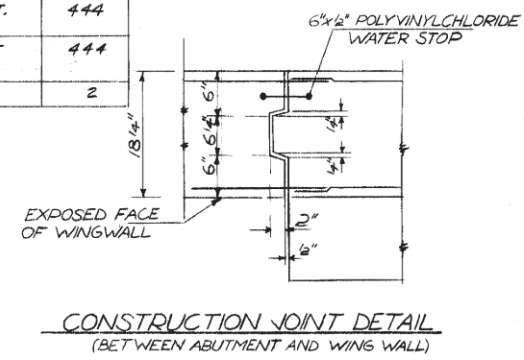
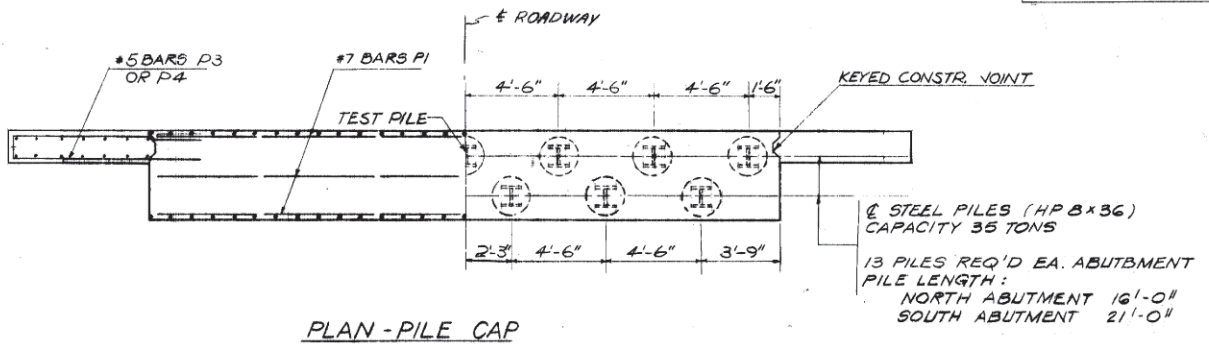
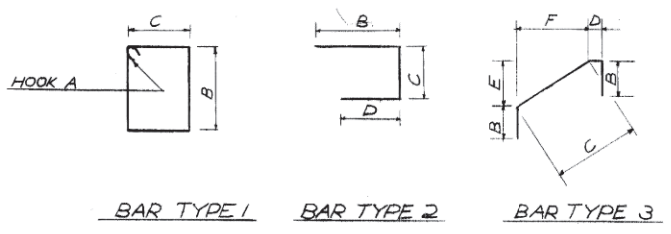
REINFORCING BAR SCHEDULE

NOS. OF BARS	N. ABUT.	S. ABUT.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	REMARKS
10	10	7	29'-8"	P1	STR						
7	7	6	29'-8"	P2	STR						
20	20	5	8'-0"	P3	STR						
12	12	5	3'-8"	P4	STR						3 EA. VARIES BY 18"
4	4	5	12'-3"	P5	3		2'-0"	7'-11"	0'-7"		E=4'-5", F=6'-7 1/2"
31	31	4	19'-0"	S1	1	0'-6"		5'-2"	3'-0"		
8	8	5	8'-8"	S2	2		3'-9"	1'-2"	3'-9"		
23	23	5	6'-11"	S3	2		3'-9"	0'-8"	2'-6"		
23	23	5	3'-5"	S4	2		2'-3"	1'-2"			
28	28	4	4'-4"	S5	STR						4 EA. VARIES BY 8"
2	2	4	5'-2"	S7	2		2'-0"	1'-2"	2'-0"		



BILL OF MATERIALS

ITEM	UNIT	QTY.
CLASS 'X' CONCRETE	C.Y.	70.0
REINFORCEMENT BARS	LBS.	3890
FURNISHING STEEL PILES (HP 8x36)	L.F.T.	444
DRIVING STEEL PILES (HP 8x36)	L.F.T.	444
TEST PILES (HP 8x36)	EA.	2



NOTE: PILE LENGTHS ARE ESTIMATED. ACTUAL LENGTHS REQ'D SHALL BE DETERMINED BY CONTRACTOR HAVING DRIVEN A TEST PILE AT EACH ABUTMENT LOCATION.

DESIGNED	DATE	REVISIONS
M.S.D.	1-77	
DRAWN	G.I.S.	2-77
CHECKED	M.S.D.	2-77
APPROVED	R.H.B.	3-77

**ROLAND H. BERGER**  
3766  
REGISTERED STRUCTURAL ENGINEER  
OF ILLINOIS  
*Roland H. Berger 3/31/21*

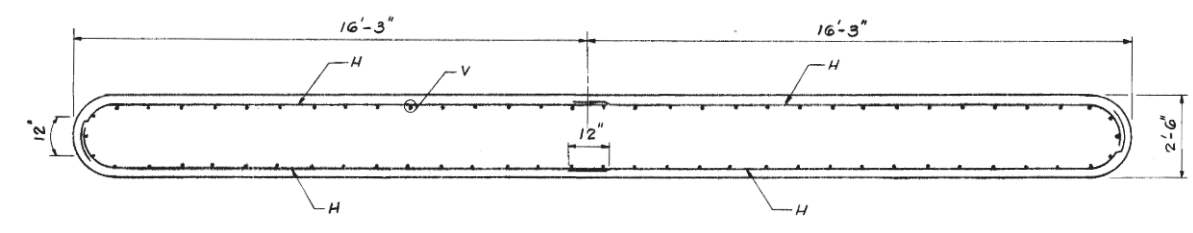
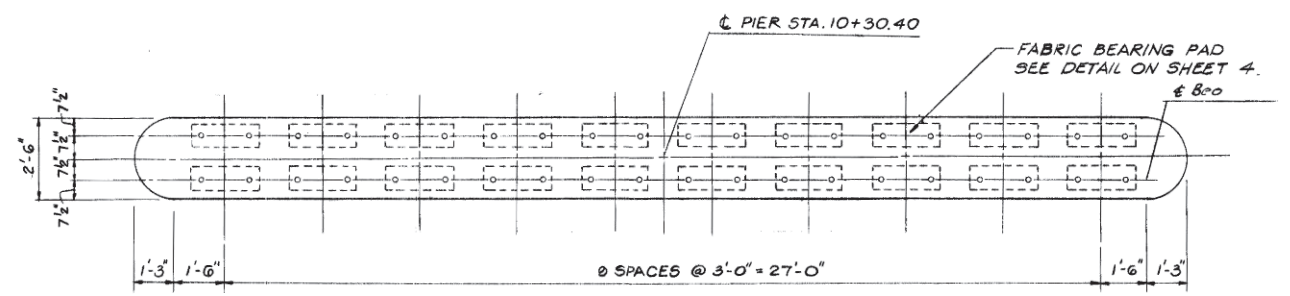
**BYRD, TALLAMY, MacDONALD & LEWIS**  
CONSULTING ENGINEERS  
FALLS CHURCH, VIRGINIA

**NORTH AND SOUTH ABUTMENTS**  
MAZON RIVER BRIDGE SECTION 76-10108-BR  
T.R. 182-STRUCTURE NO. 032-5121  
MAINE TOWNSHIP-GRUNDY COUNTY  
STA. 10+30.40  
SCALE: NO SCALE  
DRAWING NO. 5

FOR INFORMATION ONLY

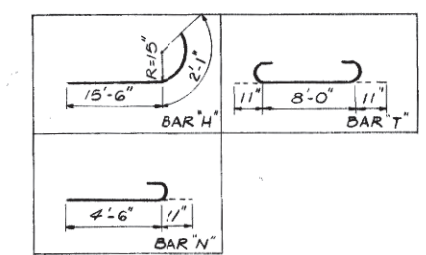
CHAMLIN & ASSOCIATES, INC. © 2024. Drawing Name: H:\A\03\1111506\1111506-00 GRUNDY CO BRIDGE PLANS\043-CARBON HILL RD - EX PLAN 04.dwg. Last Modified: Thursday, February 22, 2024 2:29:50 PM. Plotted On: Monday, February 26, 2024 3:46:23 PM. Plotted by: Kurt Decker





SECTION B-B

BAR TYPES

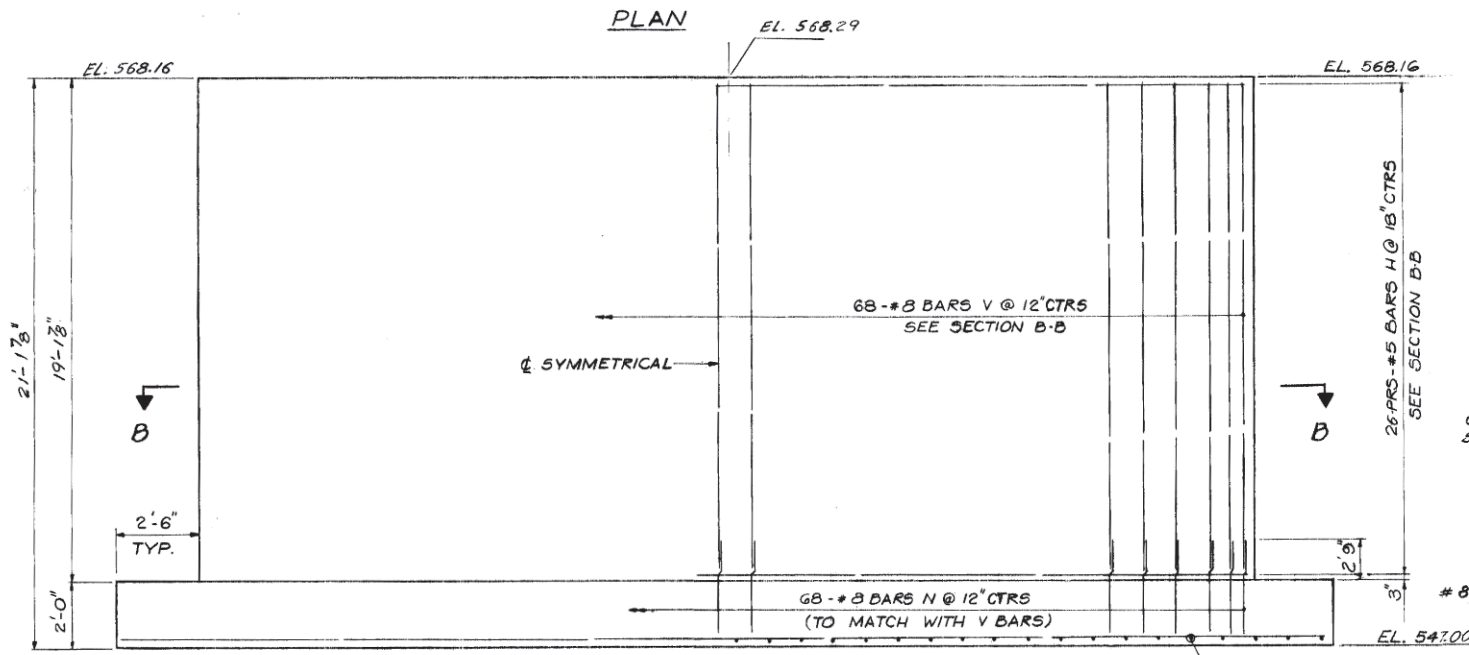


REINFORCEMENT BAR SCHEDULE (PIER)

