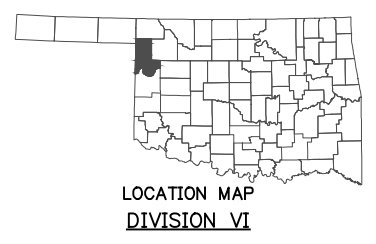


FOR SURVEY CONTROL DATA,
SEE SURVEY DATA SHEETS.



STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED
STATE HIGHWAY
FEDERAL AID PROJECT NO. NHPPY-223N(014)PM
WIDEN, RESURFACE, & BRIDGE
3R REHABILITATION
S.H. 15
ELLIS COUNTY

SEE SHEET NO. 2 FOR INDEX OF SHEETS
AND LIST OF REQUIRED STANDARDS

STATE JOB NO. 29674(04)
CONTROL SECTION NO. 15-23-20

BRIDGE "A" LOCATION NO. 2320 0154X NBI NO. 04500
BRIDGE "B" LOCATION NO. 2320 0277X NBI NO. 04476
BRIDGE "C" LOCATION NO. 2320 0399X NBI NO. 04477
BRIDGE "D" LOCATION NO. 2320 0451X NBI NO. 04348

DESIGN DATA

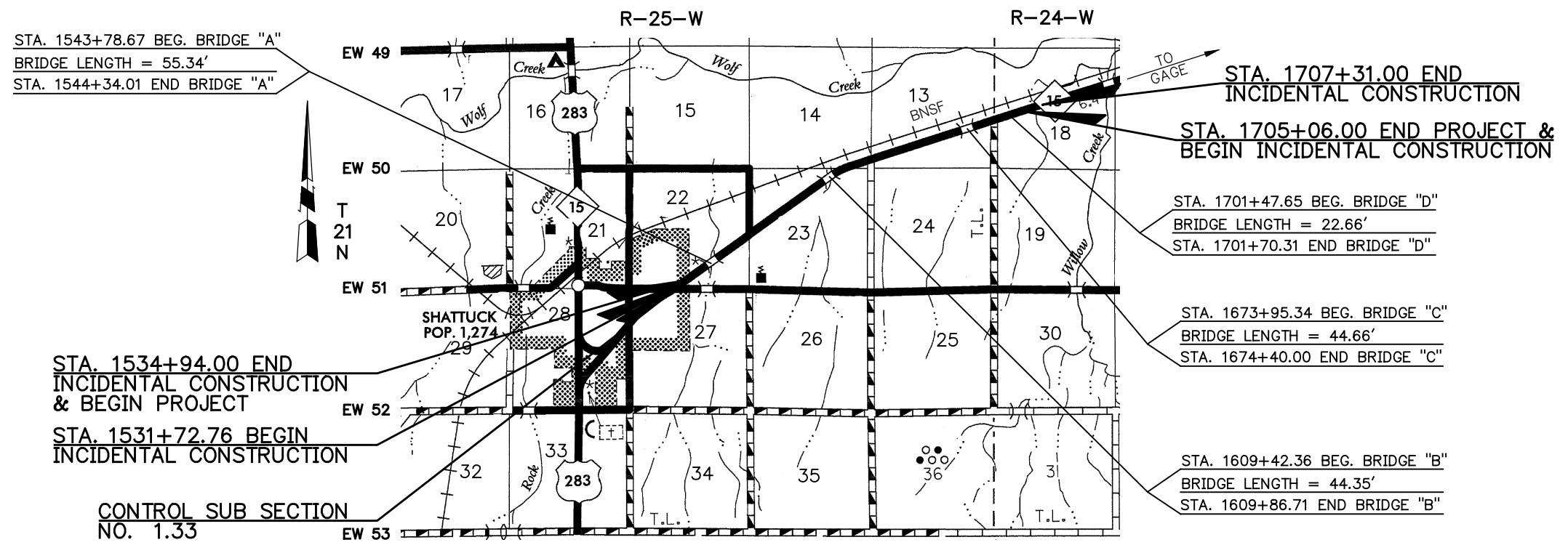
ADT 2024	= 2,800
ADT 2044	= 3,800
DHV (2-WAY)	= 418
K (DHV/ADT)	= 11%
D	= 56%
T (% DHV)	= 19%
T (% ADT)	= 22%
T3 (% ADT)	= 16%
V	= 65 MPH
20YR FLEX. ESALS	= 5.2 M

SCALES

PLAN	1" = 50'
PROFILE HOR.	1" = 50'
VER.	1" = 5'
LAYOUT MAP	1" = 3,000'

CONVENTIONAL SYMBOLS

	PROPOSED ROAD
	RAILROADS
	RANGE & TOWNSHIP
	SECTION LINES
	QUARTER SECTION LINES
	FENCES
	GROUND LINE
	EXISTING ROADS
	BASE LINE
	GRADE LINES
	TELEPHONE & TELEGRAPH
	POWER LINES
	BUILDINGS
	OIL WELLS
	DRAINAGE STRUCTURES - IN PLACE
	DRAINAGE STRUCTURES - NEW
	RIGHT-OF-WAY LINES - EXISTING
	RIGHT-OF-WAY LINES - NEW
	CONTROLLED ACCESS
	RIGHT-OF-WAY FENCE



STA. 1534+94.00 END
INCIDENTAL CONSTRUCTION
& BEGIN PROJECT
STA. 1531+72.76 BEGIN
INCIDENTAL CONSTRUCTION

CONTROL SUB SECTION
NO. 1.33

STA. 1707+31.00 END
INCIDENTAL CONSTRUCTION
STA. 1705+06.00 END PROJECT &
BEGIN INCIDENTAL CONSTRUCTION
STA. 1701+47.65 BEG. BRIDGE "D"
BRIDGE LENGTH = 22.66'
STA. 1701+70.31 END BRIDGE "D"
STA. 1673+95.34 BEG. BRIDGE "C"
BRIDGE LENGTH = 44.66'
STA. 1674+40.00 END BRIDGE "C"
STA. 1609+42.36 BEG. BRIDGE "B"
BRIDGE LENGTH = 44.35'
STA. 1609+86.71 END BRIDGE "B"

NOTE: PROJECT LENGTH BASED ON CL SURVEY STATIONING
ROADWAY LENGTH _____ 16,844.99 FT. 3.190 MI.
BRIDGE LENGTH _____ 167.01 FT. 0.031 MI.
PROJECT LENGTH _____ 3.221 MI.
EQUATIONS: NONE
EXCEPTION: NONE

TRIAD DESIGN GROUP
Architecture • Engineering
3020 N.W. 149TH STREET
OKLAHOMA CITY, OK 73134
PH. (405) 752-1122
FAX (405) 752-8855
CA# 1759, RENEWAL 06-30-2021

Joshua M. Johnston
JOSHUA M. JOHNSTON
LICENSED PROFESSIONAL ENGINEER NO. 26204
DATE 5-20-20

OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED _____	DATE APPROVED _____
BY _____ CHIEF ENGINEER	BY _____ DIVISION ADMINISTRATOR
SWO 5012(1)	PROJECT NO. NHPPY-223N(014)PM
COUNTY ELLIS	HIGHWAY S.H. 15 SHEET NO. 0001

P.E. NO. 29674(01)

2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, JANUARY 4, 2010.

THE FOLLOWING STANDARD DRAWINGS SHALL BE REQUIRED FOR THIS PROJECT:

ROADWAY		BRIDGE	TRAFFIC	
SSS-1-1	SBI-4-2		PM1-1-03	TCS4-1-01
TSC2-3-2	PUD-3-3		PM3-1-02	TCS5-1-00
TSD-2-0	MI-3-0		RSD1-1-00	TCS6-1-02
TRFD-1-2	RDI-3-2		RSD1-2-00	TCS7-1-02
PED-3-2	DC-3-2		RSD2-2-00	TCS8-1-00
PSE-1-0	PDT-1-3		WSD1-1-00	TCS9-1-01
CET6S-3-2	RWF2-2-2		SBS1-1-00	TCS10-1-00
PCES-4-1	SUEL1-3-2		SBS2-1-00	TCS11-1-01
SPI-4-1	SUEL4-3-2		SBS3-1-00	TCS13-1-00
SPB-1-4			SBS4-1-00	TCS14-1-00
FHTCP-3-1			GMS1-1-00	TCS15-1-00
			SSP1-1-02	TCS19-1-01
			SSA1-1-00	TCS20-1-00
			TCS1-1-01	TCS21-1-02
			TCS2-1-00	TCS22-1-00
			TCS3-1-01	TCS24-1-02

INDEX OF SHEETS

001	TITLE SHEET
002	INDEX OF SHEETS AND STANDARDS
003	INDEX OF SEALS
004-006	TYPICAL SECTIONS
AB01	PAY QUANTITIES AND GENERAL NOTES (BRIDGE)
AE01	ENVIRONMENTAL NOTES
AR01	PAY QUANTITIES AND NOTES (ROADWAY)
AR02	SUGGESTED SEQUENCE OF CONSTRUCTION & RAILWAY NOTES
AR03-AR05	SUMMARY SHEETS (ROADWAY)
AR06	SUMMARY OF DRAINAGE STRUCTURES
AT01	PAY QUANTITIES AND NOTES (TRAFFIC CONTROL)
AT02	PAY QUANTITIES AND NOTES (SIGNING AND STRIPING)
B001	GENERAL PLAN AND ELEVATION (BRIDGE "A")
B002-B009	BRIDGE "A" DETAILS
B010	GENERAL PLAN AND ELEVATION (BRIDGE "B")
B011-B018	BRIDGE "B" DETAILS
B019	GENERAL PLAN AND ELEVATION (BRIDGE "C")
B020-B025	BRIDGE "C" DETAILS
B026	GENERAL PLAN AND ELEVATION (BRIDGE "D")
B027-B033	BRIDGE "D" DETAILS
E001	SECTION 404 PERMIT COMPLIANCE
R001	STORMWATER MANAGEMENT PLAN
R002	DRAINAGE AREA MAP
R003	SUMMARY OF DISTURBED DRAINAGE AREAS
R004-R010	EROSION CONTROL SHEETS
R011-R015	GEOMETRIC LAYOUT SHEETS
R016-R029	PLAN AND PROFILE SHEETS
R030-R036	REMOVAL SHEETS
R037	MASS DIAGRAM
R038-R039	RCB DETAIL
R040-R044	STRUCTURE 12 DETAILS
R045	STRUCTURE 16 DETAILS
T001	TYPICAL ADVANCE WARNING SIGNS PHASE 1
T002	TRAFFIC CONTROL PHASES 1A-F
T003	TRAFFIC CONTROL PHASES 1G-K
T004	TRAFFIC CONTROL PHASES 1L-P
T005	TRAFFIC CONTROL PHASES 1L-P DRAINAGE STRUCTURES "C", "D" & 16
T006	TYPICAL ADVANCE WARNING SIGNS PHASE 2
T007	TRAFFIC CONTROL PHASE 2
T008	TYPICAL ADVANCE WARNING SIGNS PHASE 3
T009	TYPICAL MOVING OPERATION TRAFFIC CONTROL DETAIL PHASE 3
T010	SIGN SUMMARY
T011-T018	SIGNING & STRIPING PLANS
S1-S22	SURVEY DATA SHEETS
X001-X067	CROSS SECTIONS

**INDEX OF SHEETS
AND STANDARDS**

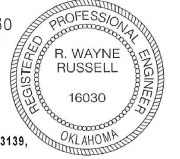
State Job No. 29674(04) Sheet No. 0002



R. Wayne Russell
 R. WAYNE RUSSELL, P.E. # 16030
 C.A. # 1160, RENEWAL 06-30-21

5-19-20
 DATE

Traffic Engineering Consultants, Inc.
 6000 S. Western Ave., Suite 300 - Oklahoma City, OK 73139,
 Ph: 405-728-7721, Web: www.tecusa.com



THIS SEAL COVERS SHEETS:
 AT01-AT02, T001-T018



3020 N.W. 149TH STREET
 OKLAHOMA CITY, OK 73134
 PH. (405) 752-1122
 FAX (405) 752-8855
 CA# 1759, RENEWAL 06-30-2021



Shay V. Smith

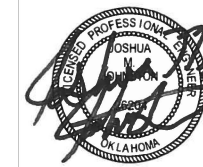
5-20-20
 DATE

SHAY V. SMITH
 LICENSED PROFESSIONAL ENGINEER NO. 27713

THIS SEAL COVERS SHEETS:
 AB01, B001-B033, R040-R045



3020 N.W. 149TH STREET
 OKLAHOMA CITY, OK 73134
 PH. (405) 752-1122
 FAX (405) 752-8855
 CA# 1759, RENEWAL 06-30-2021



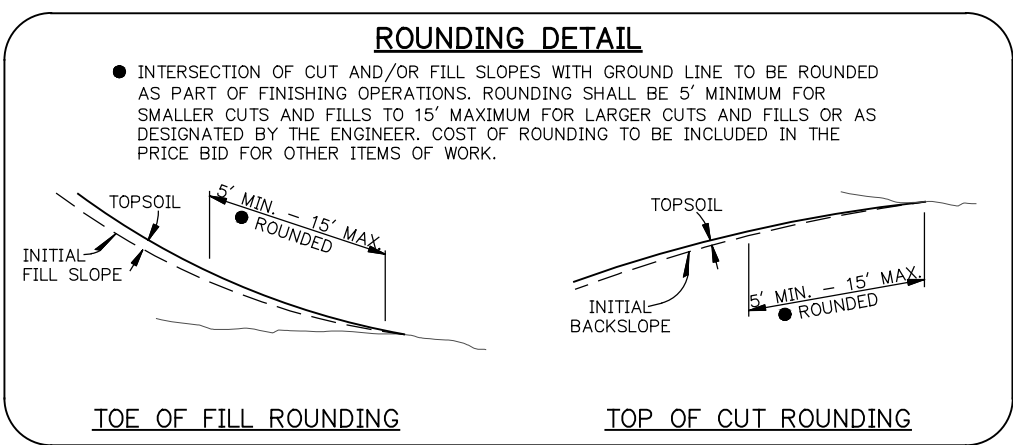
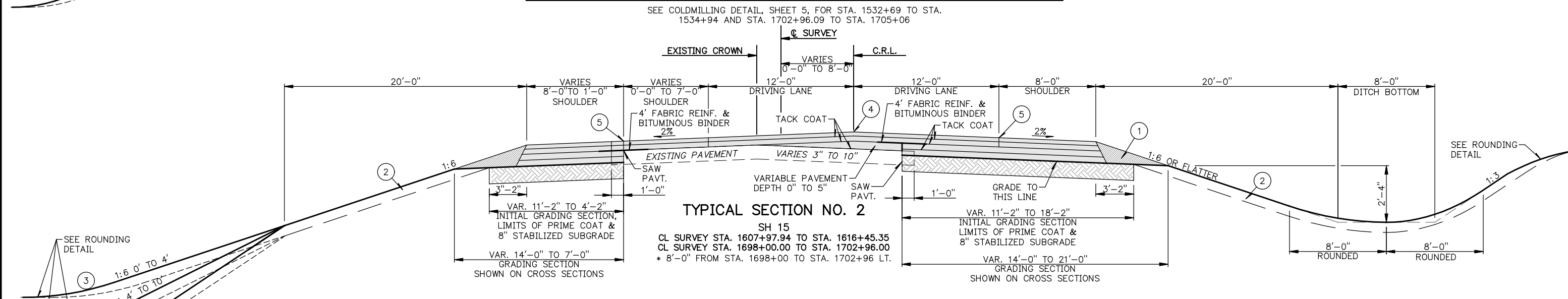
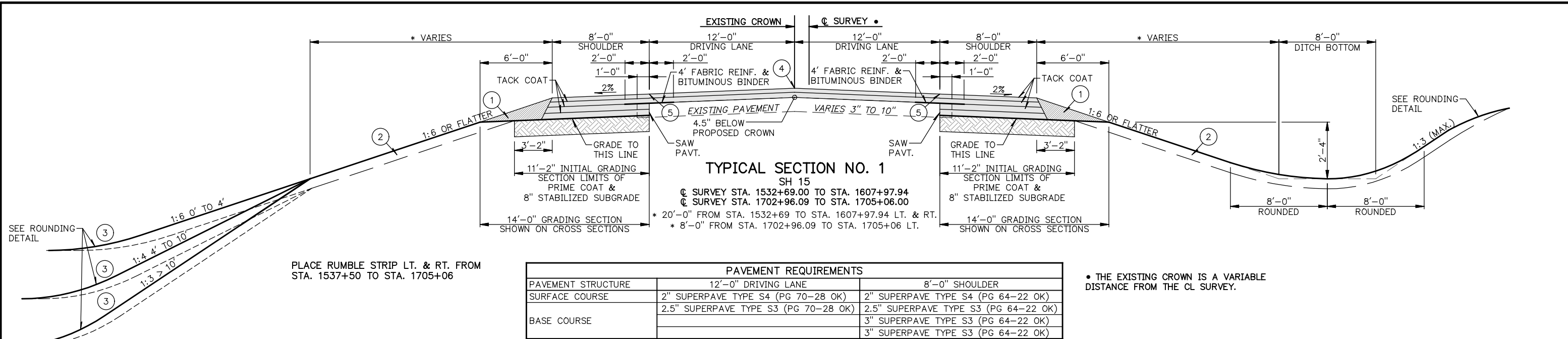
Joshua M. Johnston

5-20-20
 DATE

JOSHUA M. JOHNSTON
 LICENSED PROFESSIONAL ENGINEER NO. 26204

THIS SEAL COVERS SHEETS:
 0001-0006, AR02-AR06, R001-R039, X001-X067

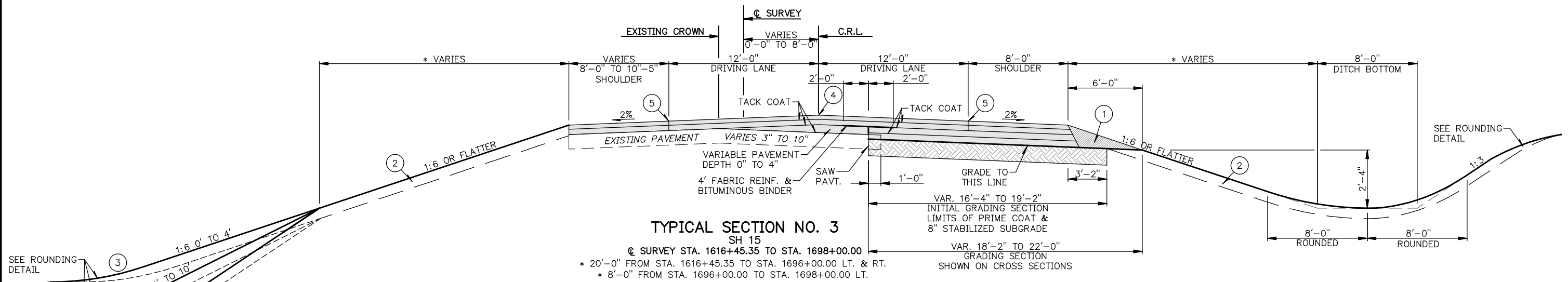
INDEX OF SEALS



- 1 BACKFILL NOTE:
TO BE BACKFILLED AS PART OF THE FINISHING OPERATIONS. QUANTITY IS MEASURED IN UNCLASSIFIED BORROW.
- 2 TOPSOIL NOTE:
THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATIONS SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.