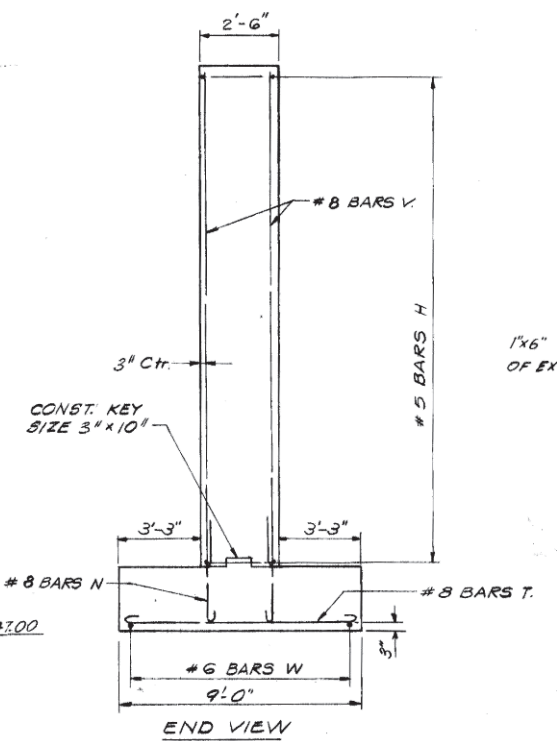
BAR	SIZE	LENGTH	SHAPE	TOTAL NUMBER
H	5	17'-7"	U	52
N	5	5'-5"	U	68
T	8	10'-6"	U	38
V	8	18'-11"	—	68
W	6	37'-0"	—	10

\*RE-BAR SCHEDULE

BAR	NO.	SIZE	LENGTH	SHAPE
A	5200	#3	1'-4"	STRAIGHT
A1	2500	#4	4'-3"	U
B	40	#5	77'-4"	STRAIGHT
B1	160	#5	15'-6"	"
B2	40	#4	77'-4"	"
C	80	#4	0'-8"	"
D	80	#5	2'-8"	U
E	6	#5	29'-8"	STRAIGHT
U1	1223	#3	7'-3"	U
U1	120	#4	7'-3"	U
F	308	#5	5'-10"	U
U2	20	#4	5'-9"	U

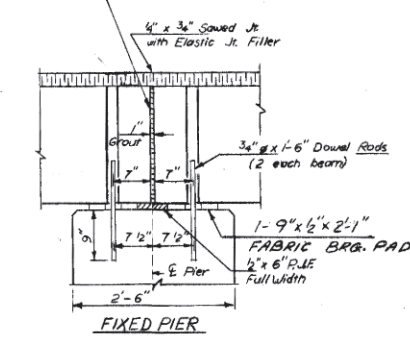


ELEVATION



END VIEW

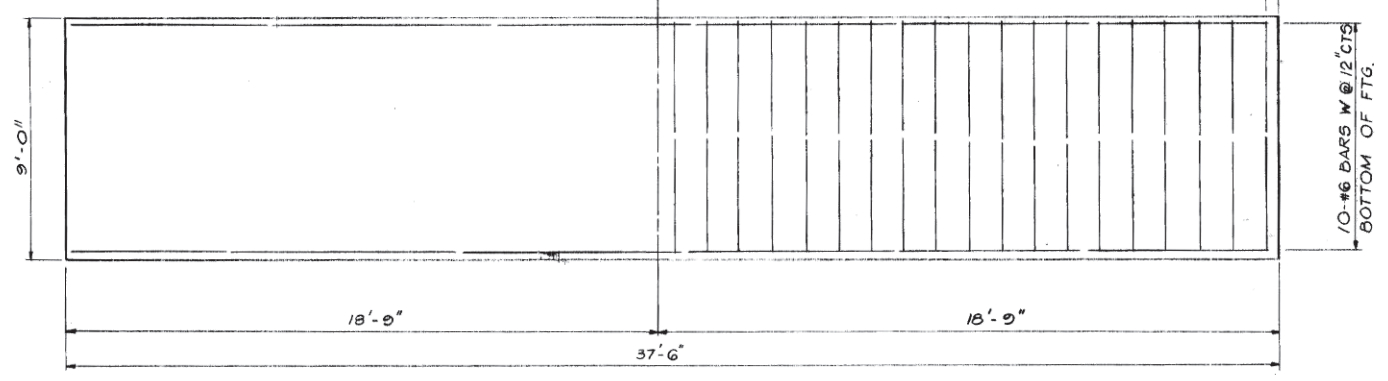
1"x6" R.I.F. ALONG OUTSIDE OF EXTERIOR BEAMS



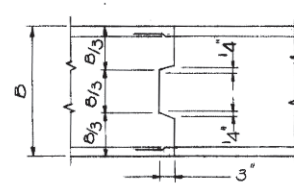
NOTE: 1" JOINT SHALL BE PACKED WITH A VERY DRY MIX OF 2:1 SAND AND RC MORTAR BETWEEN R.I.F.

BILL OF MATERIAL

ITEM	UNIT	QTY.
STRUCTURE EXCAVATION	C.Y.	92
CLASS A CONCRETE	C.Y.	81.7
REINFORCEMENT BARS	LBS.	6990



FOOTING PLAN



CONSTRUCTION KEY DETAIL

NOTES:  
1- EXCEPTIONAL CARE SHALL BE TAKEN TO ASSURE A DRY SURFACE BEFORE POURING CONCRETE FOR FOOTING. THE FINAL REMOVAL OF FOUNDATION MATERIAL SHALL BE MADE JUST PRIOR TO PLACING THE FOOTING CONCRETE. SEE SECTION 503.13 STANDARD SPECIFICATIONS.  
2- MAXIMUM FOOTING PRESSURE IS 6.0 KIPS PER SQUARE FOOT.

DESIGNED	DATE	REVISIONS		
		DATE	BY	DESCRIPTION
M.S.D.	1-77			
DRAWN	P.T.W.	2-77		
CHECKED	M.S.D.	2-77		
APPROVED	R.H.B.	3-77		

ROLAND H. BERGER  
REGISTERED STRUCTURAL ENGINEER  
OF ILLINOIS  
*Roland H. Berger* 3/31/77

**BYRD, TALLAMY, MacDONALD & LEWIS**  
CONSULTING ENGINEERS  
FALLS CHURCH, VIRGINIA

**Mazon River Bridge Section 76-10108-BR**  
T.R. 182-STRUCTURE NO. 032-5121  
MAINE TOWNSHIP-GRUNDY COUNTY  
STA. 10 + 30.40

SCALE: NO SCALE DRAWING NO. 6

FOR INFORMATION ONLY

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Drawing Name: H:\A\03\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\ROAD\PLANS\04-CARBON HILL RD - EX PLAN 05.dwg Last Modified: Thursday, February 26, 2024 2:30:01 PM Plotted On: Monday, February 26, 2024 2:30:01 PM by Kurt Decker

CONTRACT NO. 87791

DRAWN BY	LEVEL	BY	DATE	REVISIONS	
				DESCRIPTION	
---					
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**CA**  
CHAMLIN & ASSOCIATES  
PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

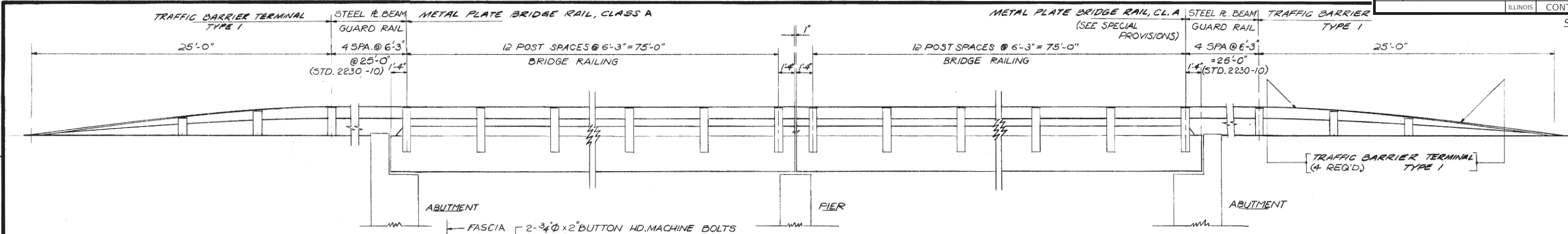
CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

EXISTING PLANS  
STR 032-5121 (E)(P)

BID SET

CURRENT AS OF: 02/14/2024	SHEET 44
SCALE: AS NOTED	OF 51
FILE NO.: 111506.00 Y-	





ELEVATION  
(SHOWING OUTSIDE FACE OF RAILING)

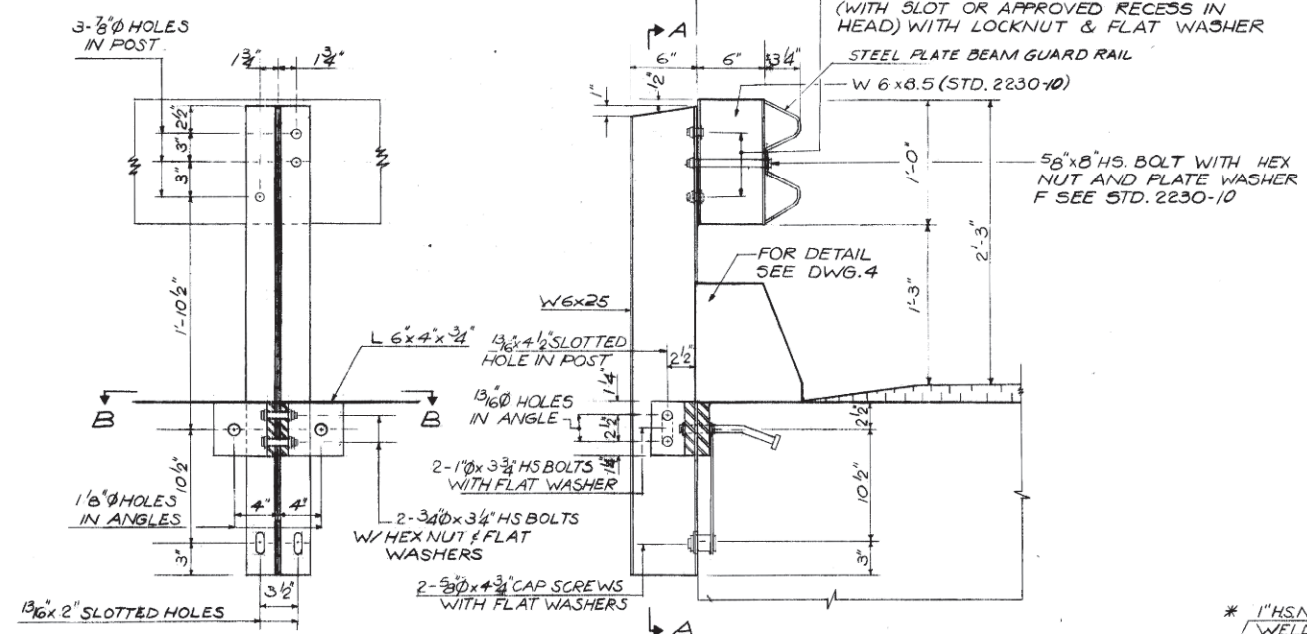
BILL OF MATERIALS

ITEM	UNIT	QUANTITY
STEEL PLATE BEAM GUARD RAIL SINGLE RAIL MODIFIED	L.F.	100
TRAFFIC BARRIER TERMINAL, TYPE I	EACH	4
* METAL PLATE BRIDGE RAIL, CLASS A	L.F.	306