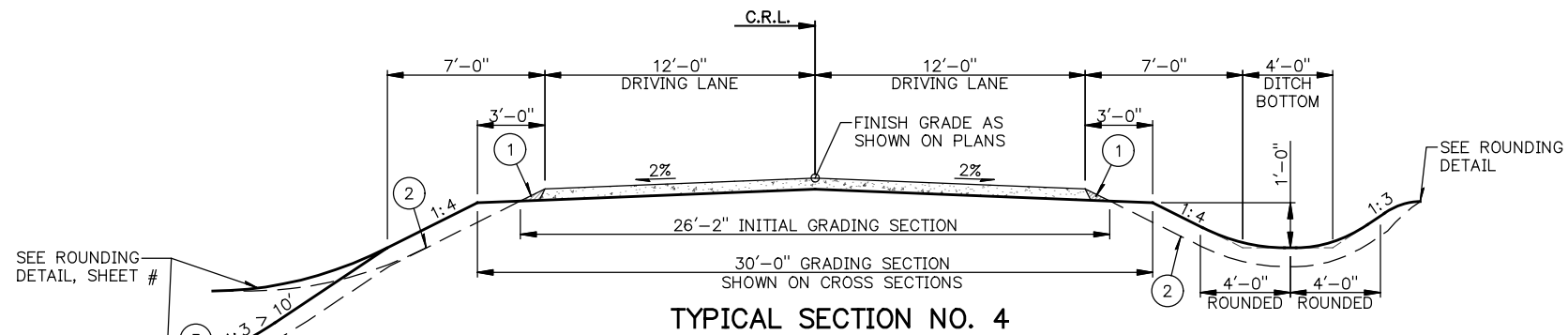
THE GRADING LINE AS SHOWN ON THE TYPICAL AND CROSS SECTIONS IS TO THE TOP OF THE TOPSOIL. EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGE AND THE TOPSOIL QUANTITY IS INCLUDED IN THE MASSLINE BALANCE.
- 3 DISTANCE MEASURED VERTICALLY FROM EDGE OF FINISHED GRADE SHOULDER.

- 4 CENTERLINE RUMBLE STRIP METHOD HMAACON.
- 5 RUMBLE STRIP METHOD HMAACYC.



TYPICAL SECTION NO. 3
 SH 15
 C SURVEY STA. 1616+45.35 TO STA. 1698+00.00
 * 20'-0" FROM STA. 1616+45.35 TO STA. 1696+00.00 LT. & RT.
 * 8'-0" FROM STA. 1696+00.00 TO STA. 1698+00.00 LT.

PAVEMENT REQUIREMENTS				
PAVEMENT STRUCTURE	8'-0" TO 10'-5" SHOULDER (LEFT)	12'-0" DRIVING LANE (LEFT)	12'-0" DRIVING LANE (RIGHT)	8'-0" SHOULDER (RIGHT)
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 64-22 OK)	2" SUPERPAVE TYPE S4 (PG 70-28 OK)	2" SUPERPAVE TYPE S4 (PG 70-28 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	2.5" SUPERPAVE TYPE S3 (PG 64-22 OK)	2.5" SUPERPAVE TYPE S3 (PG 70-28 OK)	2.5" SUPERPAVE TYPE S3 (PG 70-28 OK)	2.5" SUPERPAVE TYPE S3 (PG 64-22 OK)
		3" SUPERPAVE TYPE S3 (PG 64-22 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)

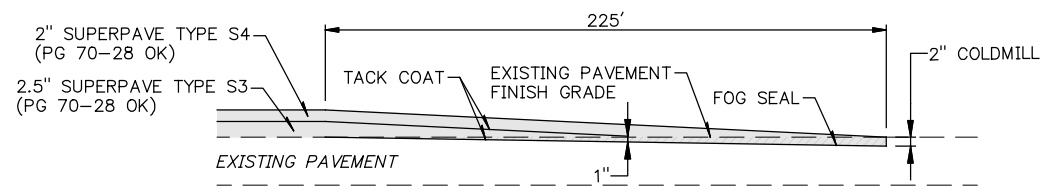


TYPICAL SECTION NO. 4
 SECTION LINE ROADS
 N1790 RD. STA. 297+90.16 TO STA. 299+41.83

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" DRIVING LANE
SURFACE COURSE	3" TRAFFIC BOUND SURFACE COURSE TYPE "E"

COLD MILLING DETAIL

STA. 1532+69 TO STA. 1534+94
 STA. 1705+06 TO STA. 1707+31 (OPPOSITE HAND)



① **BACKFILL NOTE:**
 TO BE BACKFILLED AS PART OF THE FINISHING OPERATIONS. QUANTITY IS MEASURED IN UNCLASSIFIED BORROW.

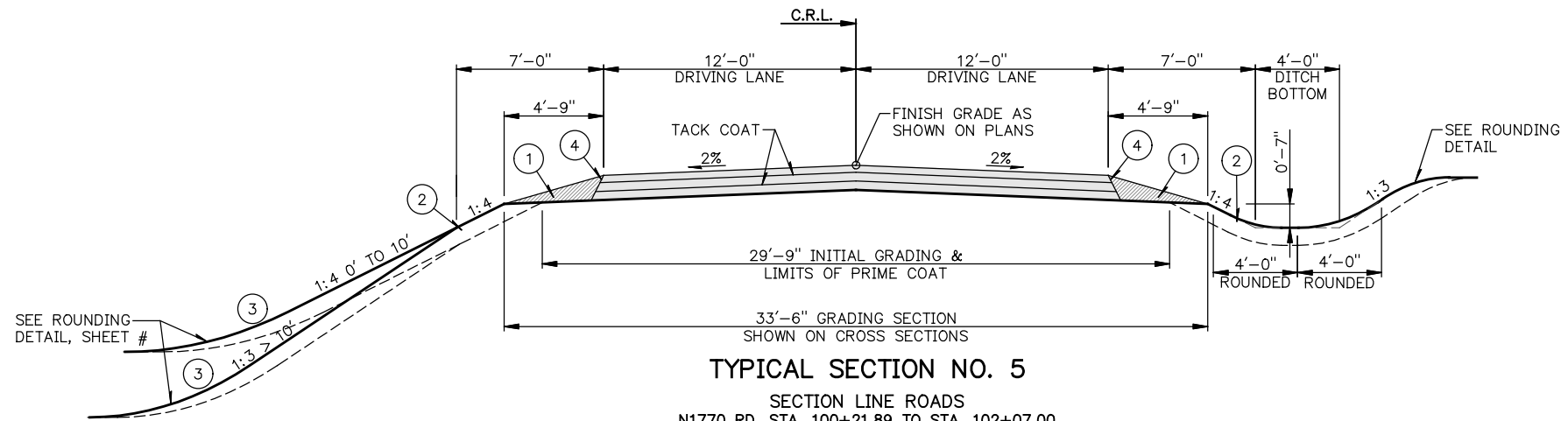
② **TOPSOIL NOTE:**
 THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATIONS SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.

 THE GRADING LINE AS SHOWN ON THE TYPICAL AND CROSS SECTIONS IS TO THE TOP OF THE TOPSOIL. EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGE AND THE TOPSOIL QUANTITY IS INCLUDED IN THE MASSLINE BALANCE.

③ DISTANCE MEASURED VERTICALLY FROM EDGE OF FINISHED GRADE SHOULDER.

④ CENTERLINE RUMBLE STRIP METHOD HMA CON.

⑤ RUMBLE STRIP METHOD HMA CYC.



TYPICAL SECTION NO. 5

SECTION LINE ROADS
 N1770 RD. STA. 100+21.89 TO STA. 102+07.00
 N1780 RD. STA. 198+68.50 TO STA. 199+72.00
 N1790 RD. STA. 299+41.83 TO STA. 299+72.00
 N1790 RD. STA. 300+12.07 TO STA. 300+74.57

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" DRIVING LANE
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	2.5" SUPERPAVE TYPE S3 (PG 64-22 OK)
	2.5" SUPERPAVE TYPE S3 (PG 64-22 OK)

① **BACKFILL NOTE:**
 TO BE BACKFILLED AS PART OF THE FINISHING OPERATIONS. QUANTITY IS MEASURED IN UNCLASSIFIED BORROW.

② **TOPSOIL NOTE:**
 THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATIONS SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.

 THE GRADING LINE AS SHOWN ON THE TYPICAL AND CROSS SECTIONS IS TO THE TOP OF THE TOPSOIL. EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGE AND THE TOPSOIL QUANTITY IS INCLUDED IN THE MASSLINE BALANCE.

③ DISTANCE MEASURED VERTICALLY FROM EDGE OF FINISHED GRADE SHOULDER.

④ PAVEMENT SAFETY EDGE

TYPICAL SECTIONS

State Job No. 29674(04) Sheet No. 0006

PAY QUANTITY NOTES

- (1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITIES. SEE THE ODOT 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SECTION 109.01.B "PLAN QUANTITIES".
- (2) FIGURED IN ACCORDANCE WITH THE DETAILS SHOWN ON STD. SBI-4-2, WITH AN ADDITIONAL 4' OF EXCAVATION FROM THE REMOVAL LINE TOWARD THE C SURVEY AT EACH END OF THE STRUCTURE. ANY ADDITIONAL EXCAVATION, SHEET PILING, OR OTHER EARTH RETAINING STRUCTURES REQUIRED FOR OR DURING CONSTRUCTION SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

GENERAL NOTES - BRIDGES "A", "B", "C" AND "D"

SPECIFICATIONS:

ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

CONCRETE:

ALL CONCRETE SHALL BE CLASS AA CONCRETE. ALL CONCRETE EDGES SHALL HAVE A 1 1/2" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. ALL CHAMFER STRIPS SHALL BE SIZED LUMBER.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE GRADE 60 AND HAVE A 2" MINIMUM CLEARANCE UNLESS OTHERWISE SHOWN ON THE PLANS. REINFORCING STEEL IN THE BOTTOM SLAB SHALL BE SUPPORTED ON BAR CHAIRS. REINFORCING STEEL IN THE TOP SLAB SHALL BE SUPPORTED ON SLAB SPACERS. REINFORCING STEEL IN THE WALLS SHALL BE HELD IN PLACE BY METAL CHAIRS. MAXIMUM SPACING OF CHAIRS SHALL BE AT 6'-0" CENTERS.

SOME REINFORCING STEEL BAR MARKS ARE REPEATED BETWEEN AND WITHIN BRIDGES "A", "B", "C" AND "D". TO ENSURE THAT ALL BARS ARE PLACED WITH THE CORRECT BRIDGE OR COMPONENT, THE BRIDGE LETTER AND COMPONENT SHOULD ACCOMPANY THE BAR MARK.

VERIFICATION OF EXISTING CONDITIONS:

ALL STATIONS, OFFSETS, FLOW LINES AND DIMENSIONS OF THE EXISTING BRIDGE SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS NECESSARY TO CONNECT THE NEW MATERIAL AND SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY THEREOF.

BIDDERS SHALL FULLY INFORM THEMSELVES OF THE NATURE OF THE WORK AND CONDITIONS UNDER WHICH IT WILL BE PERFORMED. THE CONTRACTOR SHALL ADOPT METHODS CONSISTENT WITH GOOD CONSTRUCTION PRACTICES AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THE EXISTING BRIDGE OR ATTACHMENTS. ANY DAMAGE TO THE EXISTING BRIDGE STRUCTURE DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

GENERAL NOTES - BRIDGE "A"

REMOVAL OF CULVERT END:

ITEM "REMOVAL OF CULVERT END" CONSISTS OF THE REMOVAL AND DISPOSAL OF THE WINGS, WING FOOTINGS, CURTAIN WALL, AND THE STRIPPING OF THE CONCRETE AND EXPOSING THE LONGITUDINAL STEEL IN THE BARREL OF THE EXISTING 5-10'X4' BRIDGE BOX AT C SURVEY STATION 1544+06.34 AS SHOWN IN THE PLANS. REFER TO SUBSECTION 508.04.G. OF THE STANDARD SPECIFICATIONS. ALL MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

GENERAL NOTES - BRIDGE "B"

REMOVAL OF CULVERT END:

ITEM "REMOVAL OF CULVERT END" CONSISTS OF THE REMOVAL AND DISPOSAL OF THE WINGS, WING FOOTINGS, AND THE STRIPPING OF THE CONCRETE AND EXPOSING THE LONGITUDINAL STEEL IN THE BARREL OF THE EXISTING 4-10'X3' BRIDGE BOX AT C SURVEY STATION 1609+64.53 AS SHOWN IN THE PLANS. REFER TO SUBSECTION 508.04.G. OF THE STANDARD SPECIFICATIONS. ALL MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

GENERAL NOTES - BRIDGE "C"

REMOVAL OF CULVERT END:

ITEM "REMOVAL OF CULVERT END" CONSISTS OF THE REMOVAL AND DISPOSAL OF THE WINGS, WING FOOTINGS, AND THE STRIPPING OF THE CONCRETE AND EXPOSING THE LONGITUDINAL STEEL IN THE BARREL OF THE EXISTING 4-10'X5' BRIDGE BOX AT C SURVEY STATION 1674+17.67 AS SHOWN IN THE PLANS. REFER TO SUBSECTION 508.04.G. OF THE STANDARD SPECIFICATIONS. ALL MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

GENERAL NOTES - BRIDGE "D"

REMOVAL OF CULVERT END:

ITEM "REMOVAL OF CULVERT END" CONSISTS OF THE REMOVAL AND DISPOSAL OF THE WINGS, CURTAIN WALL, APRON AND THE STRIPPING OF THE CONCRETE AND EXPOSING THE LONGITUDINAL STEEL IN THE BARREL OF THE EXISTING 2-10'X5' BRIDGE BOX AT C SURVEY STATION 1701+58.98 AS SHOWN IN THE PLANS. REFER TO SUBSECTION 508.04.G. OF THE STANDARD SPECIFICATIONS. ALL MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

INDEX OF BRIDGE SHEETS

AB01 PAY QUANTITIES AND GENERAL NOTES (BRIDGES)

INDEX OF BRIDGE SHEETS (BRIDGE "A")

B001 GENERAL PLAN AND ELEVATION (BRIDGE "A")
B002 - B009 BRIDGE "A" DETAILS

INDEX OF BRIDGE SHEETS (BRIDGE "B")

B010 GENERAL PLAN AND ELEVATION (BRIDGE "B")
B011 - B018 BRIDGE "B" DETAILS

INDEX OF BRIDGE SHEETS (BRIDGE "C")

B019 GENERAL PLAN AND ELEVATION (BRIDGE "C")
B020 - B025 BRIDGE "C" DETAILS

INDEX OF BRIDGE SHEETS (BRIDGE "D")

B026 GENERAL PLAN AND ELEVATION (BRIDGE "D")
B027 - B033 BRIDGE "D" DETAILS

29674(04) PAY QUANTITIES - BRIDGE "A"				
0200 BRIDGE "A" EXTEND 5-10'x4' BRIDGE BOX WITH SP. END SECTIONS AND 4'-0" CURTAIN WALLS, SKEWED 00°06'56.19" L.F.				
ITEM	PES NO.	DESCRIPTION	UNIT	QUANTITY
202(A)	1301	UNCLASSIFIED EXCAVATION	(1)(2) CY	570.00
501(A)	1306	STRUCTURAL EXCAVATION UNCLASSIFIED	(1) CY	230.00
508	6335	REMOVAL OF CULVERT END	EA	2.00
509(A)	1326	CLASS AA CONCRETE	(1) CY	270.30
511(A)	1332	REINFORCING STEEL	(1) LB	51,490.00

29674(04) PAY QUANTITIES - BRIDGE "B"				
0201 BRIDGE "B" EXTEND 4-10'x3' BRIDGE BOX WITH SP. END SECTIONS AND 4'-0" CURTAIN WALLS, SKEWED 00°19'22.60" R.F.				
ITEM	PES NO.	DESCRIPTION	UNIT	QUANTITY
202(A)	1301	UNCLASSIFIED EXCAVATION	(1)(2) CY	490.00
501(A)	1306	STRUCTURAL EXCAVATION UNCLASSIFIED	(1) CY	191.00
508	6335	REMOVAL OF CULVERT END	EA	2.00
509(A)	1326	CLASS AA CONCRETE	(1) CY	329.10
511(A)	1332	REINFORCING STEEL	(1) LB	46,970.00

29674(04) PAY QUANTITIES - BRIDGE "C"				
0202 BRIDGE "C" EXTEND 4-10'x5' BRIDGE BOX WITH SP. END SECTIONS AND CURTAIN WALLS, SKEWED 00°17'37.83" R.F.				
ITEM	PES NO.	DESCRIPTION	UNIT	QUANTITY
202(A)	1301	UNCLASSIFIED EXCAVATION	(1)(2) CY	720.00
501(A)	1306	STRUCTURAL EXCAVATION UNCLASSIFIED	(1) CY	221.00
508	6335	REMOVAL OF CULVERT END	EA	2.00
509(A)	1326	CLASS AA CONCRETE	(1) CY	377.90
511(A)	1332	REINFORCING STEEL	(1) LB	50,090.00