\* SEE SPECIAL PROVISIONS

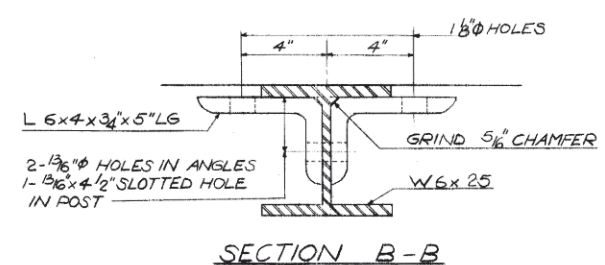
NOTES:

1. ALL STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-188 EXCEPT POSTS SHALL CONFORM TO AASHTO M-188.
2. BOLTS, CAP SCREWS, AND NUTS SHALL CONFORM TO THE REQUIREMENT OF ASTM DESIGNATION A-307 EXCEPT FOR HIGH STRENGTH BOLTS, NUTS AND WASHERS NOTED WHICH SHALL CONFORM TO AASHTO M-164.
3. ALL BOLTS NUTS CAP SCREWS & LOCK WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-232.
4. ALL POSTS, RAILING, RAIL SPLICES, ANCHOR DEVICES AND ANGLES SHALL BE GALVANIZED AFTER SHOP FABRICATION IN ACCORDANCE WITH AASHTO M-111 & ASTM A-385. GALVANIZED RAIL SHALL NOT BE PAINTED.
5. ALL FIELD DRILLED HOLES SHALL BE COATED WITH APPROVED ZINC RICH PAINT BEFORE ERECTION.
6. THE LOWER PORTION OF THE POST FLANGE IN CONTACT WITH CONCRETE SHALL RECEIVE TWO COATS OF ASPHALT PAINT CONFORMING TO SECTION 714.08 TYPE B OR PLACE 3/8" FABRIC BEARING PAD BETWEEN THE POST & CONCRETE.
7. THE 3/4" HIGH STRENGTH BOLTS USED TO CONNECT THE 6x4x3/4 ANGLES TO THE POST SHALL BE TIGHTENED IN ACCORDANCE WITH ARTICLE 507.04(9)(3) OF THE STANDARD SPECIFICATIONS. THE 1" HIGH STRENGTH BOLTS CONNECTING THE ANGLES TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/2 TURN.

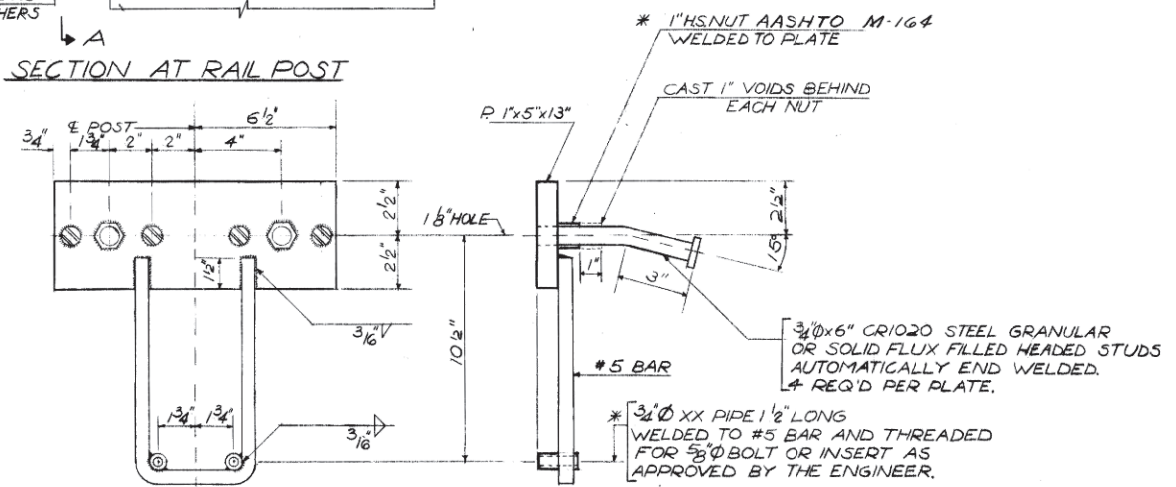


SECTION A-A

SECTION AT RAIL POST



SECTION B-B



ANCHOR DEVICE

\* THREADED AREAS SHALL BE PLUGGED OR BLOCKED OFF DURING CASTING OF BEAM.

DESIGNED	DATE	REVISIONS
M.S.D.	1-77	
DRAWN	G.I.S.	2-77
CHECKED	M.S.D.	2-77
APPROVED	R.H.B.	3-77

ROLAND H. BERGER  
3706  
REGISTERED  
STRUCTURAL  
ENGINEER  
OF  
ILLINOIS

*Roland H. Berger* 3/31/77

**BYRD, TALLAMY, MacDONALD & LEWIS**  
CONSULTING ENGINEERS  
FALLS CHURCH, VIRGINIA

BRIDGE RAILING

Mazon River Bridge Section 76-10108-BR  
T.R. 182-STRUCTURE NO. 032-5121  
MAINE TOWNSHIP-GRUNDY COUNTY  
STA. 10 + 30.40

SCALE: NO SCALE

DRAWING NO. \_\_\_\_\_

FOR INFORMATION ONLY

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Drawing Name: H:\A\08\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD\LOAD PLANS\045-CARBON HILL RD - EX PLAN 06.dwg  
Last Modified: Thursday, February 22, 2024 3:45:29 PM  
Plotted On: Monday, February 26, 2024 2:30:11 PM  
by Kurt Decker

CONTRACT NO. 87791

DRAWN BY	LEVEL	BY	DATE	REVISIONS	DESCRIPTION
---					

PERU MORRIS  
OTTAWA MENDOTA  
ILLINOIS

CA  
Chamlin & Associates

CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

EXISTING PLANS  
STR 032-5121 (E)(P)

BID SET

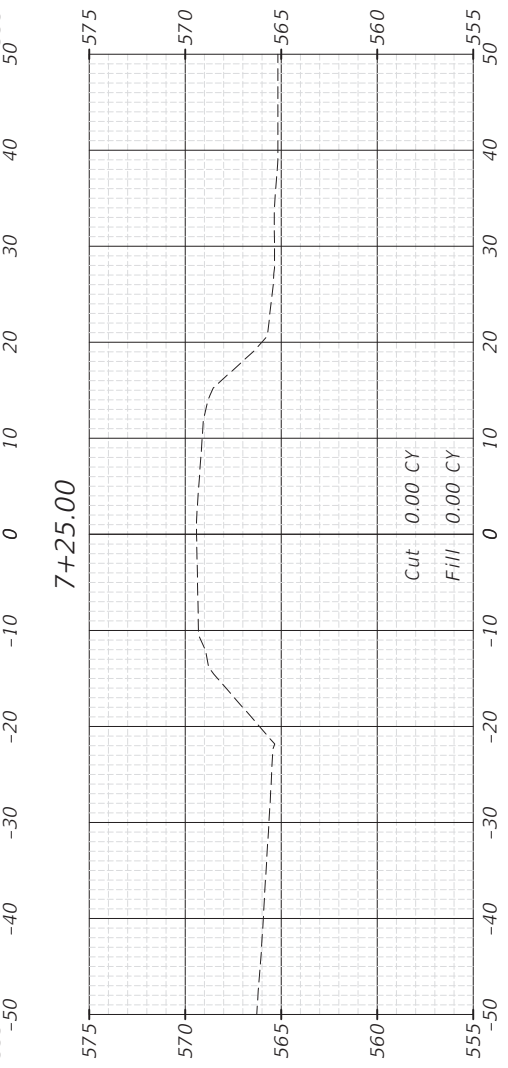
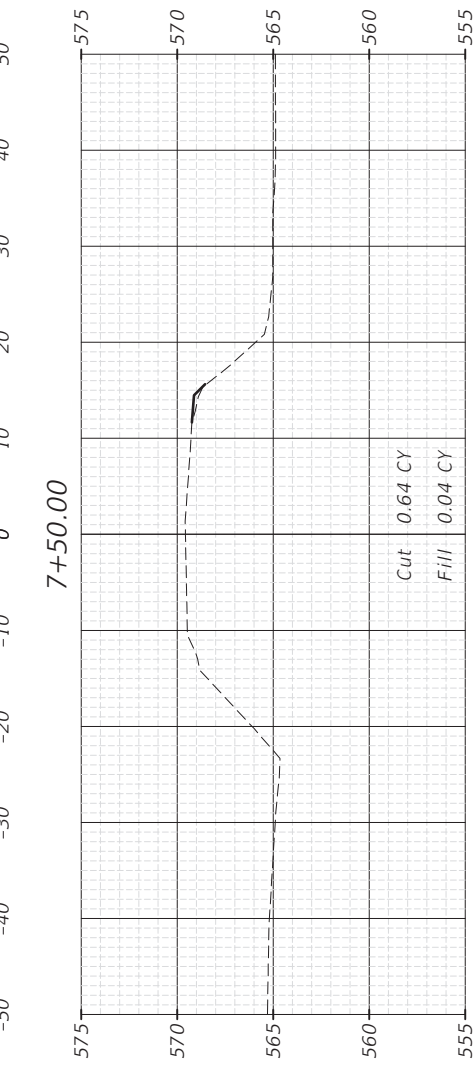
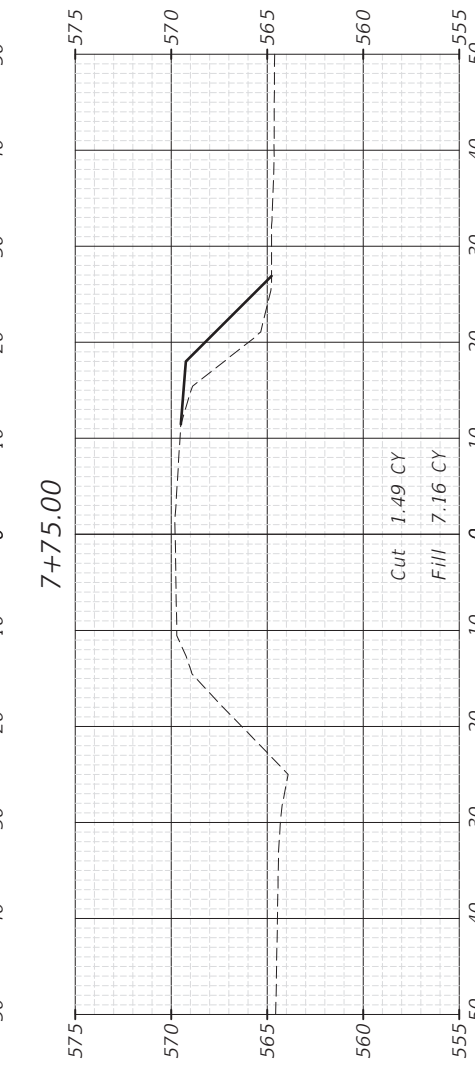
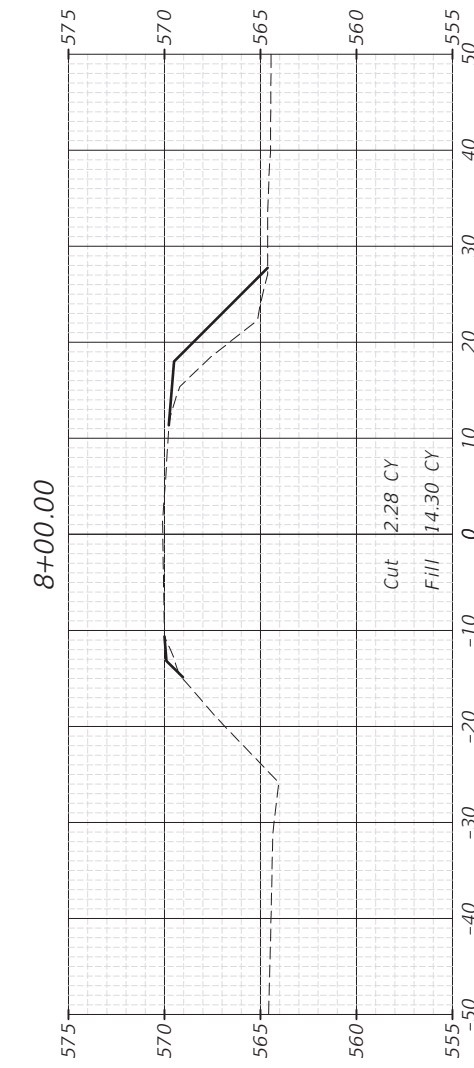
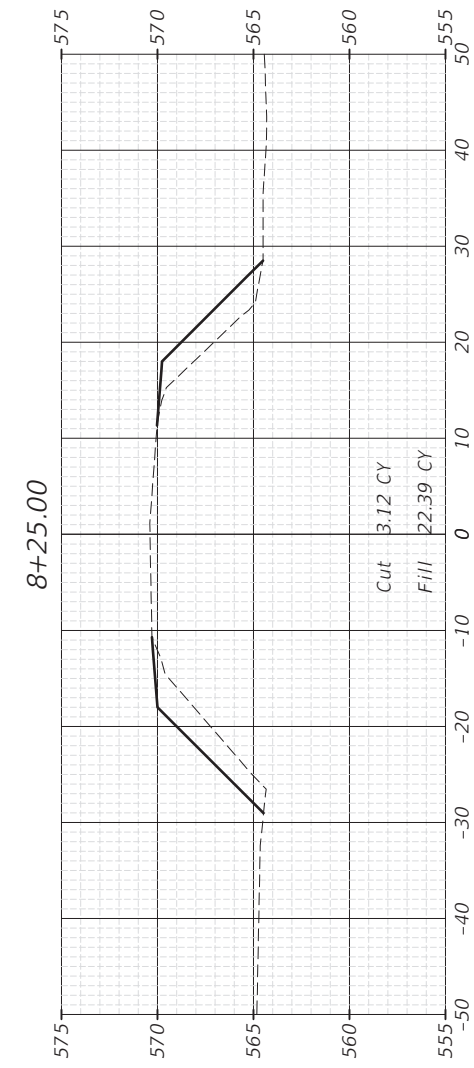
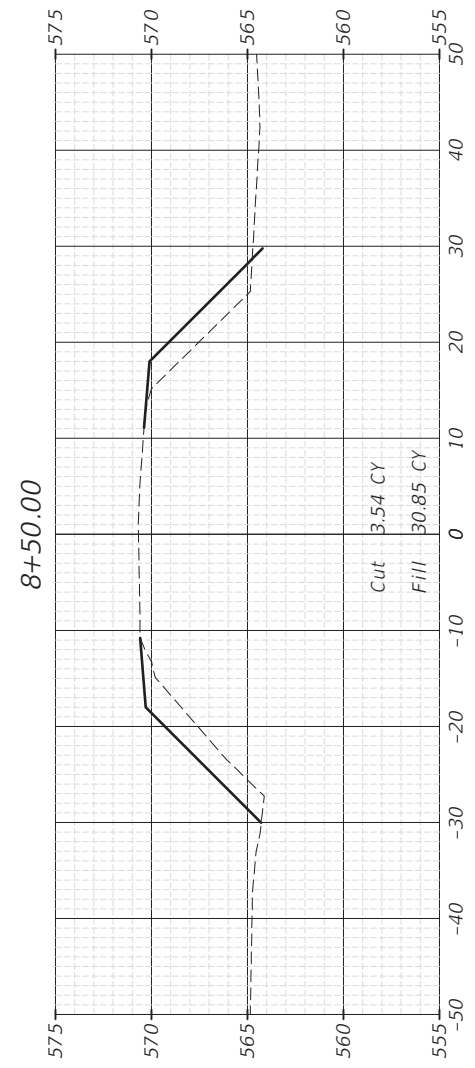
CURRENT AS OF: 02/14/2024

SCALE: AS NOTED

FILE NO.: 111506.00 Y- OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	46
	ILLINOIS	CONTRACT NO. 87791		



CHAMLIN & ASSOCIATES, INC. © 2024  
 Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD - XSEC.dwg  
 Last Modified: Friday, February 16, 2024 1:40:33 PM  
 Plotted On: Monday, February 26, 2024 2:30:28 PM  
 by Kurt Decker