29674(04) PAY QUANTITIES - BRIDGE "D"				
0203 BRIDGE "D" EXTEND 2-10'x5' BRIDGE BOX WITH SP. END SECTIONS AND 4'-0" CURTAIN WALLS, SKEWED 00°25'42.72" R.F.				
ITEM	PES NO.	DESCRIPTION	UNIT	QUANTITY
202(A)	1301	UNCLASSIFIED EXCAVATION	(1)(2) CY	460.00
501(A)	1306	STRUCTURAL EXCAVATION UNCLASSIFIED	(1) CY	169.00
508	6335	REMOVAL OF CULVERT END	EA	2.00
509(A)	1326	CLASS AA CONCRETE	(1) CY	233.90
511(A)	1332	REINFORCING STEEL	(1) LB	33,630.00

PAY QUANTITIES AND GENERAL NOTES (BRIDGES)

ENVIRONMENTAL MITIGATION NOTES

REVISIONS		
REV. NO.	DESCRIPTION	DATE

EARTHWORK NOTE:
 THE CONTRACTOR MUST ENSURE THAT ANY MATERIAL INCORPORATED INTO THE PROJECT IS FREE OF ANY HAZARDOUS, INDUSTRIAL OR CONTAMINATED WASTE. REFER TO SUB-SECTIONS 106.01 AND 202.02 OF THE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

IMPORTED MATERIAL (EG. BORROW) - IF MATERIAL IS IMPORTED TO THE PROJECT AND AT ANY POINT THE MATERIAL IS DETERMINED BY THE ENGINEER TO INCLUDE ANY TYPE OF UNACCEPTABLE CONTAMINATION, THE MATERIAL MAY REQUIRE REMOVAL, IN WHOLE, OR IN PART. IF REMOVAL IS REQUIRED, THEN THE INITIAL PLACEMENT, REMOVAL AND PROPER DISPOSAL OF THIS MATERIAL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE DISPOSAL OF THE UNACCEPTABLE MATERIAL SHALL BE APPROVED BY THE ENGINEER. REFER TO SUB-SECTION 107.15 OF THE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

TO ASSIST THE CONTRACTOR, THE "OFF PROJECT FACILITY/ BORROW SITE HAZARDOUS MATERIALS QUESTIONNAIRE" IS PROVIDED ON THE DEPARTMENT'S WEB SITE:

[HTTPS://OK.GOV/ODOT/PROGRAMS_AND_PROJECTS/ENVIRONMENTAL/INDEX.HTML](https://ok.gov/odot/programs_and_projects/environmental/index.html)

THIS QUESTIONNAIRE IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR SO THAT A CLEARER UNDERSTANDING OF THE CHARACTERISTICS OF THE PROPOSED SITE/ MATERIAL IS ACHIEVED. COMPLETION AND SUBMITTAL OF THIS FORM TO THE ENGINEER DOES NOT EXCUSE THE CONTRACTOR FROM PROVIDING MATERIALS THAT ARE FREE OF HAZARDOUS AND INDUSTRIAL COMPOSITION IN ACCORDANCE WITH SUB-SECTIONS 106.01 AND 202.02 OF THE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

NON-COMPLIANCE NOTE:
 FAILURE TO IMPLEMENT THE COMMITMENTS SPECIFIED IN THE PLAN NOTES CAN RESULT IN NON-COMPLIANCE ISSUES ON THE PROJECT. WORK ACTIVITIES MAY BE SUSPENDED ON THE PROJECT, FOR AN UNDETERMINED DURATION, WHILE WORKING WITH REGULATORS TO BRING THE PROJECT BACK INTO COMPLIANCE. THE CONTRACTOR WILL NOT BE COMPENSATED FOR TIME LOST.

WATER QUALITY CONSERVATION NOTE:
 APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE IMPACTS FROM STORM WATER DISCHARGES AND SEDIMENTATION IN STREAMS, AS ESTABLISHED BY THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY, SHALL BE CONSCIENTIOUSLY IMPLEMENTED THROUGHOUT THE PROPOSED CONSTRUCTION PERIODS, IN ORDER TO MINIMIZE ANY POTENTIAL IMPACTS TO ANY LISTED SPECIES. THE EFFECTIVENESS OF EROSION CONTROLS SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. HAZARDOUS MATERIALS, CHEMICALS, FUELS, LUBRICATING OILS, AND OTHER SUCH SUBSTANCES SHALL BE STORED AT LEAST 100 FEET FROM THE ORDINARY HIGH WATER MARK (OHWM). REFUELING OF CONSTRUCTION EQUIPMENT SHALL ALSO BE CONDUCTED AT LEAST 100 FEET FROM THE OHWMS. SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED AROUND STAGING AREAS TO PROHIBIT DISCHARGE OF MATERIALS FROM THESE SITES. CONSTRUCTION WASTE MATERIALS AND DEBRIS SHALL BE STOCKPILED AT LEAST 25 FEET OUTSIDE OF THE OHWMS, AND THESE MATERIALS SHALL BE REMOVED AND DISPOSED OF PROPERLY FOLLOWING COMPLETION OF THE PROJECT. PREVENTATIVE MEASURES MUST BE TAKEN TO PROHIBIT THE DISCHARGE OF CONTAMINANTS INTO ANY SURFACE WATERS.

MIGRATORY BIRD:
 MIGRATORY BIRDS ARE PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. MANY BIRDS COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR MOST MIGRATORY BIRD SPECIES EXTENDS FROM MARCH 1 TO AUGUST 31. MIGRATORY BIRD NESTING USE OF THE TWO SH-15 BRIDGES (NB104477 AND 04348) INVOLVED WITH THIS PROJECT WAS OBSERVED. PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION OF THE EXISTING BRIDGE/STRUCTURES SHALL BE CONDUCTED BETWEEN SEPTEMBER 1, AND FEBRUARY 28, WHEN MIGRATORY BIRD NESTS ARE NOT OCCUPIED. IF PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION CANNOT BE COMPLETED BETWEEN SEPTEMBER 1 AND FEBRUARY 28, THE BRIDGE SHALL BE PROTECTED FROM NEW NEST ESTABLISHMENT PRIOR TO MARCH 1, BY MEANS THAT DO NOT RESULT IN BIRD DEATH OR INJURY. OPTIONS INCLUDE THE EXCLUSION OF ADULT BIRDS FROM SUITABLE NEST SITES ON OR WITHIN A STRUCTURE BY THE PLACEMENT OF WEATHER-RESISTANT POLYPROPYLENE NETTING WITH 0.25-INCH OR SMALLER OPENINGS, PRIOR TO MARCH 1. METHODS OTHER THAN NETTING MUST BE PRE-APPROVED BY THE ODOT BIOLOGIST.

ALTHOUGH NO NESTS WERE OBSERVED ON ALL OTHER STRUCTURES, THE BIRDS MAY OCCUPY THE STRUCTURES IN THE FUTURE. THE RESIDENT ENGINEER SHALL CONTACT THE ODOT BIOLOGIST AT 405-521-2515 IF ANY BIRD USE OF THE EXISTING STRUCTURES IS OBSERVED. IF BIRDS ARE OBSERVED THEN PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION OF THE EXISTING BRIDGE/STRUCTURES SHALL BE CONDUCTED BETWEEN SEPTEMBER 1, AND FEBRUARY 28, WHEN MIGRATORY BIRD NESTS ARE NOT OCCUPIED.

CULTURAL RESOURCES:
 LOCATIONS OUTSIDE THE PROJECT AREA IN THE FOLLOWING AREA MUST NOT BE UTILIZED FOR BORROW, EQUIPMENT STAGING, HAUL ROADS, SPOIL DUMPS OR ANY OFF-SITE PROJECT-RELATED ACTIVITY.
 T21NR24W:
 SECTION 9: NE¹/₄NE ¹/₄SE¹/₄
 NW¹/₄NE ¹/₄SE¹/₄

HAZARDOUS WASTE:
 THIS PROJECT IS IN CLOSE PROXIMITY TO AREAS THAT HAVE HISTORICALLY BEEN USED FOR THE EXPLORATION AND EXTRACTION OF CRUDE OIL. AS A RESULT, THERE IS A POTENTIAL TO ENCOUNTER CRUDE OIL PRODUCTS AND RELATED WASTES. IF SUCH MATERIALS ARE FOUND, THE RESIDENT ENGINEER SHOULD BE NOTIFIED IMMEDIATELY.

IN ADDITION, THERE IS A POTENTIAL TO ENCOUNTER GATHERING LINES AND OTHER PIPING, AND ABANDONED OIL, GAS OR SALT WATER DISPOSAL WELLS. ANY WELLS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES MUST BE PLUGGED, BY PROPERLY LICENSED PERSONNEL, IN ACCORDANCE WITH ALL APPLICABLE OKLAHOMA CORPORATION COMMISSION RULES AND REGULATIONS.

ENVIRONMENTAL NOTES	DETAIL		
	REVIEW		
	APPROVED		
	ENVIRONMENTAL DIVISION		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION		JOB/PIECE NO. 29674(04) SHEET NO. AE01

PAY QUANTITY NOTES

- (R-3) INCLUDES 500 CU. YDS. FOR DRIVEWAYS, RETURNS, DIKES, AND MISCELLANEOUS EARTHWORK.
- (R-4) AN ESTIMATED QUANTITY OF 17,117 C.Y. TOPSOIL TO BE RESERVED FOR REPLACEMENT OF APPROXIMATELY 5" ON COMPLETED FORESLOPES, DITCHES, AND BACKSLOPES. THIS QUANTITY IS INCLUDED IN THE EARTHWORK BALANCE. ANY ADDITIONAL EXCAVATION REQUIRED IN CUT SECTIONS TO ALLOW FOR PLACEMENT OF TOPSOIL TO FINAL GRADE, SHALL BE INCLUDED IN THE PRICE BID.
- (R-6) FOR SOLID SLAB SODDING PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER, ESTIMATED AT 200 POUNDS PER 1,000 AC. FOR TYPE A SALVAGE TOPSOIL PRICE BID TO INCLUDE COST OF 18-46-0 FERTILIZER, ESTIMATED AT 150 POUNDS PER 1,000 S.Y.
- (R-7) FOR SOLID SLAB SODDING PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 40 GALLONS PER S.Y.
- (R-8) PRICE BID TO INCLUDE COST OF SEDIMENT REMOVAL AND ALL MAINTENANCE. SEDIMENT MUST BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE DEVICE.
- (R-11) THE QUANTITIES ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 25 ACRES.
- (R-15) QUANTITY BASED ON TWO APPLICATIONS.
- (R-18) ESTIMATED AT 141 LBS. PER CU. FT.
- (R-21) PRIME COAT SHALL BE APPLIED AT AN ESTIMATED RATE OF 0.35 GAL. PER SQ. YD. WHEN APPLIED TO SUBGRADE, AND 0.25 GAL. PER SQ. YD. WHEN APPLIED TO AGGREGATE BASE. THE ACTUAL CUTBACK PRIME COAT REQUIRED FOR PLACEMENT OPERATIONS WILL BE DETERMINED BY THE CONTRACTOR, AND SHALL CONSIDER THE RESIDUE FROM DISTILLATION PERCENTAGE SHOWN IN SECTION 708.03 OF THE STANDARD SPECIFICATIONS.
- (R-24) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.
- (R-26) PRICE BID TO INCLUDE COST OF FOG SEAL, MEETING THE REQUIREMENTS OF SECTION 407 OF THE STANDARD SPECIFICATIONS.
- (R-30) QUANTITY INCLUDES AN ESTIMATED 25 C.Y. TO BE USED AS DIRECTED BY THE ENGINEER.
- (R-36) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES, AND OTHER STRUCTURES WITHIN THE RIGHT OF WAY.
- (R-37) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
- (R-38) MATERIALS REMOVED SHALL NOT BE MEASURED FOR PAYMENT UNDER SECTION 202.06 UNCLASSIFIED EXCAVATION.
- (R-40) INCLUDES 2% FOR GROUND MEASUREMENT.
- (R-41) ALL GATES AND GATE END POSTS FOR STRANDED WIRE FENCE (SWF) SHALL BE CONSTRUCTED AT THE SAME WIDTH AS THE EXISTING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- (1) PRICE BID TO INCLUDE COST OF TEMPORARY SEDIMENT TRAP.
- (2) VEGETATIVE MULCH SHALL BE WHEAT HAY ONLY.
- (3) PRICE BIDS INCLUDES 500 TONS TO BE USED AS DIRECTED BY THE ENGINEER.
- (4) TACK COAT SHALL BE APPLIED AT AN ESTIMATED RATE OF 0.15 GAL. PER SQ. YD. OF DILLUTED EMULSION. PAYMENT BASED ON QUANTITY OF ORIGINAL EMULSION.
- (5) BITUMINOUS BINDER SHALL BE APPLIED AT A TARGET RATE OF 0.25 GAL. OF RESIDUAL ASPHALT PER SQ. YD. OF FABRIC REINFORCEMENT OR AS RECOMMENDED BY FABRIC MANUFACTURER. QUANTITY CALCULATED BASED ON 4'-6" WIDTH.
- (6) GALVANIZED CORRUGATED STEEL STAY IN PLACE FORM MAY BE UTILIZED ON ANY 2' TALL RCB AS APPROVED BY THE ENGINEER.
- (7) PRICE BID TO INCLUDE THE COST OF PIPE UNDERDRAIN COVER MATERIAL AND TRENCH EXCAVATION.
- (8) QUANTITY INCLUDES 45 TONS TO BE USED FROM SHOULDER EDGE TO BRIDGE HEADWALL ON EAST SIDE OF BRIDGE "B".
- (9) PRICE BID TO INCLUDE THE COST OF TRENCH EXCAVATION AND STANDARD BEDDING MATERIAL.

GENERAL CONSTRUCTION NOTES

IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT, THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE-CALL SYSTEM, INC. 48 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE-CALL SYSTEM, INC. "CALL OKIE" 1-800-522-6543 OR 811.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL AND THROUGH TRAFFIC. SEE STANDARD SPECIFICATIONS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

MAINTENANCE OF THROUGH TRAFFIC INCLUDES THE MAINTENANCE OF THE EXISTING ROAD IN CLOSE PROXIMITY TO THE NEW CONSTRUCTION AS SHOWN ON THE PLANS.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING SECTION LINE ROADS TO LOCAL AND THROUGH TRAFFIC. SEE STANDARD SPECIFICATIONS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

FOR PROJECTS THAT INCLUDE WIDENING AND/OR RESURFACING, THE CONTRACTOR SHALL SCHEDULE OPERATIONS TO MINIMIZE POTENTIAL DROP-OFF HAZARDS AND SHALL SUBMIT A SEQUENCE OF CONSTRUCTION OPERATIONS TO THE RESIDENT ENGINEER FOR APPROVAL BEFORE OPERATIONS BEGIN. ANY PORTION OF THE CONSTRUCTION OPERATIONS, SUCH AS SUPERPAVE LAYING OPERATIONS, EXCAVATION FOR PAVEMENT WIDENING, OR EXTENSION OF ROADWAY STRUCTURES, SHALL BE LIMITED TO ONE SIDE AT A TIME, AND THE PROCEDURES OUTLINED IN THE PAVEMENT DROP OFF TREATMENT STANDARD PDT-1 (LATEST REVISION) SHALL BE IMPLEMENTED. ONLY THAT AMOUNT OF OPEN TRENCH WILL BE ALLOWED THAT CAN BE SURFACED IN 1 (ONE) DAY'S TIME WITHOUT APPROVAL BY THE ENGINEER. LIGHTS, SIGNS AND BARRICADES SHALL BE MOVED AS WORK PROGRESSES.

ALL TREES, BRUSH, AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER SHALL BE CLEANED OUT TO THE RIGHT-OF-WAY LINE, AT EACH STRUCTURE AND BRIDGE, IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY RIGHT-OF-WAY FENCE AS REQUIRED. WHEN THE PORTION OF THE PROJECT THAT REQUIRED THIS FENCE IS COMPLETED, THE TEMPORARY FENCE SHALL BE REMOVED, AND PERMANENT RIGHT-OF-WAY FENCING SHALL BE RESTORED OR INSTALLED IN A MANNER APPROVED BY THE ENGINEER. ALL COST FOR TEMPORARY FENCING SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

ALL FLOWLINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY TAMPED BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

IN ORDER TO ALLEVIATE DUST CONDITIONS DURING GRADING OPERATIONS AND BEFORE PAVEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL SPRINKLE GRADING AT INTERVALS APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

THIS PROJECT IS LOCATED NEAR KNOWN SOURCES OF GYPSUM (SULFATE) DEPOSITS. SPECIAL ATTENTION SHOULD BE USED TO AVOID BORROW MATERIAL THAT COULD ADVERSELY INTERACT WITH THE CALCIUM BASED ADDITIVES (FLY ASH, PORTLAND CEMENT, CEMENT KILN DUST, AND LIME) USED IN THE STABILIZED SUBGRADE. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE SULFATE TESTING OF BORROW PIT SITES AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS AND BACKFILLS ARE COMPLETED. EXCESS UNCLASSIFIED EXCAVATION MATERIAL DETERMINED BY THE ENGINEER TO BE SUITABLE FOR BACKFILL SHALL BE USED TO REDUCE ANY UNCLASSIFIED BORROW NEEDED. COST OF SECOND HANDLING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. ANY REMAINING EXCESS EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

PRIME COAT SHALL BE APPLIED TO THE SUBGRADE IMMEDIATELY AFTER FINAL COMPACTION AND SHAPING TO RETAIN MOISTURE FOR PROPER CHEMICAL REACTION OF THE SOIL ADDITIVE.

THE CONTRACTOR SHALL KEEP THE OPEN TRENCH DRAINED. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

VEGETATIVE MULCHING: THE VEGETATIVE MULCH SHALL BE ANCHORED IN ACCORDANCE WITH THE "MULCHING-TILLER METHOD", AS SPECIFIED IN 233.04B(2) OF THE STANDARD SPECIFICATIONS.

AREAS ON WHICH SALVAGED TOPSOIL IS TO BE REPLACED SHALL HAVE 18-46-0 FERTILIZER APPLIED, AT THE RATE OF 150 POUNDS PER ACRE, JUST PRIOR TO THE REPLACEMENT OF SALVAGED TOPSOIL.

AT THE BEGINNING OF TURFING OPERATIONS, ANY AREAS INCLUDED IN PLANNED QUANTITIES THAT HAVE GROWN A SATISFACTORY VOLUNTEER TURF OF PERENNIAL GRASS, AS DETERMINED BY THE ENGINEER, SHALL BE FERTILIZED AND WATERED AS CALLED FOR ON THE PLANS, BUT SHALL NOT BE SEEDED, SODDED, OR SPRIGGED.

PIPE UNDERDRAIN QUANTITIES ESTIMATED ONLY. LOCATION, IF AND WHERE REQUIRED, TO BE DETERMINED BY THE ENGINEER.

THE CONTRACTOR SHALL REMOVE AND RESET MAILBOXES AS NECESSARY. MAILBOXES ARE TO BE MAINTAINED IN AN UPRIGHT POSITION AND ACCESSIBLE TO MAIL CARRIER'S CAR DURING CONSTRUCTION. ANY DAMAGE TO BOXES OR SUPPORTS SHALL BE REPAIRED BY THE CONTRACTOR. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

SURFACING OF RETURNS, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL BE OF THE SAME MATERIAL (BASE AND SURFACE) AS THAT OF THE ABUTTING SHOULDER OF THE MAINLINE. BASE AND SURFACE THICKNESS SHALL BE THE THICKNESS SHOWN ON PLANS.

T.B.S.C. SURFACES SHALL BE SPRINKLED WITH WATER AND ROLLED WITH A PNEUMATIC ROLLER IN A MANNER APPROVED BY THE ENGINEER.

PAY QUANTITIES - ROADWAY				
ROADWAY 100				
ITEM		DESCRIPTION	UNIT	QUANTITY
201(A)	0102	CLEARING AND GRUBBING	LSUM	1.0
202(A)	0183	UNCLASSIFIED EXCAVATION	CY	19,541.0
202(D)	0184	UNCLASSIFIED BORROW	CY	18,376.0
205(A)	4229	TYPE A-SALVAGED TOPSOIL	LSUM	1.0
221(C)	2801	TEMPORARY SILT FENCE	LF	13,383.0
221(F)	0100	TEMPORARY SILT DIKE	LF	2,527.0
221(G)	0150	TEMPORARY ROCK FILTER DAM TYPE 1	CY	29.0
230(A)	2806	SOLID SLAB SODDING	SY	123,240.0
233(A)	2817	VEGETATIVE MULCHING	AC	25.0
	241	MOWING	AC	86.0
307(K)	4300	STABILIZED SUBGRADE	SY	39,253.0
402(E)	0225	TRAFFIC BOUND SURFACE COURSE TYPE E	TON	1,188.0
407(B)	0250	TACK COAT	GAL	16,277.0
408	5774	PRIME COAT	GAL	15,096.0
409(A)	4242	FABRIC REINFORCEMENT	SY	11,741.0
409(B)	4268	BITUMINOUS BINDER	GAL	3,302.0
411(B)	5940	SUPERPAVE, TYPE S3 (PG 70-28 OK)	TON	6,518.0
411(B)	5945	SUPERPAVE, TYPE S3 (PG 64-22 OK)	TON	18,558.0
411(C)	5955	SUPERPAVE, TYPE S4 (PG 70-28 OK)	TON	5,216.0
411(C)	5960	SUPERPAVE, TYPE S4 (PG 64-22 OK)	TON	4,036.0
412	5267	COLD MILLING PAVEMENT	SY	1,706.0
413(A)	4870	RUMBLE STRIP-CENTERLINE HMA-CON	LF	17,187.0
413(B)	4863	RUMBLE STRIP-METHOD HMA-CYC	LF	34,683.0
501(A)	0313	STRUCTURAL EXCAVATION UNCLASSIFIED	CY	55.0
509(A)	0319	CLASS AA CONCRETE	CY	50.0
509(B)	0321	CLASS A CONCRETE	CY	97.0
509(D)	0325	CLASS C CONCRETE	CY	25.0
511(A)	0332	REINFORCING STEEL	LB	16,712.0
613(A)	0491	18" R.C.PIPE CLASS III	LF	134.0
613(A)	0492	24" R.C.PIPE CLASS III	LF	116.0
613(A)	4495	22" X 13" R.C.PIPE ARCH CLASS A-III	LF	346.0
613(A)	4496	28" X 18" R.C.PIPE ARCH CLASS A-III	LF	252.0
613(A)	4498	43" X 26" R.C.PIPE ARCH CLASS A-III	LF	52.0
613(H)	0450	6" PERFORATED PIPE UNDERDRAIN ROUND	LF	1,213.0
613(I)	1096	6" NON-PERF.PIPE UNDERDRAIN RND.	LF	405.0
613(L)	4531	43" X 26" PREFAB. CULVERT END SECTION, ARCH	EA	2.0
613(M)	7196	TYPE A6 CULVERT END TREATMENT	EA	14.0
613(M)	7197	TYPE B6 CULVERT END TREATMENT	EA	8.0
613(Q)	5946	OUTLET LATERAL HEADWALL	EA	4.0
619(A)	0920	REMOVAL OF STRUCTURES & OBSTRUCTIONS	LSUM	1.0
619(B)	0291	REMOVAL OF HEADWALL	EA	12.0
619(B)	4728	REMOVAL OF ASPHALT PAVEMENT	SY	7,505.0
619(C)	0924	SAWING PAVEMENT	LF	26,800.0
624(A)	4281	FENCE-STYLE WWWF	LF	329.0
624(C)	4458	FENCE-STYLE SWF (4 BARBED WIRE)	LF	942.0
624(C)	4459	FENCE-STYLE SWF (5 BARBED WIRE)	LF	8,081.0
624(C)	7181	FENCE-STYLE SWF (6 BARBED WIRE)	LF	924.0
629(B)	4959	MAILBOX INSTALLATION-MULTIPLE	EA	1.0
629(C)	4960	MAILBOX	EA	2.0
629(D)	4961	REMOVAL OF MAILBOX INSTALLATION	EA	2.0

PAY QUANTITIES (STAKING)				
STAKING 600				
ITEM	PES. NO	DESCRIPTION	UNIT	QUANTITY
642(B)	0096	CONSTRUCTION STAKING LEVEL II	LSUM	1

PAY QUANTITIES (CONSTRUCTION)				
CONSTRUCTION 640				
ITEM	PES. NO	DESCRIPTION	UNIT	QUANTITY
220	2800	SWPPP DOCUMENTATION AND MANAGEMENT	LSUM	1
641	1552	MOBILIZATION	LSUM	1

PAY QUANTITIES & NOTES (ROADWAY)

State Job No. 29674(04) Sheet No. AR01

BNSF RAILWAY COMPANY NOTES

NOTIFICATION OF WORK:

THE CONTRACTOR IS REQUIRED TO GIVE THE BNSF RAILWAY COMPANY AT LEAST 10 WORKING DAYS ADVANCE NOTICE, IN WRITING, BEFORE ANY WORK IS STARTED ON THE SITE. TO AVOID HAZARDS, THE BNSF RAILWAY COMPANY MAY HAVE A REPRESENTATIVE PRESENT, IF DEEMED NECESSARY, FOR THE PURPOSE OF INSPECTION AND THE ISSUANCE OF ANY APPROPRIATE INSTRUCTIONS FOR RAILWAY OPERATIONS DURING THE WIDENING AND RECONSTRUCTION OF SH-15 IN ELLIS COUNTY AS IT RELATES TO THE BNSF RAILWAY COMPANY'S PROPERTY. (PROJECT PARALLELS BNSF TRACK, MILEPOST 412.00 – 410.19, PANHANDLE SUBDIVISION)

THE CONTRACTOR SHALL NOTIFY:

MR. ALEXANDER SERPAS
BNSF ROADMASTER
BNSF RAILWAY COMPANY
PHONE: 682-225-9200
EMAIL: ALEXANDER.SERPAS@BNSF.COM

MR. TIM HUYA
MANAGER PUBLIC PROJECTS
BNSF RAILWAY COMPANY
PHONE: 817-352-2902
EMAIL: TIM.HUYA@BNSF.COM

FLAGGING AND INSURANCE:

FLAGGING AND INSURANCE SHALL BE PROVIDED AS SPECIFIED IN SECTION 107 OF THE STANDARD SPECIFICATIONS AND IN THE SPECIAL PROVISIONS FOR RAILROAD FLAGGING (SEE PROPOSAL FOR SPECIAL PROVISIONS) AND WHAT IS STATED IN THE BNSF RAILWAY COMPANY CONTRACTOR'S GENERAL CONSTRUCTION AGREEMENT, EXHIBITS C AND C-1. BNSF RAILWAY COMPANY, AT THEIR DISCRETION, SHALL PROVIDE FLAGGING FOR THE RAILWAY DURING CONSTRUCTION OPERATIONS.

THE CONTRACTOR IS REQUIRED TO REIMBURSE BNSF RAILWAY COMPANY FOR FLAGGING SERVICES PROVIDED.

THE CONTRACTOR SHALL ALSO FURNISH SATISFACTORY EVIDENCE TO THE STATE OF OKLAHOMA THAT THEY HAVE PROVIDED INSURANCE OF THE KINDS AND AMOUNTS AS SPECIFIED IN THE SPECIAL PROVISIONS FOR RAILROAD INSURANCE AND IN THE BNSF RAILWAY CONTRACTOR'S GENERAL CONSTRUCTION AGREEMENT, EXHIBITS C AND C-1.

THE CONTRACTOR WILL BE REQUIRED TO ENTER INTO A CONTRACTOR'S GENERAL CONSTRUCTION AGREEMENT, EXHIBITS C AND C-1, WITH THE BNSF RAILWAY COMPANY BEFORE THEY WILL BE ALLOWED ON THE RAILROAD'S RIGHT-OF-WAY.

PRE-WORK MEETING:

PRIOR TO WORKING ON THE BNSF RAILWAY COMPANY'S RIGHT-OF-WAY OR IN THE VICINITY OF THEIR TRACKS, YOU **MUST** CONTACT THE LOCAL ROADMASTER FOR THE BNSF RAILWAY COMPANY TO COORDINATE YOUR WORK. IT IS **VITAL** THAT YOU HAVE CONTACT WITH THE BNSF RAILWAY COMPANY ROADMASTER PRIOR TO GETTING ON THE RAILROAD'S PROPERTY.

COORDINATION WITH RAILROAD

THE CONTRACTOR SHALL CONDUCT CONSTRUCTION OPERATIONS IN A MANNER WHICH WILL NOT DELAY OR INTERFERE WITH TRAIN OPERATIONS. CONSTRUCTION ACTIVITY WITHIN 25 (TWENTY-FIVE) FEET OF ACTIVE TRACKS WILL REQUIRE A FLAGMAN TO BE PROVIDED BY THE BNSF RAILROAD COMPANY AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE BNSF RAILWAY COMPANY ROADMASTER, A MINIMUM OF 30 (THIRTY) CALENDAR DAYS IN ADVANCE OF WHEN FLAGGING IS REQUIRED.

SPECIAL PERMISSION MUST BE OBTAINED FROM THE BNSF RAILWAY COMPANY BEFORE MOVING ANY EQUIPMENT OR OTHER OBJECT WHICH COULD MAKE THE TRACK IMPASSABLE IF IT FELL WITHIN THE AREA SHOWN ON THE CONSTRUCTION CLEARANCE DIAGRAM.

- THE CONTRACTOR WORK ACTIVITIES ARE WITHIN 25 (TWENTY-FIVE) FEET OF THE TRACK, MEASURED FROM THE TRACK CENTERLINE.
- ACTIVITIES ARE OVER OR UNDER THE TRACK.
- CRANES OR SIMILAR EQUIPMENT WILL NOT BE POSITIONED WHERE THEY COULD FOUL THE TRACK IF THEY TIPPED OVER OR EXPERIENCED SOME OTHER CATASTROPHIC EVENT.
- IN THE OPINION OF THE BNSF RAILWAY COMPANY REPRESENTATIVE:
 - IT IS NECESSARY TO SAFEGUARD THE BNSF RAILWAY COMPANY PROPERTY, EMPLOYEES, TRAINS, ENGINES, AND FACILITIES.
 - WHEN ANY EXCAVATION IS PERFORMED BELOW THE BOTTOM OF THE ELEVATIONS AND TRACK OR OTHER BNSF RAILWAY COMPANY FACILITIES MAY BE SUBJECT TO MOVEMENT OR SETTLEMENT.
 - WHEN WORK IN ANY WAY INTERFERES WITH SAFE OPERATION OF TRAINS AND TIMETABLE SPEEDS.
 - WHEN ANY HAZARD IS PRESENTED TO RAILROAD TRACK, SIGNALS, COMMUNICATIONS, ELECTRICAL, OR OTHER FACILITIES EITHER DUE TO PERSON, MATERIAL, EQUIPMENT, OR BLASTING IN THE AREA.

EROSION CONTROL AND DRAINAGE

THE CONTRACTOR WILL INSTALL, MAINTAIN, AND REMOVE ALL EROSION CONTROL MEASURES DEEMED NECESSARY WITHIN THE RAILROAD RIGHT OF WAY.

THE CONTRACTOR WILL MAINTAIN THE RAILROAD DRAINAGE AT ALL TIMES WHEN WORKING WITHIN THE RAILROAD RIGHT OF WAY.

RAIL TRAFFIC

THE BNSF RAILWAY COMPANY HAS 49 TRAINS PER DAY AT 70 MPH, ON THE PANHANDLE SUBDIVISION. RAIL TRAFFIC IS FOR INFORMATION PURPOSES ONLY. ACTUAL RAIL TRAFFIC MAY VARY.

SUGGESTED SEQUENCE OF CONSTRUCTION

GENERAL NOTES:

CONSTRUCTION ACTIVITIES SHOULD BE LIMITED TO APPROXIMATELY ONE MILE OF CONSTRUCTION AT A TIME.

SOD FORESLOPES AS PRACTICAL IN ORDER TO MINIMIZE THE AMOUNT OF AREA DISTURBED AT ONE TIME.

PHASE 1: CONSTRUCT SOUTH HALF OF S.H. 15

TRAFFIC ON EXISTING PAVEMENT

- A SHIFT TRAFFIC TO THE NORTH EDGE OF S.H. 15 AND REDUCE SPEED TO 45 MPH THROUGH THE PROPOSED CONSTRUCTION AREA.
- B PLACE DRUMS OR OTHER ACCEPTABLE DELINEATION DEVICES ON THE SOUTH EDGE OF TRAFFIC.
- C SAW AND REMOVE APPROXIMATELY 1' OF EXISTING PAVEMENT ON THE SOUTH EDGE OF S.H. 15 FROM STA. 1531+72.76 TO STA. 1585+50 IN ORDER TO PROVIDE A CLEAN JOINT FOR THE PROPOSED PAVEMENT WIDENING.
- D CONSTRUCT THE SOUTH EXTENSION OF BRIDGE "A" AND STRUCTURES 2, 5, AND 8.
- E GRADE AND DRAIN THE SOUTH HALF OF S.H. 15 FROM STA. 1531+72.76 TO STA. 1585+50.
- F CONSTRUCT THE BOTTOM TWO LIFTS OF PAVEMENT ON THE SOUTH PROPOSED WIDENING OF S.H.15 FROM STA. 1531+72.76 TO STA. 1585+50.
- G MOVE DRUMS OR OTHER ACCEPTABLE DELINEATION DEVICES TO THE NEXT MILE SECTION OF ROADWAY.
- H SAW AND REMOVE APPROXIMATELY 1' OF EXISTING PAVEMENT ON THE SOUTH EDGE OF S.H. 15 FROM STA. 1585+50 TO STA. 1638+30 IN ORDER TO PROVIDE A CLEAN JOINT FOR THE PROPOSED PAVEMENT WIDENING.
- I CONSTRUCT THE SOUTH EXTENSION OF BRIDGE "B" AND STRUCTURE 10.
- J GRADE AND DRAIN THE SOUTH HALF OF S.H. 15 FROM STA. 1585+50 TO STA. 1638+30.
- K CONSTRUCT THE BOTTOM TWO LIFTS OF PAVEMENT ON THE SOUTH PROPOSED WIDENING OF S.H. 15 FROM STA. 1585+50 TO STA. 1638+30.
- L MOVE DRUMS OR OTHER ACCEPTABLE DELINEATION DEVICES TO THE REMAINING SECTION OF ROADWAY.
- M SAW AND REMOVE APPROXIMATELY 1' OF EXISTING PAVEMENT ON THE SOUTH EDGE OF S.H. 15 FROM STA. 1638+30 TO STA. 1705+06 IN ORDER TO PROVIDE A CLEAN JOINT FOR THE PROPOSED PAVEMENT WIDENING.
- N CONSTRUCT THE SOUTH EXTENSION OF BRIDGE "C", BRIDGE "D", AND STRUCTURE 16. UTILIZE LONGITUDINAL BARRIER AS REQUIRED TO PROTECT TRAFFIC DURING TEAR OUT AND EXTENSION OF THESE STRUCTURES.
- O GRADE AND DRAIN THE SOUTH HALF OF S.H. 15 FROM STA. 1638+30 TO STA. 1705+06.
- P CONSTRUCT THE BOTTOM TWO LIFTS OF PAVEMENT ON THE SOUTH PROPOSED WIDENING OF S.H. 15 FROM STA. 1638+30 TO STA. 1705+06.