CONTRACT NO. 87791

LEVEL	BY	DATE	REVISIONS	
			DESCRIPTION	



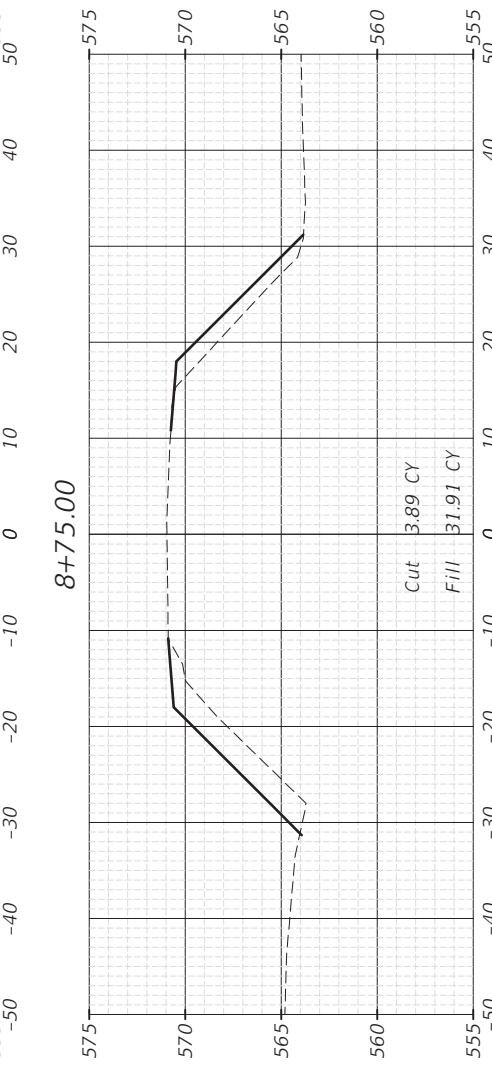
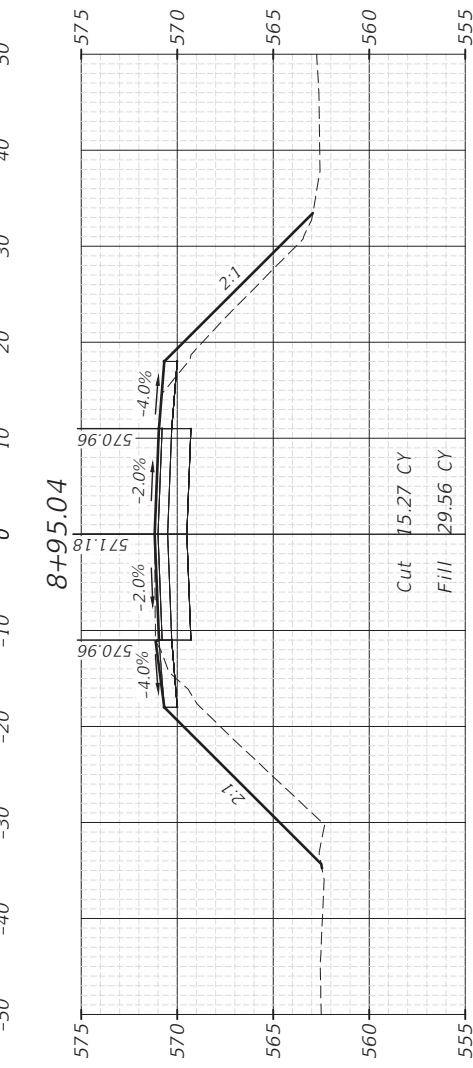
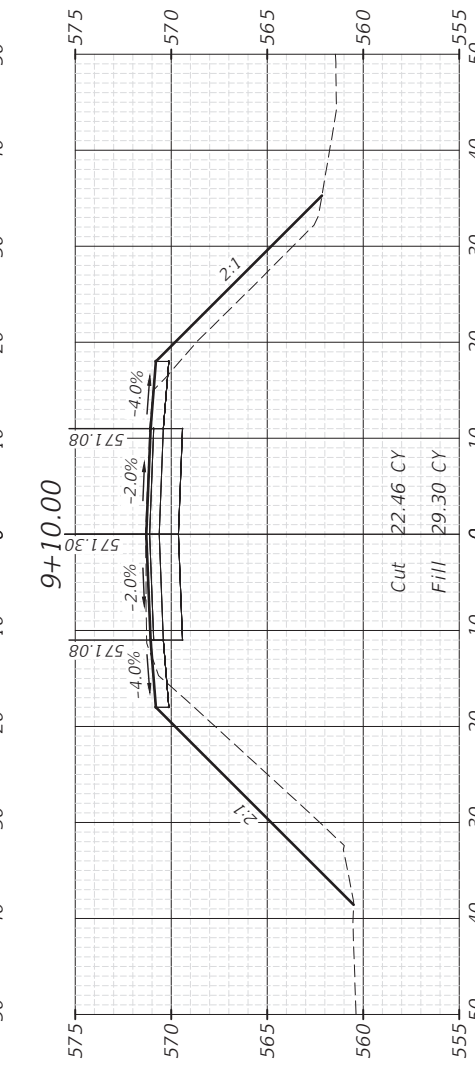
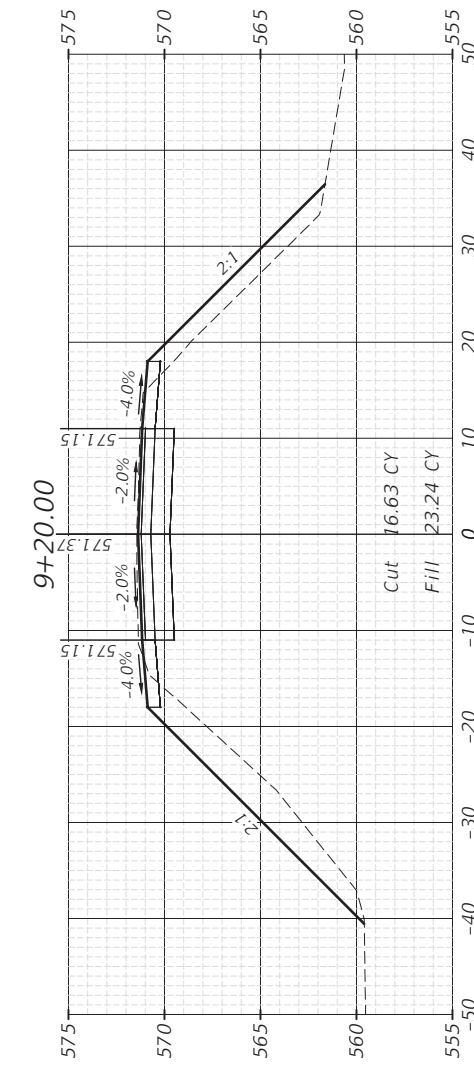
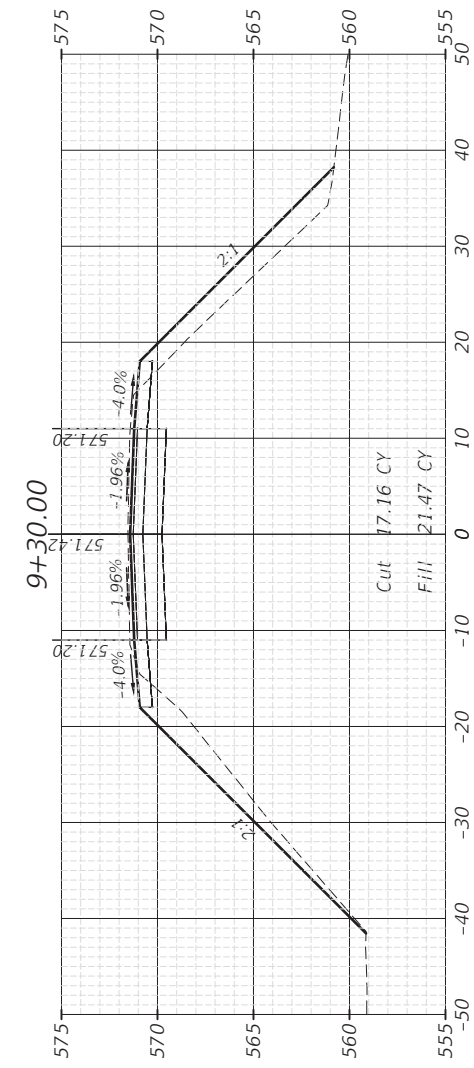
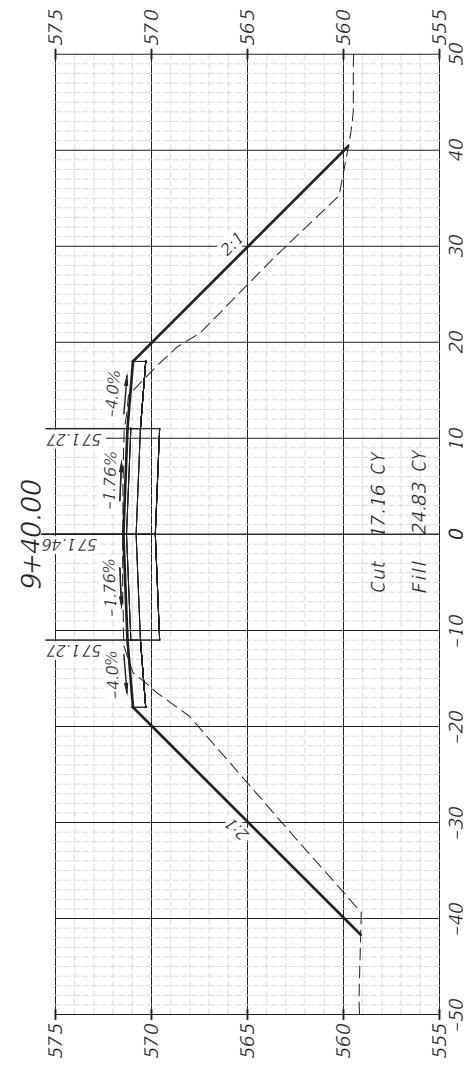
CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

CROSS SECTIONS  
STR 032-5121 (E)(P)

BID SET CURRENT AS OF: 02/14/2024 SCALE: AS NOTED FILE NO.: 111506.00 Y-	OF	51
	SHEET	46
	OF	



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	47
	ILLINOIS	CONTRACT NO. 87791		



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 Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD - XSEC.dwg  
 Last Modified: Friday, February 16, 2024 1:40:33 PM  
 Plotted On: Monday, February 26, 2024 2:30:32 PM  
 by Kurt Decker