PHASE 2: CONSTRUCT NORTH HALF OF S.H. 15

TRAFFIC ON EXISTING PAVEMENT & WIDENED SOUTH SHOULDER

- A SHIFT TRAFFIC TO THE SOUTH EDGE OF THE WIDENED S.H. 15 AND CONTINUE A 45 MPH CONSTRUCTION ZONE SPEED LIMIT.
- B PLACE DRUMS OR OTHER ACCEPTABLE DELINEATION DEVICES ON THE NORTH EDGE OF TRAFFIC.
- C SAW AND REMOVE APPROXIMATELY 1' OF EXISTING PAVEMENT ON THE NORTH EDGE OF S.H. 15 FROM STA. 1531+72.76 TO STA. 1585+50 IN ORDER TO PROVIDE A CLEAN JOINT FOR THE PROPOSED PAVEMENT WIDENING.
- D CONSTRUCT THE NORTH EXTENSION OF BRIDGE "A" AND STRUCTURES 2, 5, AND 8.
- E GRADE AND DRAIN THE NORTH HALF OF S.H. 15 FROM STA. 1531+72.76 TO STA. 1585+50.
- F CONSTRUCT THE BOTTOM TWO LIFTS OF PAVEMENT ON THE NORTH PROPOSED WIDENING OF S.H. 15 FROM STA. 1531+72.76 TO STA. 1585+50.
- G MOVE DRUMS OR OTHER ACCEPTABLE DELINEATION DEVICES TO THE NEXT MILE SECTION OF ROADWAY.
- H SAW AND REMOVE APPROXIMATELY 1' OF EXISTING PAVEMENT ON THE NORTH EDGE OF S.H. 15 FROM STA. 1585+50 TO STA. 1616+46 IN ORDER TO PROVIDE A CLEAN JOINT FOR THE PROPOSED PAVEMENT WIDENING.
- I CONSTRUCT THE NORTH EXTENSION OF BRIDGE "B" AND STRUCTURE 10.
- J GRADE AND DRAIN THE NORTH HALF OF S.H. 15 FROM STA. 1585+50 TO STA. 1638+30. GRADING EXTENDS BEYOND THE PAVEMENT WIDENING.
- K CONSTRUCT THE BOTTOM TWO LIFTS OF PAVEMENT ON THE NORTH PROPOSED WIDENING OF S.H. 15 FROM STA. 1585+50 TO STA. 1616+46.
- L MOVE DRUMS OR OTHER ACCEPTABLE DELINEATION DEVICES TO THE REMAINING SECTION OF ROADWAY.
- M SAW AND REMOVE APPROXIMATELY 1' OF EXISTING PAVEMENT ON THE NORTH EDGE OF S.H. 15 FROM STA. 1697+97 TO STA. 1705+06 IN ORDER TO PROVIDE A CLEAN JOINT FOR THE PROPOSED PAVEMENT WIDENING.
- N CONSTRUCT THE NORTH EXTENSION OF BRIDGE "C", BRIDGE "D", AND STRUCTURE 16.
- O GRADE AND DRAIN THE NORTH HALF OF S.H. 15 FROM STA. 1638+30 TO STA. 1705+06. GRADING BEGINS PRIOR TO THE BEGINNING OF PAVING OPERATIONS IN THIS SECTION OF S.H. 15.
- P CONSTRUCT THE BOTTOM TWO LIFTS OF PAVEMENT ON THE NORTH PROPOSED WIDENING OF S.H. 15 FROM STA. 1638+30 TO STA. 1705+06.
- Q SHIFT TRAFFIC TO THE SOUTH EDGE OF PAVEMENT ON S.H. 15 FOR THE ENTIRE LENGTH OF THE PROJECT.

PHASE 3: CONSTRUCT OVERLAY OF EXISTING PAVEMENT AND WIDENED SHOULDER

TRAFFIC ON SOUTH HALF OF S.H. 15, SHIFTING AS NECESSARY TO COMPLETE OVERLAY OPERATIONS

- A LAY FABRIC REINFORCEMENT OVER THE NORTH JOINT BETWEEN EXISTING AND NEWLY CONSTRUCTED PAVEMENT ON S.H. 15.
- B REDUCE TRAFFIC TO 1 LANE DURING WORKING HOURS BY UTILIZING A PILOT CAR. ONLY LAY AS MUCH PAVEMENT AS CAN BE COMPLETED BY THE END OF WORKING HOURS. PRIOR TO THE END OF WORKING HOURS ENSURE THAT S.H. 15 IS IN COMPLIANCE WITH THE MOST CURRENT VERSION OF STANDARD PDT-1. OPEN TO TRAFFIC IN BOTH DIRECTIONS DURING NON WORKING HOURS WITH APPROPRIATE SIGNAGE.
- C SHIFT TRAFFIC TO THE NORTH EDGE OF S.H. 15.
- D LAY FABRIC REINFORCEMENT OVER THE SOUTH JOINT BETWEEN EXISTING AND NEWLY CONSTRUCTED PAVEMENT ON S.H. 15.
- E REDUCE TRAFFIC TO 1 LANE DURING WORKING HOURS BY UTILIZING A PILOT CAR. ONLY LAY AS MUCH PAVEMENT AS CAN BE COMPLETED BY THE END OF WORKING HOURS. PRIOR TO THE END OF WORKING HOURS ENSURE THAT S.H. 15 IS IN COMPLIANCE WITH THE MOST CURRENT VERSION OF STANDARD PDT-1. OPEN TO TRAFFIC IN BOTH DIRECTIONS DURING NON WORKING HOURS WITH APPROPRIATE SIGNAGE.
- F CONTINUE TO THE NEXT MILE SECTION.
- G REPEAT PHASES 3A THROUGH 3F TO COMPLETE THE REMAINDER OF S.H. 15 OVERLAY OPERATIONS.
- H COMPLETE FINISHING OPERATIONS
- I OPEN TO TRAFFIC.

SUGGESTED SEQUENCE OF CONSTRUCTION & RAILWAY NOTES

State Job No. 29674(04) Sheet No. AR02

SUMMARY OF SURFACING

STATION EXTENTS	UNCLASSIFIED BORROW 202(D)	STABILIZED SUBGRADE 307(K)	FOG SEAL	TACK COAT 407(B)	PRIME COAT 408	FABRIC REINFORCEMENT 409(A)	BITUMINOUS BINDER 409(B)	SUPERPAVE, TYPE S3 (PG 70-28 OK) 411(B)	SUPERPAVE, TYPE S3 (PG 64-22 OK) 411(B)	SUPERPAVE, TYPE S4 (PG 70-28 OK) 411(C)	SUPERPAVE, TYPE S4 (PG 64-22 OK) 411(C)	COLD MILLING PAVEMENT 412	RUMBLE STRIP CENTERLINE -METHOD HMA-CON 413(A)	RUMBLE STRIP -METHOD HMA-CYC 413(B)
	C.Y.	S.Y.	GAL.	GAL.	GAL.	S.Y.	GAL.	TONS	TONS	TONS	TONS	S.Y.	L.F.	L.F.
S.H. 15														
STA. 1531+72.76 TO STA. 1537+00	78.79	1,172.10	14.33	369.67	410.23	425.89	119.78	160.89	423.90	128.76	94.73	716.37	424.00	951.24
STA. 1537+00 TO STA. 1552+00	246.66	3,722.09		1,229.42	1,302.73	1,333.34	375.00	559.94	1,352.17	448.11	301.90		1,500.00	3,000.00
STA. 1552+00 TO STA. 1567+00	246.66	3,720.36		1,229.04	1,302.13	1,333.34	375.00	559.94	1,351.54	448.11	301.71		1,395.98	2,895.98
STA. 1567+00 TO STA. 1582+00	246.66	3,722.49		1,229.53	1,302.87	1,333.40	375.02	559.94	1,352.39	448.11	301.94		1,500.00	3,000.00
STA. 1582+00 TO STA. 1597+00	246.66	3,722.35		1,229.47	1,302.82	1,333.34	375.00	559.94	1,352.29	448.11	301.93		1,500.00	3,000.00
STA. 1597+00 TO STA. 1612+00	246.66	3,657.51		1,318.42	1,280.13	1,333.43	375.03	559.96	1,455.25	448.13	301.91		1,500.00	2,999.82
STA. 1612+00 TO STA. 1627+00	246.66	3,130.92		1,658.84	1,095.82	864.14	243.04	559.54	1,892.05	447.79	319.37		1,470.35	2,969.33
STA. 1627+00 TO STA. 1642+00	246.66	3,102.14		1,500.02	1,085.75	666.67	187.50	559.94	1,667.31	448.11	332.49		1,454.71	2,954.71
STA. 1642+00 TO STA. 1657+00	246.66	2,972.48		1,456.53	1,040.37	666.67	187.50	559.94	1,597.97	448.11	319.41		1,500.00	3,000.00
STA. 1657+00 TO STA. 1672+00	246.66	2,954.90		1,367.82	1,034.21	666.70	187.51	559.94	1,503.44	448.11	311.70		1,500.00	3,000.00
STA. 1672+00 TO STA. 1687+00	246.66	2,977.53		1,390.58	1,042.14	666.84	187.55	559.94	1,533.67	448.11	322.24		1,411.47	2,851.68
STA. 1687+00 TO STA. 1702+00	246.66	3,108.84		1,362.70	1,088.09	844.55	237.53	559.96	1,517.98	448.13	313.68		1,500.00	3,000.00
STA. 1702+00 TO STA. 1707+31	50.32	1,288.35	19.79	442.94	450.92	272.00	76.50	197.81	472.09	158.30	107.69		989.29	1,059.80
TOTALS	2,842.37	39,252.06	34.12	15,784.98	13,738.21	11,740.30	3,301.96	6,517.68	17,472.05	5,215.99	3,630.70	1,705.66	17,186.42	34,682.56

☼ ITEM LISTED FOR CONTRACTOR USE ONLY. COST TO BE INCLUDED IN COLD MILL PAVEMENT.
 ● QUANTITIES FOR ADJUSTMENT OF CROWN AND SUPERELEVATION CORRECTION INCLUDED IN MAINLINE QUANTITIES.

SUMMARY OF EROSION CONTROL

STATION EXTENTS	LOCATION AND DESCRIPTION	SOLID SLAB SODDING 230(A)
		S.Y.
S.H. 15		
STA. 1532+69 TO STA. 1537+00	EDGE OF ROAD TO TOES LT. & RT.	3,708.68
STA. 1537+00 TO STA. 1552+00	EDGE OF ROAD TO TOES LT. & RT.	13,262.17
STA. 1552+00 TO STA. 1567+00	EDGE OF ROAD TO TOES LT. & RT.	11,914.54
STA. 1567+00 TO STA. 1582+00	EDGE OF ROAD TO TOES LT. & RT.	11,989.59
STA. 1582+00 TO STA. 1597+00	EDGE OF ROAD TO TOES LT. & RT.	11,652.01
STA. 1597+00 TO STA. 1612+00	EDGE OF ROAD TO TOES LT. & RT.	11,239.74
STA. 1612+00 TO STA. 1627+00	EDGE OF ROAD TO TOES LT. & RT.	8,328.79
STA. 1627+00 TO STA. 1642+00	EDGE OF ROAD TO TOES LT. & RT.	9,387.74
STA. 1642+00 TO STA. 1657+00	EDGE OF ROAD TO TOES LT. & RT.	8,764.45
STA. 1657+00 TO STA. 1672+00	EDGE OF ROAD TO TOES LT. & RT.	9,191.98
STA. 1672+00 TO STA. 1687+00	EDGE OF ROAD TO TOES LT. & RT.	11,992.75
STA. 1687+00 TO STA. 1702+00	EDGE OF ROAD TO TOES LT. & RT.	9,724.37
STA. 1702+00 TO STA. 1705+06	EDGE OF ROAD TO TOES LT. & RT.	2,082.47
TOTALS		123,239.28

SUMMARY OF DRIVES, ST. RETURN AND SECTION LINES

HIGHWAY OR STREET	STATION AND LOCATION	WIDTH x LENGTH	TYPE	RADII (R1)	RADII (R2)	3" TBSC TYPE E 402(E)	3" TBSC TYPE E 402(E)	TACK COAT 407(B)	PRIME COAT 408	SUPERPAVE, TYPE S3 (PG 64-22 OK) 411(B)	SUPERPAVE, TYPE S4 (PG 64-22 OK) 411(C)
						TON	TON	GAL.	GAL.	TON	TON
S.H. 15	STA. 1548+48 - LT.	12.00' x 53.40'	ASPH.	15'	15'	23.15		12.84	31.45	24.37	9.30
S.H. 15	STA. 1551+49 - RT.	20.00' x 56.70'	ASPH.	15'	15'	40.42		27.20	65.28	51.27	19.97
S.H. 15	STA. 1555+44 - RT.	16.00' x 56.44'	ASPH.	15'	15'	32.36		17.24	41.78	32.60	12.57
S.H. 15	STA. 1562+33 - RT.	66.00' x 31.56'	ASPH.	30'	30'	73.42		41.51	98.02	77.81	30.73
N1770 RD.	STA. 1565+24 - LT.	24.00' x 185.11'	SEC. LINE RETURN	40'	40'	156.78		87.42	246.34	164.56	64.32
S.H. 15	STA. 1569+21 - RT.	12.00' x 56.77'	TBSC	15'	15'	24.51	9.02	4.82	11.80	9.15	3.49
S.H. 15	STA. 1575+33 - RT.	12.00' x 57.50'	TBSC	15'	15'	24.83	9.18	4.81	11.79	9.14	3.49
S.H. 15	STA. 1577+30 - RT.	12.00' x 57.77'	ASPH.	15'	15'	24.99		13.77	33.73	26.14	9.98
S.H. 15	STA. 1580+25 - RT.	16.00' x 57.67'	ASPH.	15'	15'	33.07		17.59	25.58	33.25	12.82
S.H. 15	STA. 1584+37 - RT.	16.00' x 47.40'	ASPH.	15'	15'	25.60		14.75	21.46	27.90	10.76
S.H. 15	STA. 1587+92 - RT.	14.00' x 47.06'	ASPH.	15'	15'	23.66		13.10	31.91	24.82	9.53
S.H. 15	STA. 1603+56 - RT.	16.00' x 68.90'	ASPH.	15'	15'	39.46		20.69	50.15	39.13	15.09
N1780 RD.	STA. 1627+08 - RT.	24.00' x 103.50'	SEC. LINE RETURN	25'	25'	88.47		46.93	112.35	88.37	34.53
S.H. 15	STA. 1645+70 - RT.	16.00' x 72.00'	TBSC	25'	25'	41.24	13.46	11.49	27.75	21.70	8.40
S.H. 15	STA. 1655+08 - RT.	12.00' x 85.37'	TBSC	15'	15'	37.27	12.15	5.17	12.66	9.82	3.75
N1790 RD.	STA. 1683+42 - RT.	24.00' x 181.83'	SEC. LINE RETURN	25'	25'	155.40	50.99	29.99	77.09	56.35	22.26
N1790 RD.	STA. 1683+47 - LT.	24.00' x 62.50'	SEC. LINE RETURN	25'	25'	52.11		29.50	83.57	54.81	21.62
S.H. 15	STA. 1686+32 - RT.	12.00' x 71.30'	ASPH.	15'	15'	30.79		17.06	41.71	32.36	12.38
S.H. 15	STA. 1689+86 - RT.	12.00' x 47.00'	ASPH.	15'	15'	20.30		11.51	28.19	21.84	8.34
S.H. 15	STA. 1690+89 - RT.	12.00' x 57.00'	TBSC	15'	15'	24.61	9.07	4.82	11.80	9.15	3.49
TOTALS						1,187.89	103.86	491.52	1,357.79	1,040.25	404.73

* TBSC QUANTITIES INCLUDES TWO APPLICATIONS FOR TEMPORARY DRIVES.
 NOTE: ASPHALT DRIVES CONSTRUCTED WITH 2" TYPE S4 (PG 64-22 OK) AND 5" TYPE S3 (PG 64-22 OK).

SUMMARY OF EARTHWORK QUANTITIES

STATION EXTENTS	UNCLASSIFIED EXCAVATION 202(A)	FILL +15%	EXCESS EXCAVATION	UNCLASSIFIED BORROW 202(D)
	C.Y.	C.Y.	C.Y.	C.Y.
S.H. 15				
STA. 1532+00 TO STA. 1705+06	17,961	33,569		15,608
NS177				
STA. 100+00 TO STA. 102+45	214	294		80
NS 178				
STA. 198+52 TO STA. 200+00	126	74	52	
NS 179				
STA. 297+90.16 TO STA. 300+00	762	150	612	
STA. 300+12.06 TO STA. 300+74.57	13	23		10
TOTALS	19,076	34,110	▲	15,034

▲ UTILIZE EXCESS EXCAVATION TO REDUCE UNCLASSIFIED BORROW BY 664 C.Y.

SUMMARY SHEET (ROADWAY)

SUMMARY OF FENCE				
STATION EXTENTS AND LOCATION	FENCE - STYLE WWF 624(A)	FENCE-STYLE SWF (4 BARBED WIRES) 624(C)	FENCE-STYLE SWF (5 BARBED WIRES) 624(C)	FENCE-STYLE SWF (6 BARBED WIRES) 624(C)
	L.F.	L.F.	L.F.	L.F.
S.H.15				
STA. 1541+50.00 TO STA. 1543+79.00 - LT.			249	
STA. 1544+34.00 TO STA. 1547+36.00 - LT.	322			
STA. 1556+19.00 TO STA. 1557+57.00 - LT.			138	
STA. 1557+57.00 TO STA. 1565+80.00 - LT.				905
STA. 1564+04.00 TO STA. 1579+00.00 - RT.			1,496	
STA. 1565+78.00 TO STA. 1597+67.00 - LT.			3,209	
STA. 1584+75.00 TO STA. 1603+37.00 - RT.			1,862	
STA. 1603+74.00 TO STA. 1609+42.00 - RT.			585	
STA. 1609+87.00 TO STA. 1610+57.00 - RT.			98	
STA. 1626+50.00 TO STA. 1626+55.00 - RT.			41	
STA. 1682+27.00 TO STA. 1682+35.00 - RT.		140		
STA. 1683+51.00 TO STA. 1690+70.00 - RT.		783		
STA. 1703+44.00 TO STA. 1705+87.00 - RT.			244	
TOTALS	322	923	7,922	905

SUMMARY OF REMOVAL QUANTITIES			
STATION EXTENTS	REMOVAL OF FENCE	REMOVAL OF ASPHALT PAVEMENT 619(B)	SAWING PAVEMENT 619(C)
	L.F.	S.Y.	L.F.
S.H. 15			
STA. 1531+72.76 TO STA. 1552+00.00	612.00	965.12	3,970.00
STA. 1552+00.00 TO STA. 1582+00.00	4,376.00	2,354.84	6,083.00
STA. 1582+00.00 TO STA. 1612+00.00	2,924.00	1,480.11	6,000.00
STA. 1612+00.00 TO STA. 1642+00.00	61.00	478.40	3,446.00
STA. 1642+00.00 TO STA. 1672+00.00	0	769.56	3,000.00
STA. 1672+00.00 TO STA. 1702+00.00	2,341.00	1,159.76	3,674.00
STA. 1702+00.00 TO STA. 1705+06.00	391.00	297.16	627.00
TOTALS	10,705.00	7,504.95	26,800.00

• FOR INFORMATION PURPOSES ONLY. COST TO BE INCLUDED IN PRICE BID FOR REMOVAL OF STRUCTURES AND OBSTRUCTIONS.

NOTE: ITEMS TO BE REMOVED MAY OR MAY NOT BE PRESENT IN ANY SPECIFIED LOCATION.

SUMMARY OF MAILBOX				
STATION AND LOCATION	TYPE	MAILBOX INSTALLATION - MULTIPLE 629(B)	MAILBOX 629(C)	REMOVAL OF MAILBOX INSTALLATION 629(D)
		EA.	EA.	EA.
S.H. 15				
STA. 1555+73.00 - RT.	1	1	2	2
TOTALS		1	2	2

**SUMMARY SHEET
(ROADWAY)**

SUMMARY OF DRAINAGE STRUCTURES

STRUCTURE NO.	STATION	DESCRIPTION	DESIGN	UNCLASS. EXC.	STR. EXC. UNCLASS.	TRENCH EXC.			CLASS 'AA' CONCRETE	CLASS 'A' CONCRETE	REINFORCING STEEL	R.C. PIPE CLASS III 613(A)		R.C. PIPE ARCH 613(A)			C.E.T. 613(M)		P.C.E.S. 613(L)	REMOVAL OF HDWL.
				202(A)	501(A)	613(V)				18"	24"	22"x13"	28"x18"	43"x26"	A6	B6	43"x26"	619(B)		
				C.Y.	C.Y.	C.Y.	ELEV.	ELEV.	C.Y.	C.Y.	LBS.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	EA.	EA.	EA.
1	S.H. 15 1548+48.00	CONST. 18"x68' LG. RCP S.D., 54' LT. W/ TYPE A6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-A6			26.59	2204.88	2203.43				68					2			
2	S.H. 15 1553+41.54	EXTEND EXIST. 4'x2'x46' LG. RCB W/ SP. HDWLS, WINGS APRON & 4' CURTAIN WALL 21' LG. LT. & 20' LG. RT.	SBI-4, SEE DETAIL SHEET	12	5		2207.36	2206.15		16.16	1,476									2
3	S.H. 15 1555+44.00	CONST. 22"x13"x58' LG. RCPA S.D., 50' RT. W/ TYPE A6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-A6			18.35	2208.02	2207.85					58				2			
4	S.H. 15 1569+21.00	CONST. 22"x13"x68' LG. RCPA S.D., 42' RT. W/ TYPE A6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-A6			23.27	2210.77	2209.86					68				2			
5	S.H. 15 1570+19.33	EXTEND EXIST. 5'x2'x45' LG. RCB W/ SP. HDWLS, WINGS APRON & 4' CURTAIN WALL 21' LG. LT. & 21' LG. RT.	SBI-4, SEE DETAIL SHEET	54	7		2208.53	2206.64		19.50	1,822									2
6	S.H. 15 1575+33.00	CONST. 22"x13"x88' LG. RCPA S.D., 42' RT. W/ TYPE A6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-A6			42.55	2206.54	2205.87					88				2			
7	S.H. 15 1577+30.00	CONST. 28"x18"x72' LG. RCPA S.D., 42' RT. W/ TYPE B6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-B6			40.18	2204.63	2203.81						72				2		
8	S.H. 15 1579+52.53	EXTEND EXIST. 6'x2'x42' LG. RCB W/ SP. HDWLS, WINGS APRON & 4' CURTAIN WALL 24' LG. LT. & 22' LG. RT.	SBI-4, SEE DETAIL SHEET	84	9		2201.34	2200.43		25.07	2,338									2
9	S.H. 15 1587+92.00	CONST. 22"x13"x60' LG. RCPA S.D., 42' RT. W/ TYPE A6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-A6			18.12	2195.29	2194.76					60				2			
10	S.H. 15 1591+86.27	EXTEND EXIST. 5'x2'x41' LG. RCB W/ SP. HDWLS, WINGS APRON & 4' CURTAIN WALL 22' LG. LT. & 23' LG. RT.	SBI-4, SEE DETAIL SHEET	46	7		2191.87	2190.83		20.87	1,966									2
11	S.H. 15 1603+56.00	CONST. 28"x18"x82' LG. RCPA S.D., 45' RT. W/ TYPE B6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-B6			50.68	2184.80	2184.28						82				2		
12	NS 178 199+41.10	EXTEND EXIST. 2-6'x2'x33' LG. RCB W/ SP. HDWLS, WINGS APRON & 4' CURTAIN WALL 26' LG. LT. & 26.95' LG. RT.	SBI-4, SEE DETAIL SHEETS	138	23		2172.50	2171.74	49.80		7,810									2
13	S.H. 15 1645+70.00	CONST. 24"x116' LG. RCP S.D., 57' RT. W/ TYPE B6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-B6			84.72	2167.74	2167.19				116						2		
14	S.H. 15 1655+08.00	CONST. 28"x18"x98' LG. RCPA S.D., 53' RT. W/ TYPE B6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-B6			49.76	2164.62	2164.26						98				2		
15	S.H. 15 1686+32.00	CONST. 43"x26"x52' LG. RCPA S.D., 63' RT. W/ PCES	SPI-4, SPB-1, FHTCP-3, PCES-4			44.86	2169.17	2168.65							52					2
16	S.H. 15 1686+53.25	EXTEND EXIST. 3'x2'x43' LG. RCB W/ SP. HDWLS, WINGS APRON & 4' CURTAIN WALL 15' LG. LT. & 32' LG. RT.	SBI-4, SEE DETAIL SHEETS	131	4		2168.61	2166.22		15.10	1,300									2
17	S.H. 15 1690+89.00	CONST. 18"x66' LG. RCP S.D., 53' RT. W/ TYPE A6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-A6			20.84	2169.60	2169.18				66						2		
18	S.H. 15 1584+37.00	CONST. 22"x13"x72' LG. RCPA S.D., 42' RT. W/ TYPE A6 CET	SPI-4, SPB-1, FHTCP-3, CET6S-3-A6			22.68	2198.66	2198.01					72					2		
TOTALS				465	55	442.60			49.80	96.70	16,712	134	116	346	252	52	14	8	2	12

⊛ TRENCH EXCAVATION AND STANDARD BEDDING MATERIAL TO BE INCLUDED IN THE COST OF R.C. PIPE AND R.C. PIPE ARCH.

SUMMARY OF DRAINAGE STRUCTURES

State Job No. 29674(04) Sheet No. AR06

S.H. 15
ELLIS COUNTY

GENERAL CONSTRUCTION NOTES

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL MEET ODOT'S "QUALITY STANDARDS FOR TEMPORARY TRAFFIC CONTROL DEVICES".

THE CONTRACTOR SHALL PROVIDE A PERSON TO BE ON 24 HOUR CALL AS NEEDED AND DETERMINED BY THE ENGINEER. THIS PERSON SHALL HOLD A CURRENT CERTIFICATION FROM THE AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA) OR THE OKLAHOMA TRAFFIC ENGINEERING ASSOCIATION (OTEA) AS A TRAFFIC CONTROL TECHNICIAN OR TRAFFIC CONTROL SUPERVISOR.

ANY SIGNS AND/OR DELINEATORS WHICH ARE TO BE REMOVED DURING THIS PROJECT WILL BE STORED IN A PROTECTED AREA DESIGNATED BY THE RESIDENT ENGINEER, UNTIL SUCH A TIME THAT THEY ARE TO BE RESET BY THE CONTRACTOR. COST OF THIS WORK TO BE INCLUDED IN OTHER ITEMS OF WORK.

EXISTING ROADWAY SHALL REMAIN OPEN DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BARRICADES, LIGHTS, AND SIGNING WITHIN THE LIMITS OF CONSTRUCTION. ALL CONSTRUCTION SIGNING WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS. CONSTRUCTION TRAFFIC CONTROL WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES,(CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS.

PAY QUANTITY NOTES

- (TC-1) THE CONTRACTOR SHALL FURNISH AND INSTALL SUCH LIGHTS, SIGNS, BARRICADES, AND PROVIDE FLAGGERS NECESSARY FOR THE CONTROL, SAFETY, AND MAINTENANCE OF TRAFFIC WHEN INSTALLING, RELOCATING OR DELIVERING PORTABLE LONGITUDINAL BARRIER.
- (TC-19) THIS ITEM INCLUDES AN ESTIMATED 65,500 L.F. (4" WIDE) WHITE AND 77,800 L.F. (4" WIDE) YELLOW STRIPE. THE CONTRACTOR SHALL PROVIDE AND INSTALL AN O.D.O.T. APPROVED REMOVABLE PAVEMENT MARKING TAPE. COST FOR REMOVAL OF THIS TAPE SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM. NON-REMOVABLE MARKING TAPE (FOIL BACK) SHALL NOT BE CONSIDERED AN APPROVED EQUAL FOR THIS ITEM.
- (TC-20) ALL STRIPING TO BE PLACED ON TEMPORARY SURFACES OR ON SURFACES SCHEDULED TO BE REMOVED SHALL BE DONE WITH PAINT UNLESS OTHERWISE NOTED ON THE PLANS OR STANDARD DRAWINGS. TEMPORARY PAVEMENT MARKINGS PLACED ON FINISHED PAVEMENT OR EXISTING PAVEMENT TO REMAIN IN PLACE SHALL USE ONE OF THE FOLLOWING METHODS:
 - REMOVABLE PAVEMENT MARKING TAPE
 - CLASS A PAVEMENT MARKERS
- (TC-21) INCLUDED IN THE COST OF THIS ITEM SHALL BE INSTALLATION, MAINTENANCE, AND REMOVAL. THIS ITEM SHALL BE BID ACCORDINGLY.
- (TC-22) AMOUNT SHOWN IS AN APPROXIMATION AND THE ACTUAL AMOUNT OF REMOVAL, IF NECESSARY, SHALL BE DETERMINED BY THE ENGINEER. PRICE BID FOR PAVEMENT MARKING REMOVAL SHALL INCLUDE THE COST OF REMOVING STRIPE, ARROWS, WORDS AND SYMBOLS, AS SHOWN IN THE PLANS. THESE ITEMS MAY CONSIST OF PLASTIC, PAINT OR NON-REMOVABLE MARKING TAPE.
- (TC-28) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 0.00 S.F. AND 6.25 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC-29) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 6.26 S.F. AND 15.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC-30) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 16.00 S.F. AND 32.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC-33) ALL CONSTRUCTION WORK ZONE SIGNS SHALL HAVE FLUORESCENT SHEETING. THE FLUORESCENT SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST REVISION).

THE MANUFACTURER SHALL FURNISH A TYPE 'D' CERTIFICATION IN ACCORDANCE WITH OTA STANDARD SPECIFICATIONS (CURRENT EDITION) SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON MATERIAL SUBMITTED FOR APPROVAL.
- (TC-52) ANY USED CHANGEABLE MESSAGE SIGN, IMPACT ATTENUATORS OR TRUCK MOUNTED ATTENUATORS TO BE PLACED ON THIS PROJECT SHALL BE SUBJECT TO INSPECTION AND APPROVAL, BY THE OKLAHOMA DEPARTMENT OF TRANSPORTATION, TO ASSURE THAT THEY ARE IN GOOD WORKING CONDITION, PRIOR TO PLACEMENT ON THE PROJECT.
- (TC-61) ANY DAMAGE TO A FINISHED OR EXISTING SURFACE RESULTING FROM THE CONTRACTORS NEGLIGENCE IN THE REMOVAL OF CONSTRUCTION ZONE PAVEMENT MARKERS OR CHANNELIZING DEVICES AND THE BITUMINOUS ADHESIVE USED IN THEIR INSTALLATION, SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

REVISIONS		
NO.	DESCRIPTION	DATE


PAY QUANTITIES

0301 - TRAFFIC CONTROL				
ITEM	DESCRIPTION	UNIT	QUANTITY	
857(C) 8851	REMOVABLE PAVEMENT MARKING TAPE (4" WIDE) (TC-19,20,21,70,75)	LF	143,300.00	
857(F) 8006	PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE) (TC-22,61,70)	LF	25,000.00	
871(B) 8705	(SP) CONST. ZONE IMPACT ATTEN. (TC-52)(1)	SD	2200.00	
871(C) 8709	(SP) RELOCATION OF IMPACT ATTENUATOR (TC-52)	EA	10.00	
876(A) 8482	(PL) TRUCK MOUNTED ATTENUATOR (TC-52,70,76,77)(1)	SD	200.00	
877(B) 8484	DELIVER PORTABLE LONGITUDINAL BARRIER (TC-1)	LF	687.50	
877(C) 8486	RELOCATION OF PORTABLE LONGITUDINAL BARRIER (TC-1)	LF	687.50	
880(B) 8818	CONSTRUCTION SIGNS 0 TO 6.25 SF (TC-28,33)(1)	SD	5,400.00	
880(B) 8821	CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF (TC-29,33)(1)	SD	2,000.00	
880(B) 8824	CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF (TC-30,33)(1)	SD	3,660.00	
880(C) 8848	WING BARRICADES (1)	SD	880.00	
880(E) 8860	WARNING LIGHTS (TYPE A) (1)	SD	7,660.00	
880(F) 8878	DRUMS (1)	SD	6,500.00	
880(G) 8890	CHANNELIZER CONES (1)	SD	60,000.00	
882(A) 8306	PORT. CHANGEABLE MESSAGE SIGN (TC-52,85)(1)	SD	440.00	

PAY QUANTITY NOTES

- (TC-70) THIS ITEM IS AN ESTIMATED QUANTITY TO BE USED AS DEEMED NECESSARY BY THE ENGINEER.
- (TC-75) TEMPORARY PAVEMENT MARKINGS SHALL BE IN PLACE THE SAME DAY THAT EXISTING PAVEMENT MARKINGS ARE REMOVED FROM ANY ROADWAY OPEN TO TRAFFIC. ALSO, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO THE INSTALLATION OF FINAL STRIPING.
- (TC-76) TRUCK MOUNTED ATTENUATOR USED ON THIS PROJECT SHALL HAVE PASSED ALL MANDATORY AND OPTIONAL TESTS LISTED IN NCHRP 350, TL-3 CRITERIA. THIS ITEM IS TO BE USED WHERE SHOWN IN THE STANDARD DRAWINGS OR AT THE DISCRETION OF THE ENGINEER ON SHADOW VEHICLES PROTECTING THE WORK AREAS AND TEMPORARY ROADSIDE HAZARDS.
- (TC-77) TRUCK MOUNTED ATTENUATORS ARE TO BE INSTALLED ON NON-STATE OWNED TRUCKS HAVING A MINIMUM GROSS WEIGHT RATING OF 15,000 POUNDS. EACH OF THESE TRUCKS SHALL ALSO BE EQUIPPED WITH AN ARROW DISPLAY (TYPE B).
- (TC-85) THESE SIGNS MUST BE ON THE OKLAHOMA DEPARTMENT OF TRANSPORTATION LIST OF APPROVED CHANGEABLE MESSAGE SIGNS. FOR A LIST OF THE APPROVED SIGNS GO TO THE OKLAHOMA DEPARTMENT OF TRANSPORTATION WEBSITE AT <http://www.okladot.state.ok.us/traffic/qpl/index.php>.
- (1) 220 TOTAL CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE TOTAL CALENDAR DAYS ARE BROKEN DOWN BY PHASE TO CALCULATE THE SIGN DAY PAY ITEMS PER PHASE AS SHOWN BELOW. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T. STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION. THE FOLLOWING CALENDAR DAYS PER PHASE ARE AS FOLLOWS.
 - 100 PHASE 1 CONSTRUCTION CALENDAR DAYS
 - 100 PHASE 2 CONSTRUCTION CALENDAR DAYS
 - 20 PHASE 3 CONSTRUCTION CALENDAR DAYS

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Design	RWR	05/12/20
Drawn	GDB	05/12/20
		

**SUMMARY OF
PAY QUANTITIES AND NOTES
(TRAFFIC CONTROL)**

State Job No. 29674(04) Sheet No. AT01

S.H. 15 ELLIS COUNTY

GENERAL CONSTRUCTION NOTES

ANY SIGNS AND/OR DELINEATORS WHICH ARE TO BE REMOVED DURING THIS PROJECT WILL BE STORED IN A PROTECTED AREA DESIGNATED BY THE RESIDENT ENGINEER UNTIL SUCH A TIME THAT THEY ARE TO BE RESET BY THE CONTRACTOR. COST OF THIS WORK TO BE INCLUDED IN OTHER ITEMS OF WORK.

EXISTING ROADWAY SHALL REMAIN OPEN DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BARRICADES, LIGHTS, AND SIGNING WITHIN THE LIMITS OF CONSTRUCTION. ALL CONSTRUCTION SIGNING WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS. CONSTRUCTION TRAFFIC CONTROL WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING TRAFFIC ON CROSS STREETS. A MINIMUM OF ONE LANE IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES.

ANY DAMAGE CAUSED BY THE CONTRACTOR TO ANY STRUCTURES, ROADWAY SURFACES, STRIPING, RAISED PAVEMENT MARKERS, GUARDRAIL, SLOPES, AND SIGNS SHALL BE REPAIRED AT CONTRACTORS EXPENSE TO THE SATISFACTION OF THE ENGINEER.

ALL REGULATORY SIGNS SHALL BE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST EDITION) FOR TYPE III SHEETING.

ALL WARNING SIGNS SHALL HAVE FLUORESCENT YELLOW SHEETING. THE FLUORESCENT YELLOW SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST EDITION) REQUIREMENTS FOR TYPE VIII SHEETING.

ALL GREEN AND BLUE SIGNS ON CONVENTIONAL HIGHWAYS SHALL HAVE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST EDITION) FOR TYPE III SHEETING.

ALL PANEL AND OVERHEAD SIGNS SHALL HAVE TYPE III HIGH INTENSITY BACKGROUND WITH TYPE VII LEGENDS AND BORDERS. THE TYPE III BACKGROUND AND THE TYPE VII LEGENDS AND BORDERS SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST EDITION).

THE MANUFACTURER SHALL FURNISH A TYPE "A" CERTIFICATION IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS, LATEST EDITION, SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON THE MATERIAL SUBMITTED FOR APPROVAL.

ALL BROKEN CONCRETE INCLUDING OLD SIGN FOOTINGS WITH STUBS, WASTE MATERIAL AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN AN AREA APPROVED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THE DISPOSAL OF THIS MATERIAL. ANY PIPE POST OR WIDE FLANGE POST ABOVE THE OLD SIGN FOOTINGS SHALL BE CUT AND HANDLED AS PROPERTY OF THE STATE AND SHALL BE NEATLY STACKED ON THE JOB SITE, AS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME AS DIVISION PERSONNEL CAN REMOVE THE MATERIAL FROM THE JOB SITE.