CONTRACT NO. 87791

DRAWN BY: KED	REVISIONS			
	LEVEL	BY	DATE	DESCRIPTION
CHECKED BY: DAH				
DATE: 02/2023				



CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

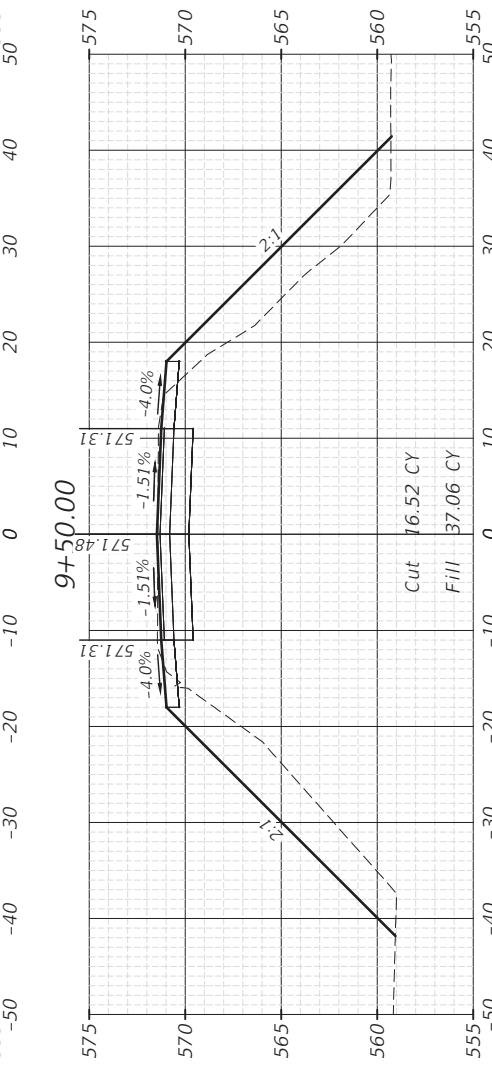
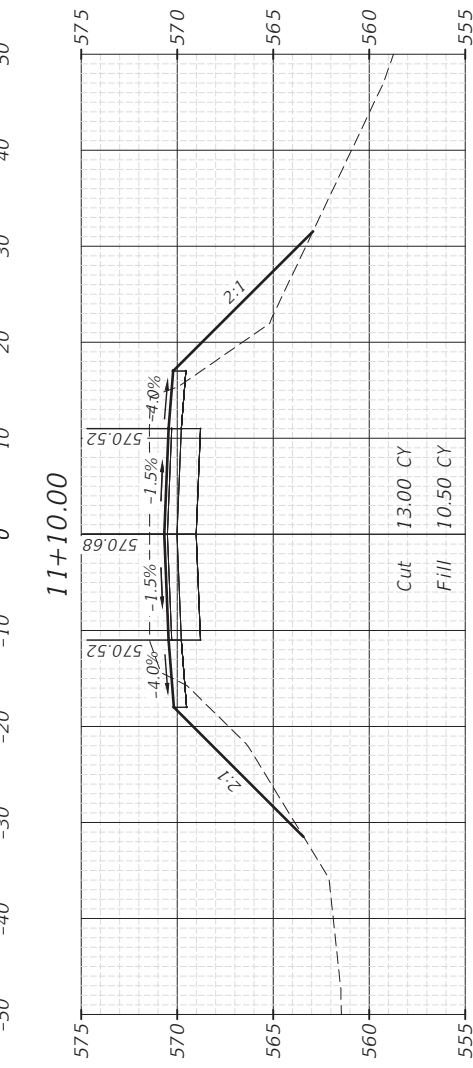
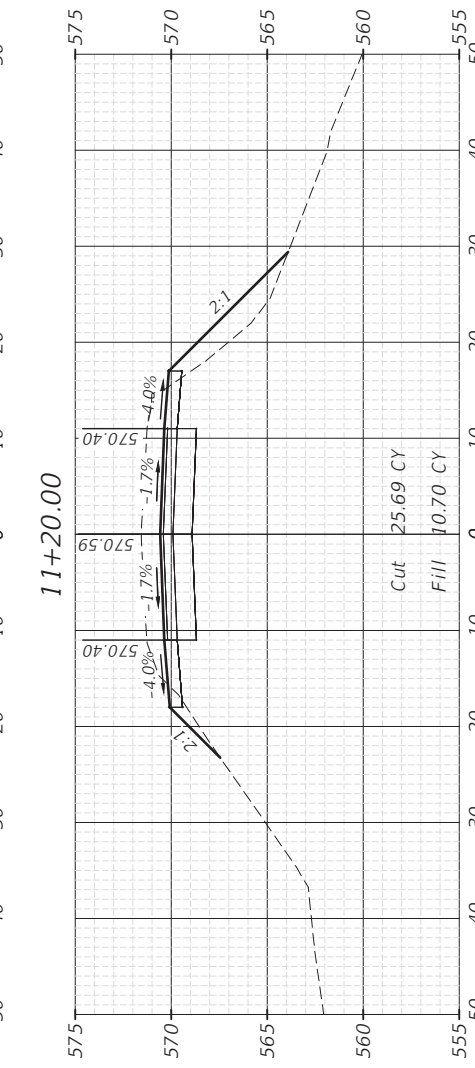
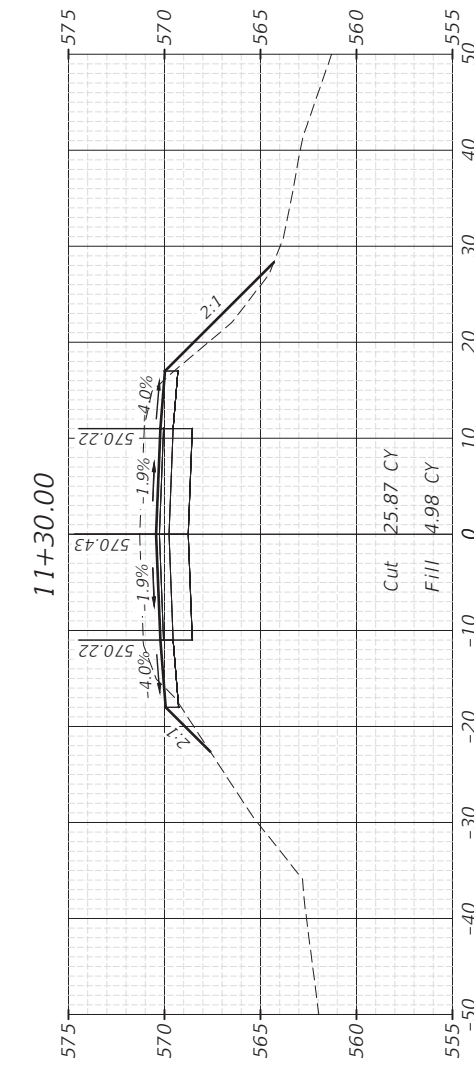
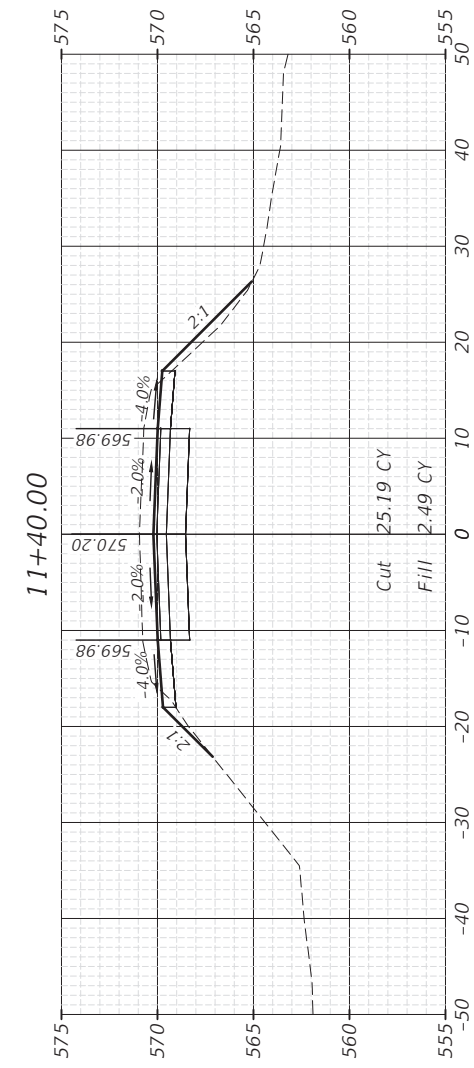
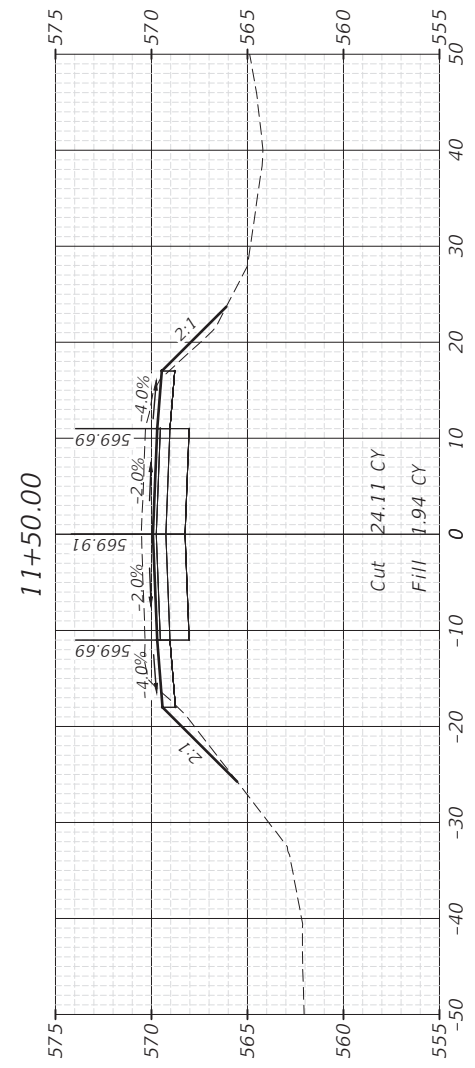
CROSS SECTIONS  
STR 032-5121 (E)(P)

BID SET

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 47
FILE NO.: 111506.00 Y-	OF 51

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	48
	ILLINOIS	CONTRACT NO. 87791		

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 Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD - XSEC.dwg  
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CONTRACT NO. 87791

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DATE: 02/2023				



CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

CROSS SECTIONS  
STR 032-5121 (E)(P)

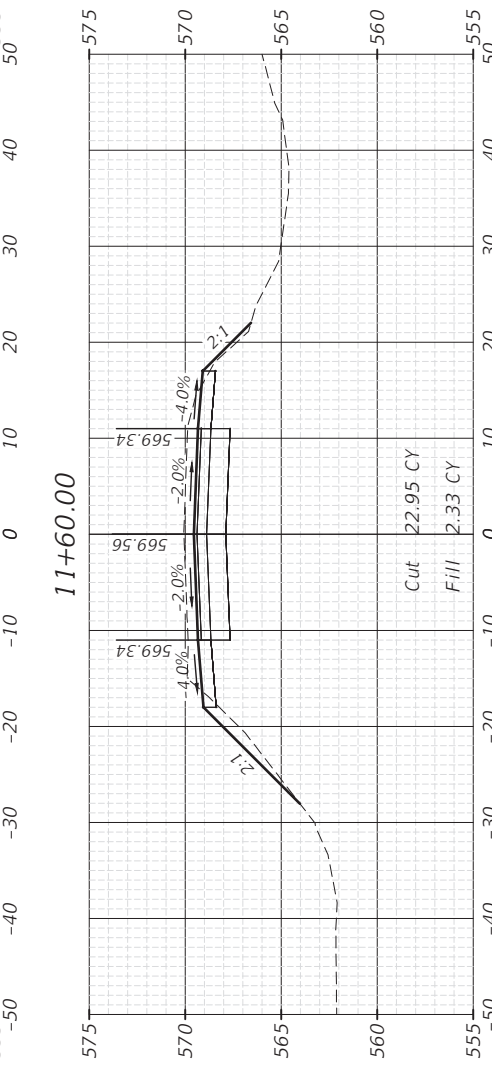
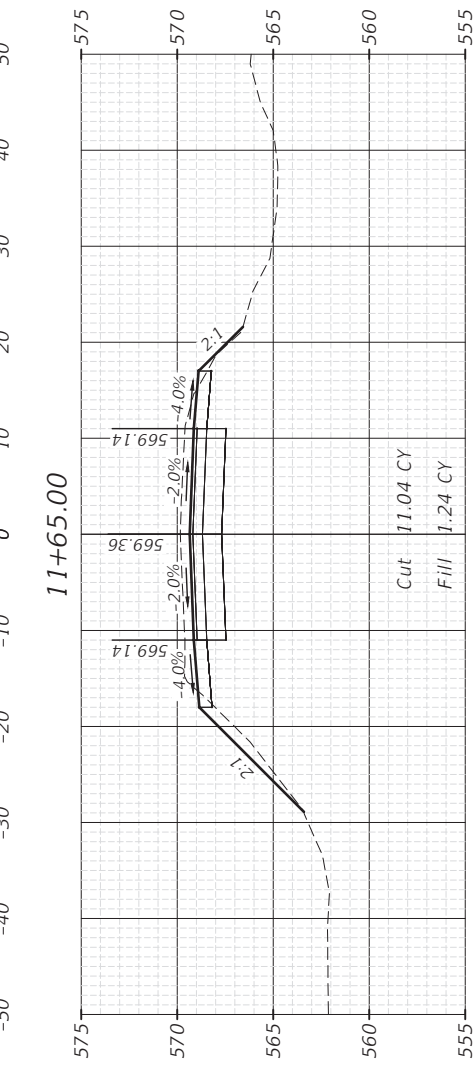
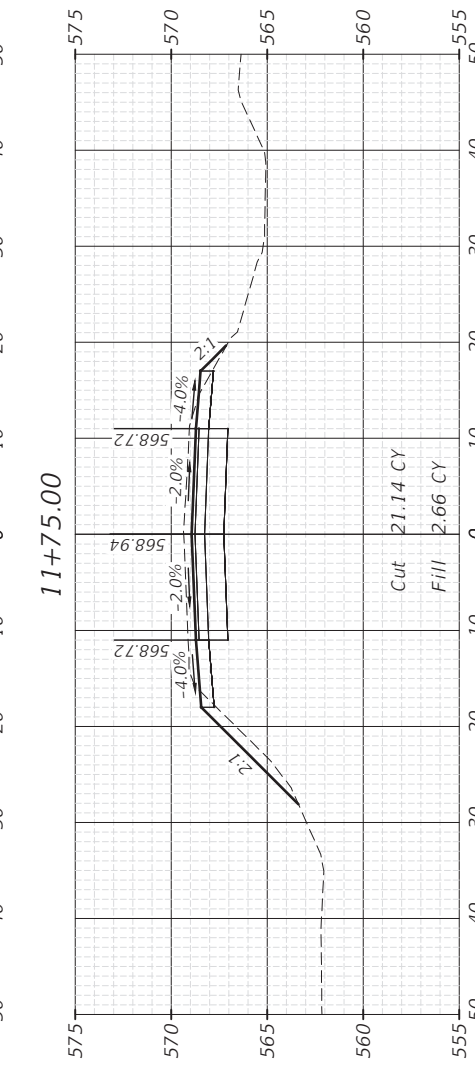
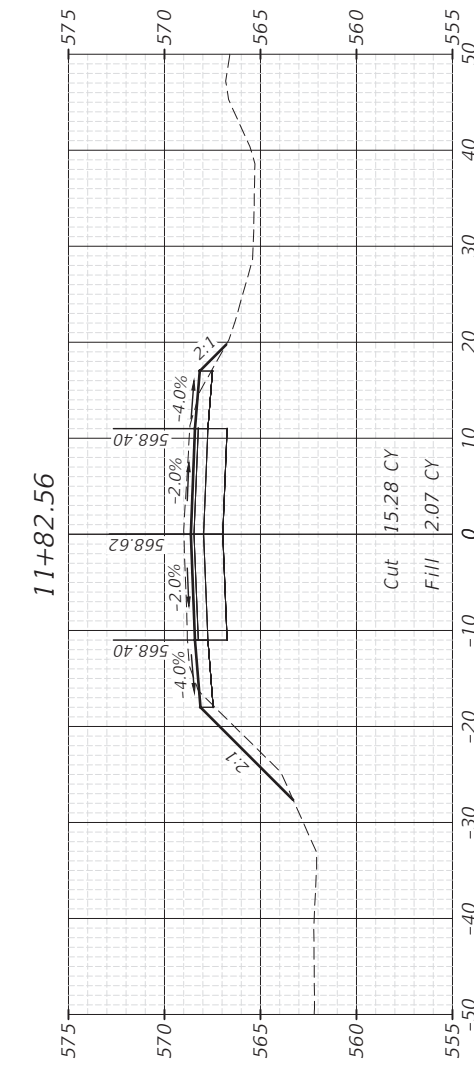
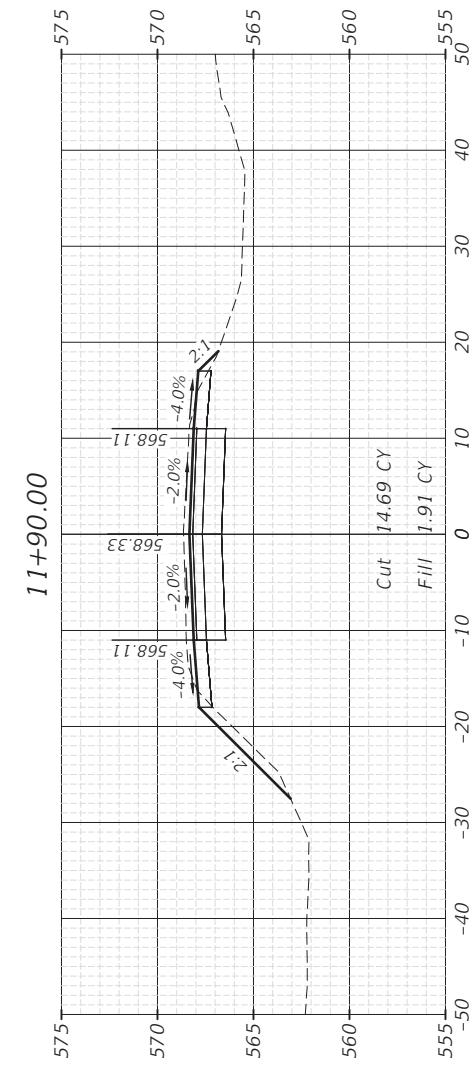
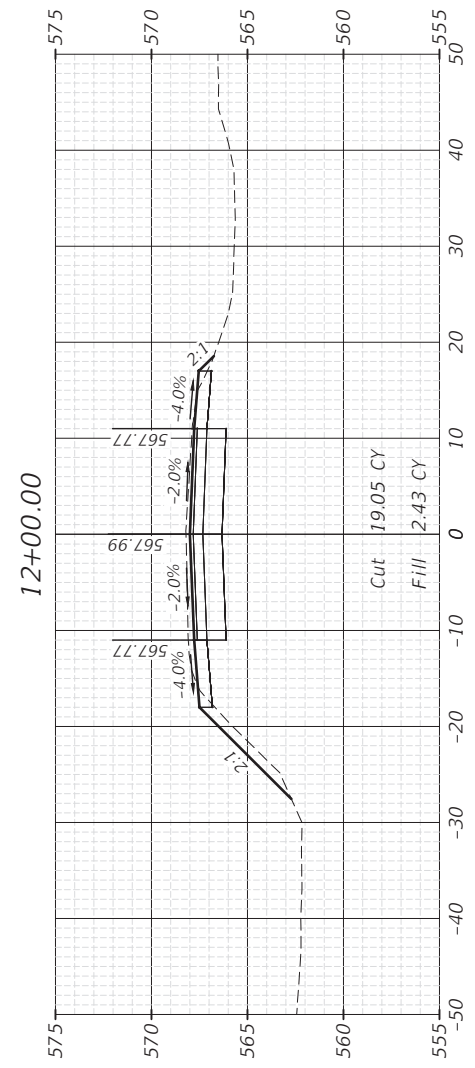
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CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 48
FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	49
	ILLINOIS	CONTRACT NO. 87791		

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 Drawing Name: H:\ADDER\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD - XSEC.dwg  
 Last Modified: Friday, February 16, 2024 1:40:33 PM  
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CONTRACT NO. 87791

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	LEVEL	BY	DATE	DESCRIPTION
CHECKED BY: DAH				
DATE: 02/2023				



PERU MORRIS  
 OTTAWA MENDOTA  
 ILLINOIS

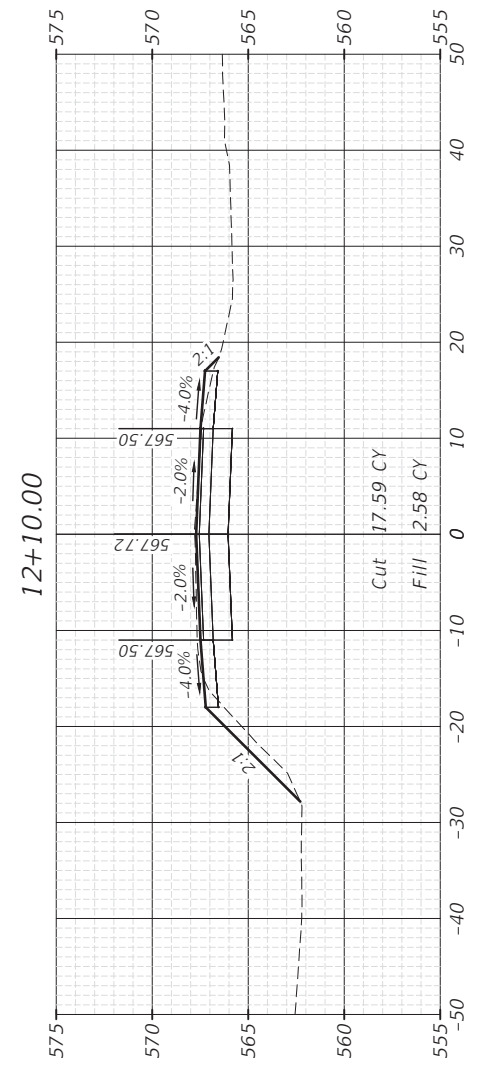
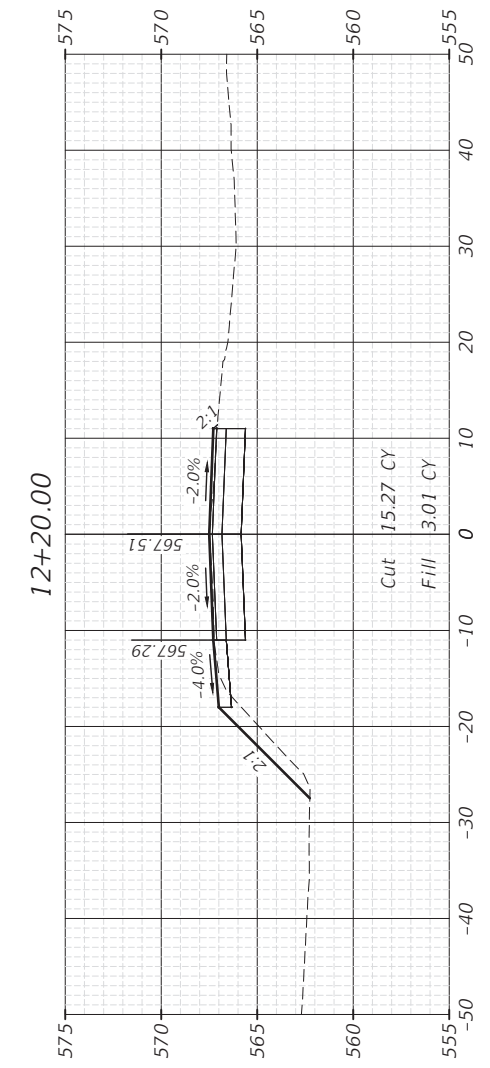
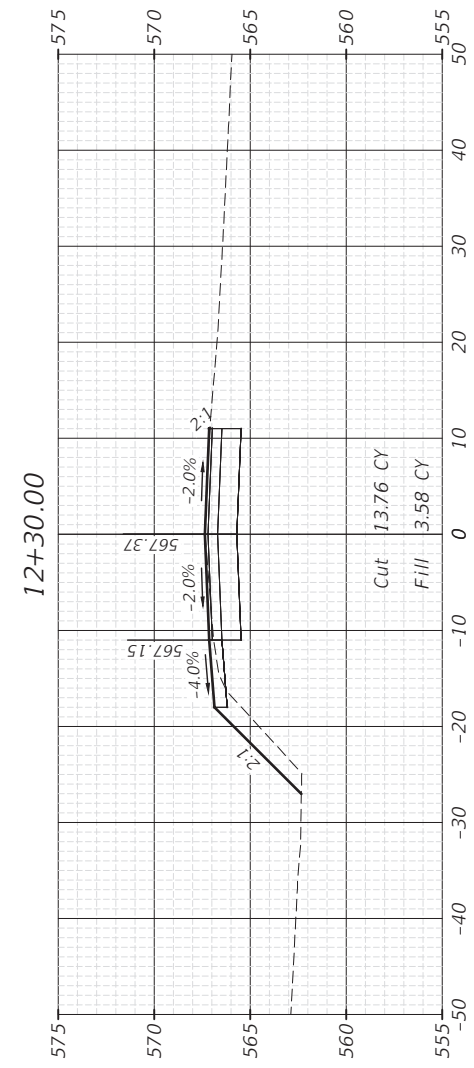
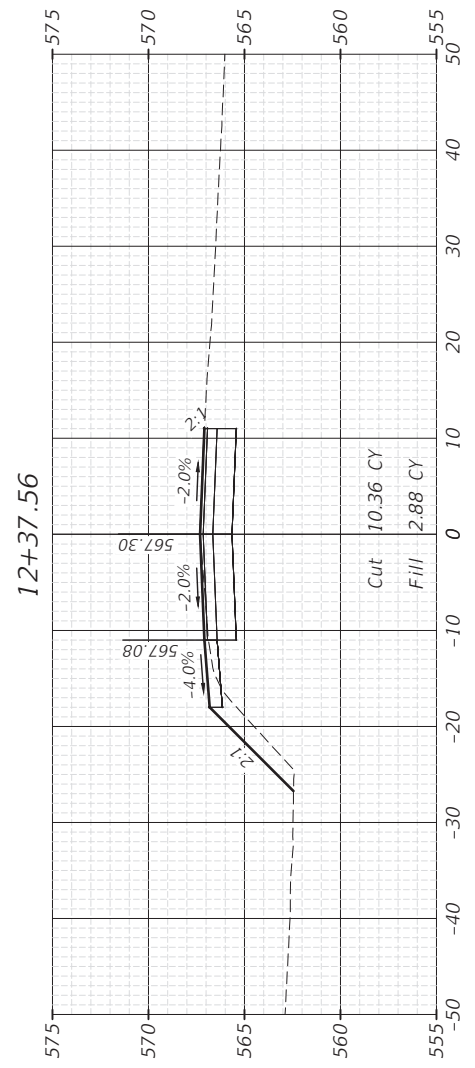
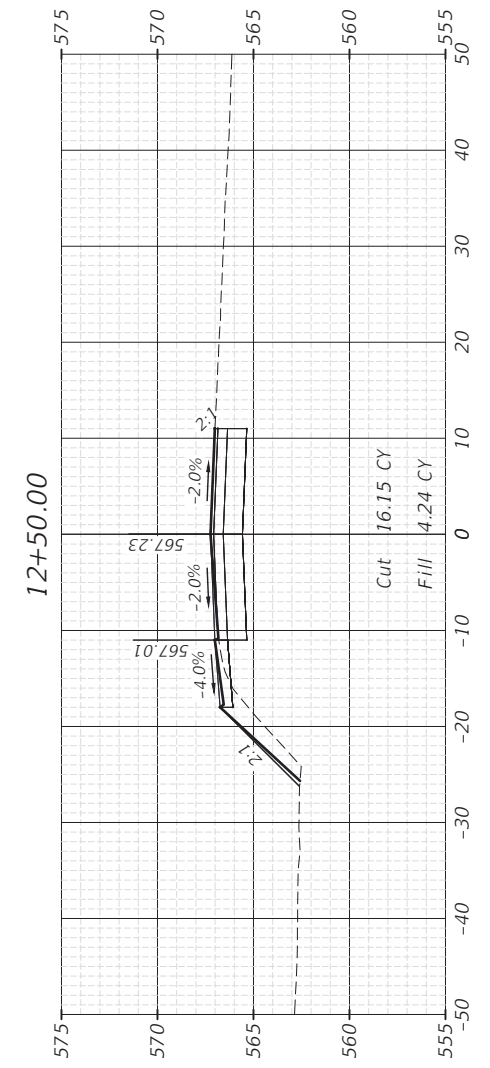
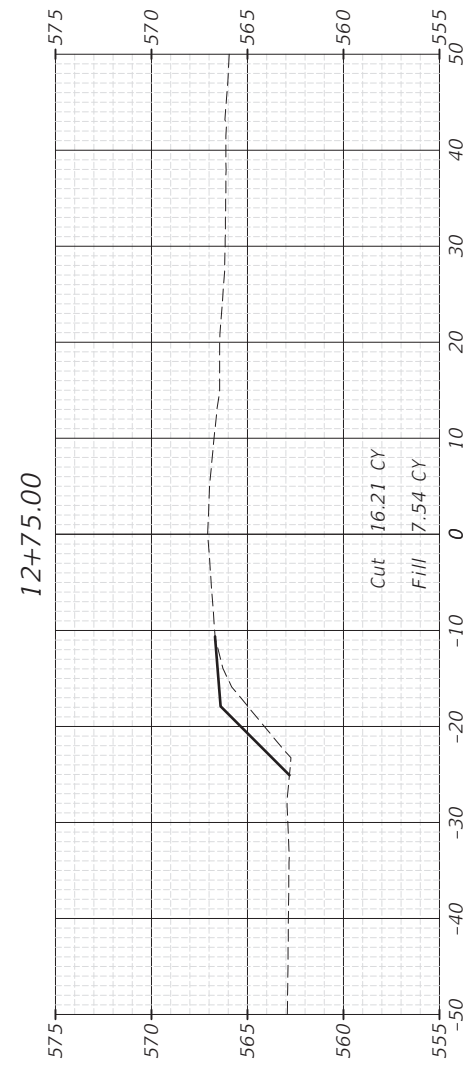
**CH 34V SECTION 19-00178-00-BR**  
**FAS 272 SECTION 22-00192-00-BR**  
**GRUNDY COUNTY**