THE STATIONS AND LOCATIONS OF THE SIGN PLACEMENT, AS SHOWN ON THE PLAN SHEETS, ARE APPROXIMATE. EXACT STATIONS AND LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH DEPARTMENT STANDARDS AND THE MUTCD IN ORDER TO PROVIDE OPTIMUM VISIBILITY TO THE ONCOMING/APPROACHING MOTORIST. IF A PROPOSED LOCATION CONFLICTS WITH OTHER SIGNS, UTILITIES OR OTHER ROADWAY FEATURES, THE ENGINEER SHALL BE NOTIFIED.

POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE, EXACT LENGTH SHALL BE DETERMINED BY FIELD SURVEY BY THE CONTRACTOR.

ALL REMOVED SIGNS, SIGN POSTS, BOLTS, MISCELLANEOUS HARDWARE, AND DELINEATORS SHALL REMAIN THE PROPERTY OF THE STATE. THE CONTRACTOR SHALL NEATLY STACK SUCH REMOVED MATERIAL AT A LOCATION ON THE JOB SITE AS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME AS DIVISION PERSONNEL CAN REMOVE THE MATERIAL FROM THE JOB SITE.

ALL SIGNS SHALL BE REMOVED FROM THE POSTS IN A SALVAGEABLE MANNER FOR REUSE. CARE SHALL BE TAKEN DURING REMOVAL AND TRANSPORTING TO ALLEVIATE DAMAGE OF MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED DURING REMOVAL OF SIGNS, AND SIGN POSTS.

AFTER REMOVAL OF ANY SIGN FOOTINGS, THE HOLES SHALL BE FILLED WITH SOIL AND TAMPED AND SHAPED IN A MANNER APPROVED BY THE ENGINEER.

SYMBOLS AND LEGENDS ARE DIAGRAMMATIC ONLY AND LOCATIONS SHALL BE ADJUSTED FOR EXISTING FIELD CONDITIONS, BUT NO MAJOR ALTERATIONS OR RELOCATIONS WILL BE MADE WITHOUT FIRST CONSULTING WITH THE TRAFFIC ENGINEERING DIVISION AT (405)521-2861.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL AND THROUGH TRAFFIC. SEE STANDARD SPECIFICATIONS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

ALL BROKEN CONCRETE, WASTE MATERIAL, AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN AN AREA APPROVED BY THE ENGINEER. NO PAYMENT WILL BE MADE FOR THE DISPOSAL OF THIS MATERIAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE HE MAY INFLICT TO THE EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AS A RESULT OF HIS DIGGING, TRENCHING, BORING, ETC.... PRIOR TO DIGGING NEAR THE UTILITIES, THE CONTRACTOR SHALL CALL FOR A LIST OF ALL UNDERGROUND FACILITIES REGISTERED IN THE AREA OF CONSTRUCTION LISTED WITH THE FOLLOWING AGENCIES:
THE "OKIE" NOTIFICATION CENTER 811 OR (405)522-6543 OR WWW.CALLOKIE.COM OR THE LOCAL COUNTY CLERK'S OFFICE.

REVISIONS		
NO.	DESCRIPTION	DATE

PAY QUANTITIES			
0300 SIGNING AND STRIPING			
ITEM	DESCRIPTION	UNIT	TOTAL
805(A) 8724	(PL) REMOVAL OF EXISTING SIGNS	(1) EA	14.00
805(D) 8756	(PL) REMOVE & RESET EXISTING SIGNS	(2) EA	3.00
850(A) 8110	SHEET ALUMINUM SIGNS	SF	141.22
851(C) 8327	2 1/4" SQUARE TUBE POST	(TS-33) LF	392.00
856(A) 8530	TRAFFIC STRIPE (MULTI-POLYMER)(4" WIDE)	(TS-24) LF	45586.00
856(A) 8555	TRAFFIC STRIPE (MULTI-POLY.) (24" WIDE)	(TS-28) LF	68.00
857(F) 8006	PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE)	(TS-32) LF	25000.00

PAY QUANTITY NOTES

(TS-24) QUANTITY SHOWN INCLUDES 35,474 L.F. TRAFFIC STRIPE (MULTI-POLYMER) (WHITE) AND 10,112 L.F. TRAFFIC STRIPE (MULTI-POLYMER) (YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF FOUR INCH (4") WIDE TRAFFIC STRIPE.

(TS-28) QUANTITY SHOWN INCLUDES 68 L.F. TRAFFIC STRIPE (MULTI-POLYMER) (WHITE) AND WILL BE MEASURED BY THE LINEAR FOOT OF TWENTY-FOUR INCH (24") WIDE TRAFFIC STRIPE.

(TS-32) THE AMOUNT SHOWN IS AN APPROXIMATION AND THE ACTUAL AMOUNT OF REMOVAL, IF NECESSARY, SHALL BE DETERMINED BY THE ENGINEER. PRICE BID FOR PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE) SHALL INCLUDE COST OF REMOVAL OF ARROWS, WORDS, AND SYMBOLS. THE PAVEMENT MARKING TO BE REMOVED SHALL BE CONSIDERED THERMOPLASTIC AND BID ACCORDINGLY.


DURING REMOVAL OF EXISTING STRIPING AND REPLACEMENT WITH NEW STRIPING, PERMANENT STRIPING SHALL BE REPLACED WITHIN 48 HOURS AFTER OLD STRIPING IS REMOVED.

(TS-33) INCLUDED IN THIS PAY ITEM IS ALL HARDWARE ASSOCIATED WITH PROPERLY ANCHORING AND MOUNTING THE HIGHWAY SIGN IN ACCORDANCE WITH O.D.O.T. PLANS AND STANDARD DRAWINGS SSA1-1 AND SSP1-1- (LATEST REVISION).

(1) THIS PAY ITEM IS FOR THE REMOVAL OF THE EXISTING SIGNS, POSTS AND FOOTINGS THAT ARE BEING REPLACED ON THIS PROJECT. THE REMOVED SIGNS AND POSTS SHALL BECOME THE PROPERTY OF THE STATE AND SHALL BE NEATLY STORED ON THIS PROJECT UNTIL STATE PERSONNEL CAN PICK THEM UP. THE REMOVED FOOTINGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AS DIRECTED IN THE GENERAL CONSTRUCTION NOTES.

(2) "REMOVE AND RESET EXISTING SIGNS" SHALL INCLUDE THE REMOVAL OF A COMPLETE SIGN ASSEMBLY AND FOOTINGS. WHEN APPROVED BY THE ENGINEER, FOOTINGS MAY BE OBLITERATED TO A POINT BELOW GROUND LEVEL IN LIEU OF BEING COMPLETELY REMOVED. SEE GENERAL CONSTRUCTION NOTES FOR DISPOSAL OF OLD CONCRETE FOOTING MATERIAL. THIS PAY ITEM SHALL ALSO INCLUDE ALL LABOR, PARTS, EQUIPMENT AND INCIDENTALS NECESSARY TO RESET THE EXISTING SIGN IN ACCORDANCE WITH PERTINENT ODOT STANDARDS. THE PARTS TO BE REPLACED UNDER THIS PAY ITEM MAY INCLUDE NEW POSTS AS NECESSARY IN ORDER TO ASSURE THAT THE HEIGHT OF THE RESET SIGN COMPLIES WITH CURRENT ODOT STANDARDS AND SPECIFICATIONS.

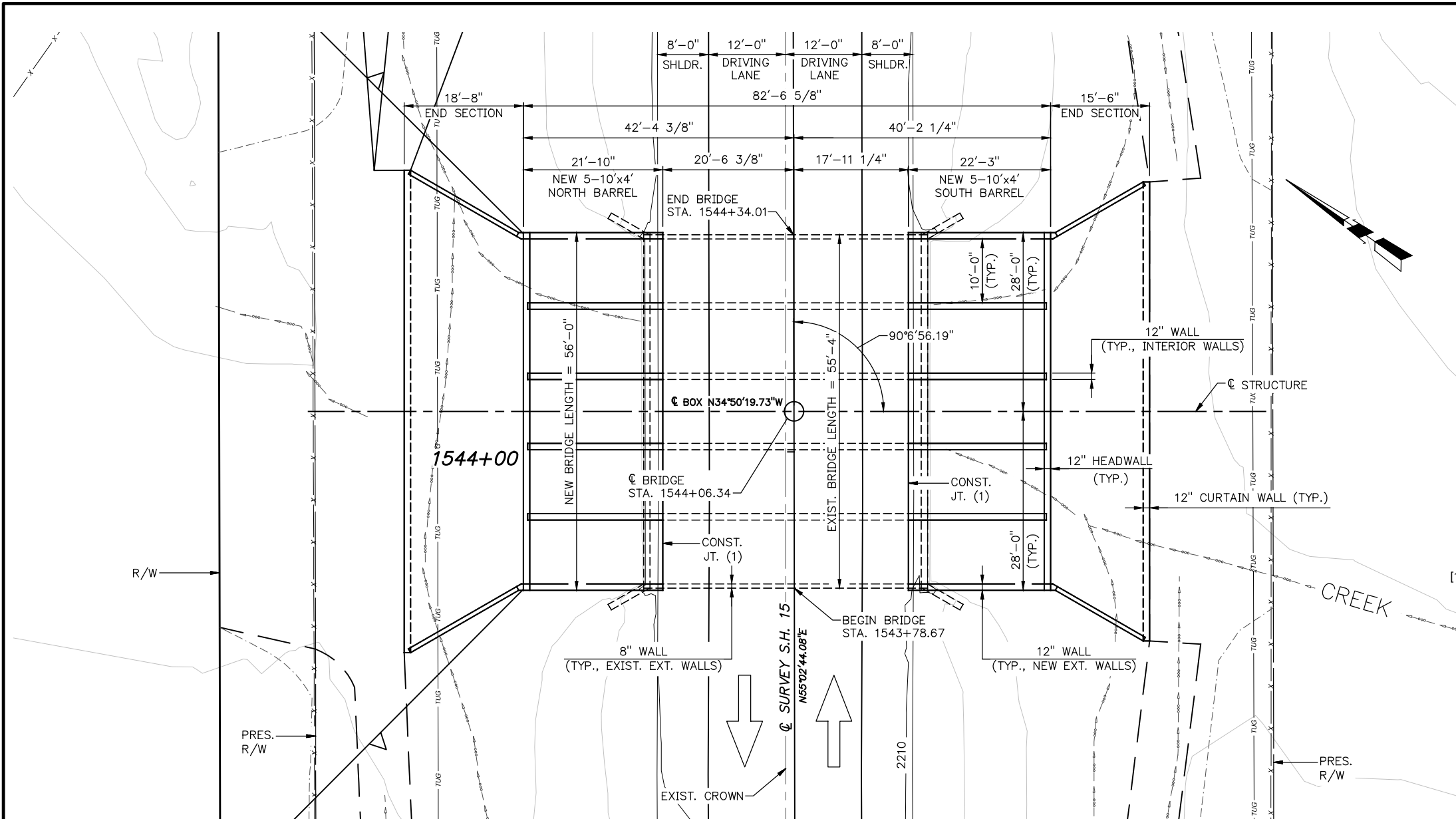
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Design	RWR	05/12/20
Drawn	GDB	05/12/20
		

**SUMMARY OF
PAY QUANTITIES AND NOTES
(SIGNING AND STRIPING)**

State Job No. 29674(04) Sheet No. AT02

S.H. 15 ELLIS COUNTY



**LOAD AND RESISTANCE FACTOR DESIGN
(NEW CONSTRUCTION ONLY)**

DESIGN DATA

CLASS "AA" CONCRETE $F'_c = 4,000$ PSI
 REINFORCING STEEL $F_y = 60,000$ PSI
 LOADING: HL-93 AND ODOT OVERLOAD TRUCK
 DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2014 EDITION,
 WITH 2016 INTERIMS.
 THE FOLLOWING STANDARDS SHALL BE REQUIRED:
 SBI-4-2

SUMMARY OF QUANTITIES - BRIDGE "A"				
DESCRIPTION	UNIT	NORTH BARREL [1]	SOUTH BARREL [1]	TOTAL
UNCLASSIFIED EXCAVATION	CY	240.00	330.00	570.00
STRUCTURAL EXCAVATION UNCLASSIFIED	CY	119.00	111.00	230.00
REMOVAL OF CULVERT END	EA	1.00	1.00	2.00
CLASS AA CONCRETE	CY	149.20	121.10	270.30
REINFORCING STEEL	LB	26,110.00	25,380.00	51,490.00

[1] INCLUDES HEADWALL, APRON, CURTAIN WALL, AND WING WALLS.

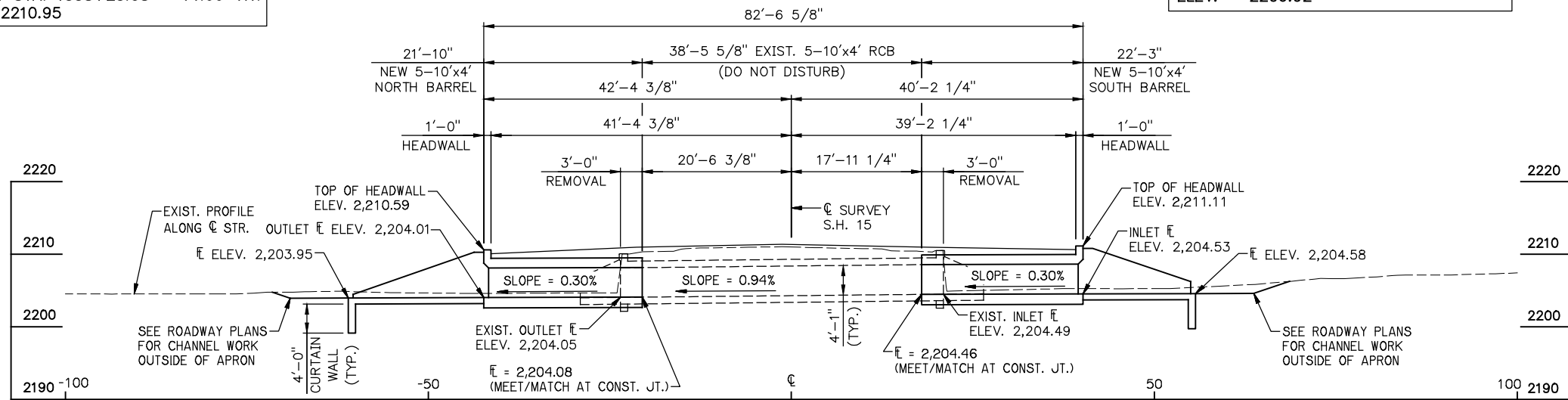
NOTES: ALL STATIONING FOLLOWS ϕ SURVEY S.H. 15, UNLESS NOTED OTHERWISE.
 THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
 FOR CHANNEL WORK DETAILS, SEE THE PLAN AND PROFILE SHEETS AND CROSS-SECTIONS. (ROADWAY ITEMS).

BM#118-3/4" IRON PIN IN SOUTH R.O.W. FENCE
 ϕ SURVEY STA. 1538+23.08 71.66' RT.
 ELEV. = 2210.95

(1) STRIP CONCRETE AND EXPOSE LONGITUDINAL STEEL TO THIS LINE FOR BOND.

PLAN
 SCALE 1" = 10'

BM#117-3/4" IRON PIN
 ϕ SURVEY STA. 1547+47.12 75.11' RT.
 ELEV. = 2206.92



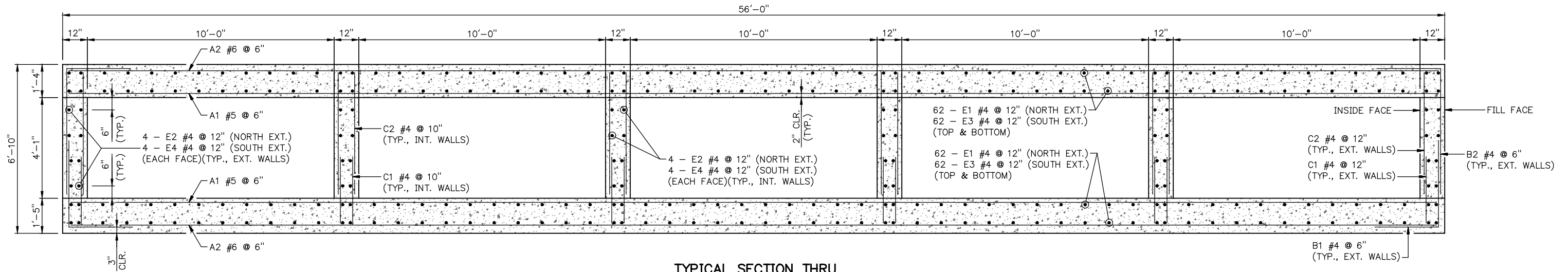
HYDRAULIC DATA

TOTAL D.A.	=	3.31 SQ. MI.		
CONTROLLED D.A.	=	0.00 SQ. MI.		
EFFECTIVE D.A.	=	3.31 SQ. MI.		
Q2	=	165 CFS	Q0.T. = Q43	= 1,590 CFS
V2	=	3.13 FPS	V0.T.	= 11.91 FPS
Q2 CHW	=	2,207.50 FT.	O.T. CHW	= 2,210.21 FT.
Q5	=	430 CFS	Q50	= 1730 CFS
V5	=	8.08 FPS	V50	= 13.62 FPS
Q5 CHW	=	2,208.03 FT.	Q50 CHW	= 2,210.61 FT.
Q10	=	727 CFS	Q100	= 2,320 CFS
V10	=	9.44 FPS	V100	= 14.41 FPS
Q10 CHW	=	2,208.31 FT.	Q100 CHW	= 2,211.28 FT.
Q25	=	1,260 CFS		
V25	=	11.14 FPS		
Q25 CHW	=	2,209.31 FT.		