**CROSS SECTIONS**  
**STR 032-5121 (E)(P)**

<b>BID SET</b>	CURRENT AS OF: <b>02/14/2024</b>	
	SCALE: AS NOTED	SHEET <b>49</b>
	FILE NO.: 111506.00 Y-	OF <b>51</b>

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	50
	ILLINOIS	CONTRACT NO. 87791		

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 Drawing Name: H:\A008\1111506-00 GRUNDY CO BRACEVILLE RD & CARBON HILL RD - XSEC.dwg  
 Last Modified: Friday, February 16, 2024 1:40:33 PM  
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 by Kurt Decker



CONTRACT NO. 87791

DRAWN BY: KED	REVISIONS			
	LEVEL	BY	DATE	DESCRIPTION
CHECKED BY: DAH				
DATE: 02/2023				



CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

CROSS SECTIONS  
STR 032-5121 (E)(P)

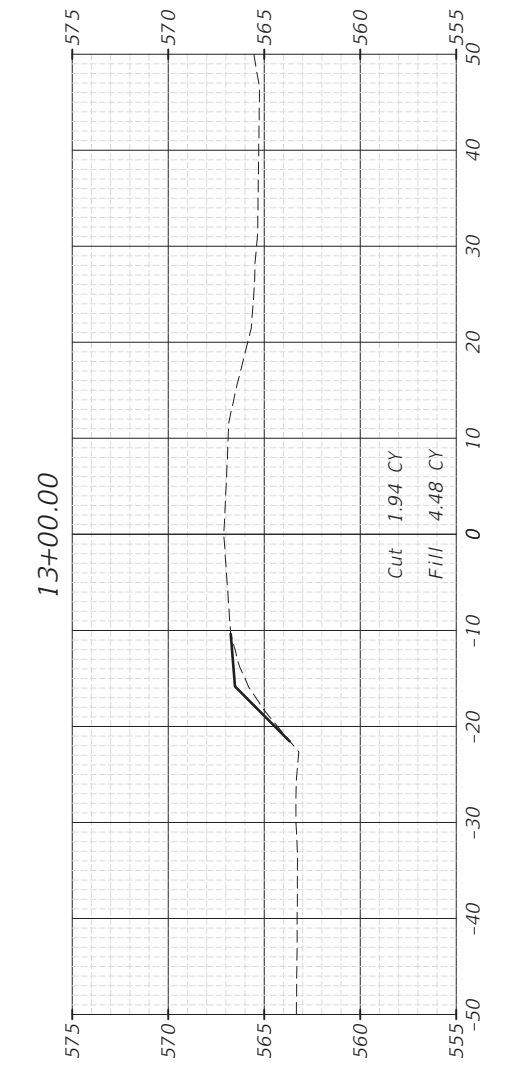
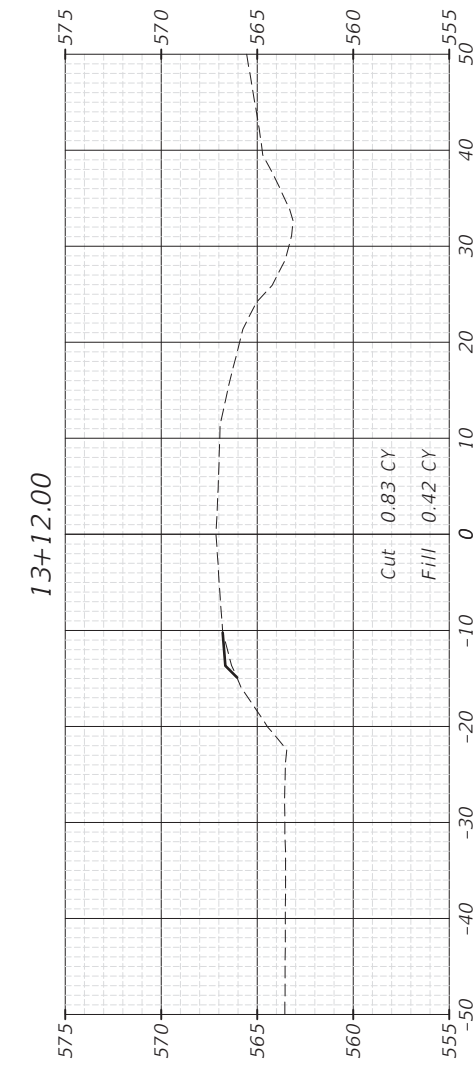
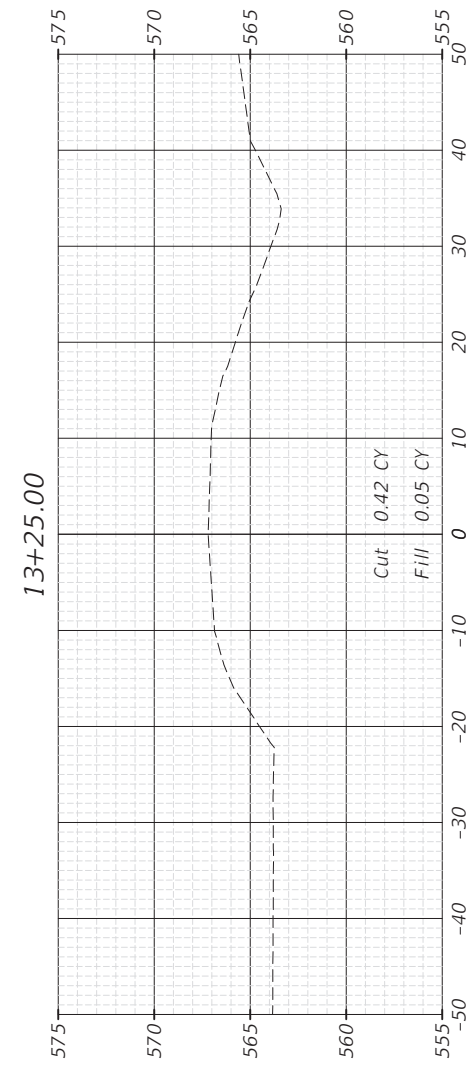
BID SET

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 50
FILE NO.: 111506.00 Y-	OF 51



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	22-00192-00-BR 19-00178-00-BR	GRUNDY	51	51
	ILLINOIS	CONTRACT NO. 87791		

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 Plotted On: Monday, February 26, 2024 2:30:51 PM  
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CONTRACT NO. 87791

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	LEVEL	BY	DATE	DESCRIPTION
CHECKED BY: DAH				
DATE: 02/2023				



CH 34V SECTION 19-00178-00-BR  
FAS 272 SECTION 22-00192-00-BR  
GRUNDY COUNTY

CROSS SECTIONS  
STR 032-5121 (E)(P)

BID SET

CURRENT AS OF: 02/14/2024	
SCALE: AS NOTED	SHEET 51
FILE NO.: 111506.00 Y-	OF 51