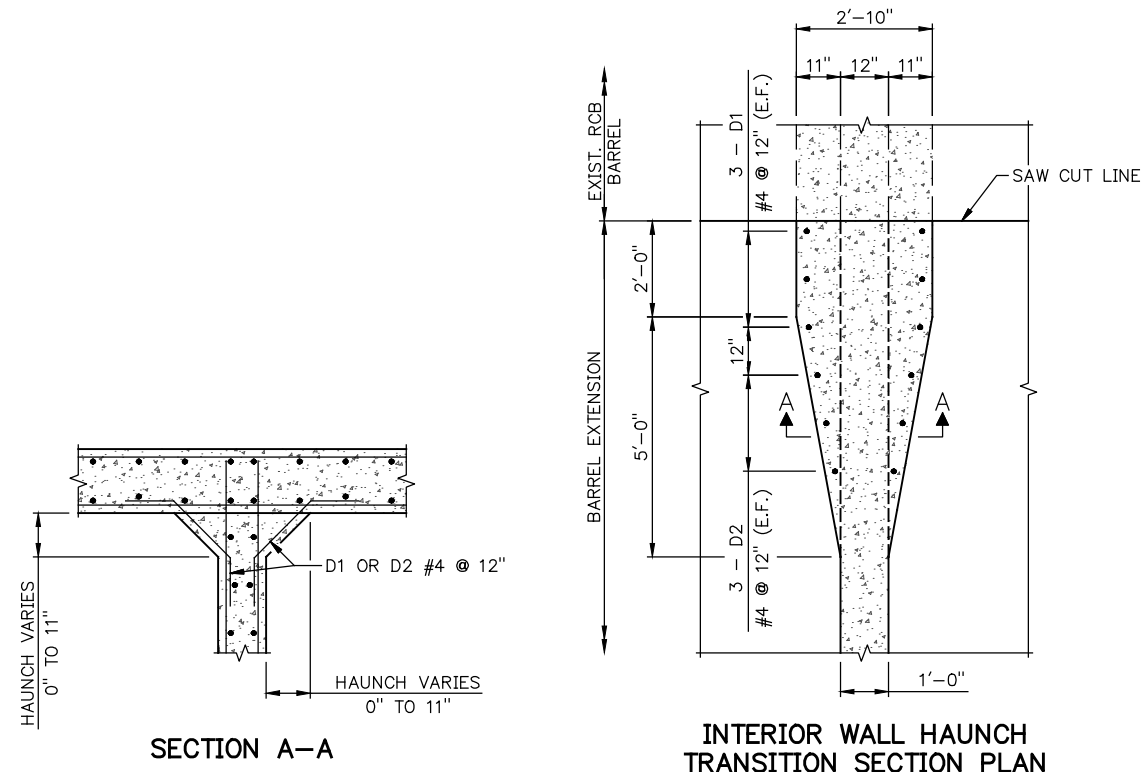
EXTEND 5-10'x4' BRIDGE BOX WITH APRONS AND 4' CURTAIN WALLS, SKEWED 00°06'56.19" L.F.

SECTION THRU ϕ STRUCTURE
 SCALE 1" = 10'

**GENERAL PLAN AND ELEVATION
(BRIDGE "A")**
 BRIDGE "A" ϕ SURVEY STA. 1544+06.34
 5-10'x4'x82.55' LG. BOX, SKEWED 00°06'56.19" L.F.
 State Job No. 29674(04) Sheet No. B001



TYPICAL SECTION THRU
5 - 10' x 4'-1" BARREL EXTENSION



SECTION A-A

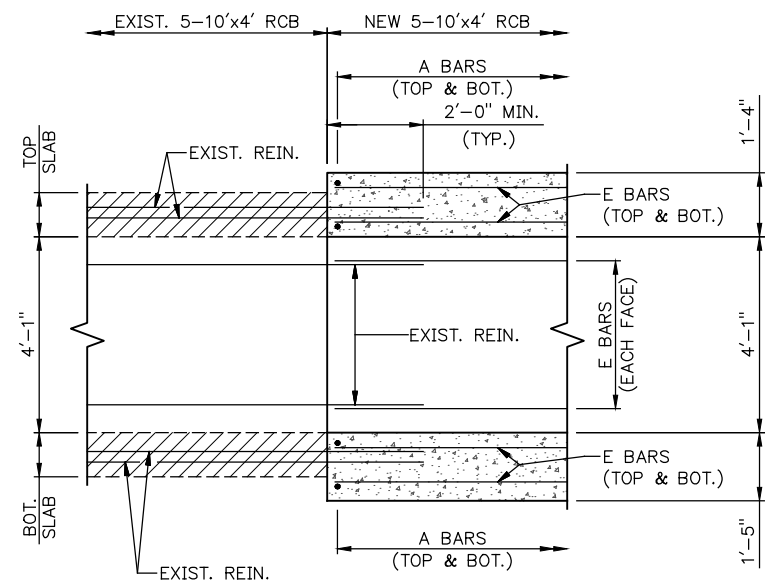
INTERIOR WALL HAUNCH
TRANSITION SECTION PLAN

NORTH BARREL EXTENSION BAR LIST (BRIDGE "A")					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
A1	88	#5	STR.	55'-8"	
A2	88	#6	STR.	55'-8"	
B1	88	#4	BNT.	6'-0"	
B2	88	#4	BNT.	7'-9"	
C1	262	#4	STR.	2'-10"	
C2	262	#4	STR.	5'-3"	
D1	6	#4	BNT.	3'-6"	
[1] D2	6	#4	BNT.	2'-11" AVG.	2'-8" TO 3'-2"
E1	248	#4	STR.	21'-6"	
E2	48	#4	STR.	21'-6"	

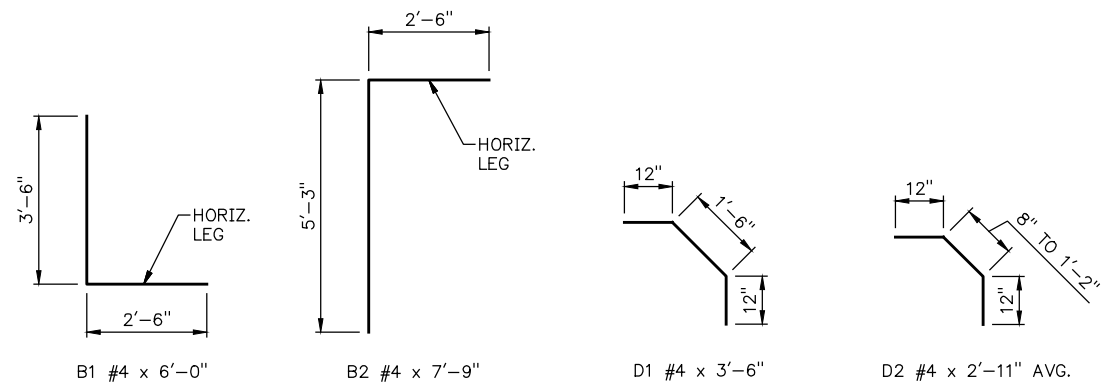
SOUTH BARREL EXTENSION BAR LIST (BRIDGE "A")					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
A1	90	#5	STR.	55'-8"	
A2	90	#6	STR.	55'-8"	
B1	90	#4	BNT.	6'-0"	
B2	90	#4	BNT.	7'-9"	
C1	270	#4	STR.	2'-10"	
C2	270	#4	STR.	5'-3"	
D1	6	#4	BNT.	3'-6"	
[1] D2	6	#4	BNT.	2'-11" AVG.	2'-8" TO 3'-2"
E3	248	#4	STR.	21'-11"	
E4	48	#4	STR.	21'-11"	

[1] TWO SETS OF THREE (3) BARS EACH.

BRIDGE "A" DETAILS
(DETAIL 1 OF 8)



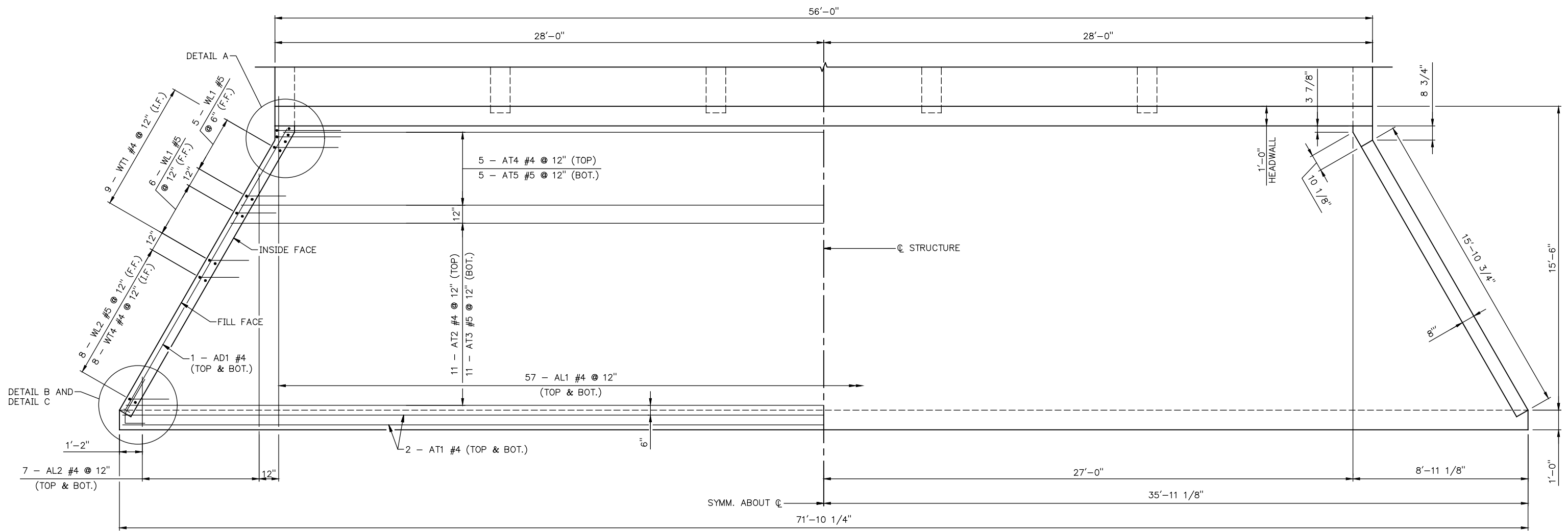
TYPICAL SECTION THRU BARREL CONNECTION
 (SOUTH EXTENSION SHOWN, MIRROR FOR NORTH EXTENSION)



BAR BEND DETAILS

BRIDGE "A" DETAILS
 (DETAIL 2 OF 8)

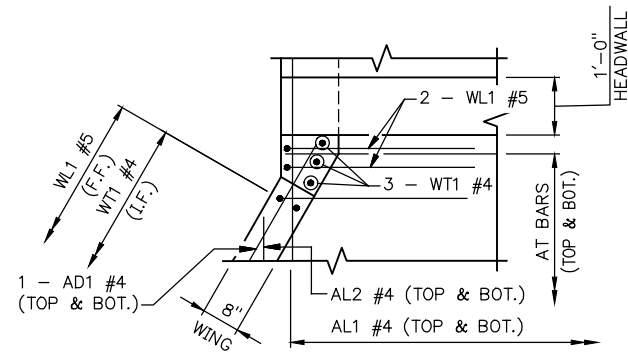
State Job No. 29674(04) Sheet No. B003



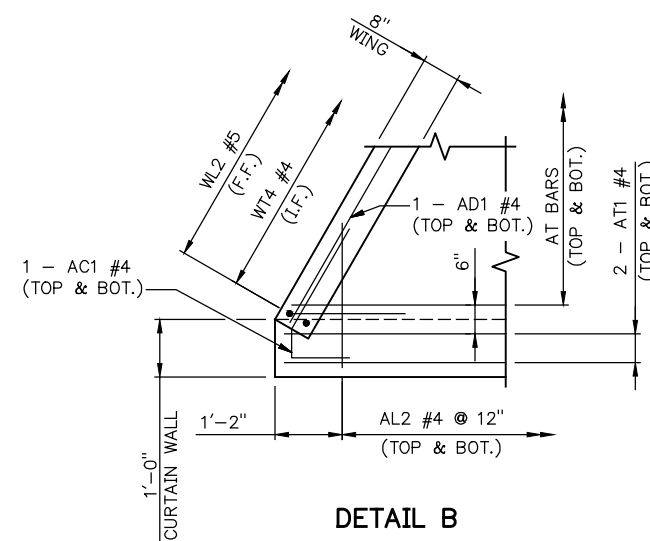
NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE

SOUTH END SECTION APRON REINFORCING AND LAYOUT PLAN

NOTE:
 SEE "DETAIL C" ON SHEET B006
 FOR CURTAIN WALL REINFORCING DETAILS.



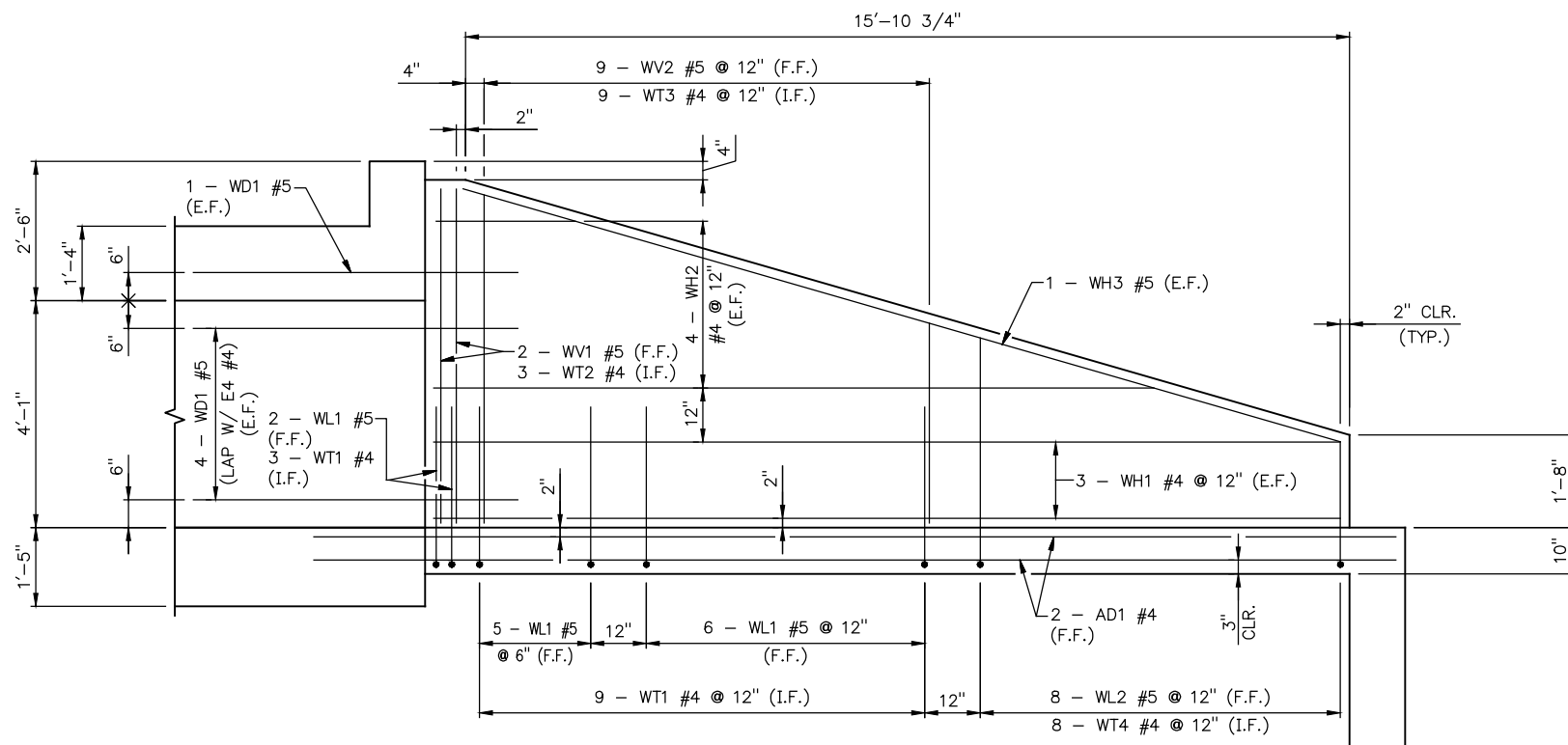
DETAIL A



DETAIL B

BRIDGE "A" DETAILS
 (DETAIL 3 OF 8)

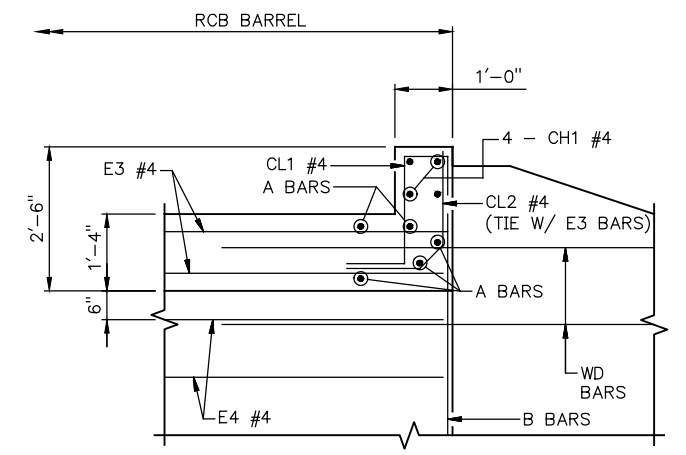
State Job No. 29674(04) Sheet No. B004



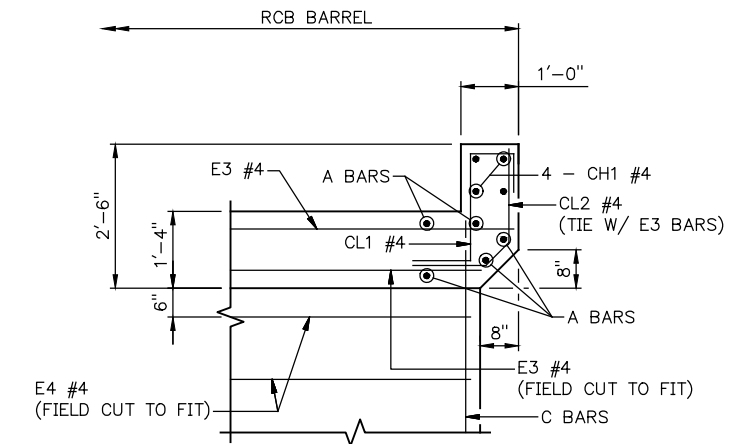
SOUTH END SECTION WING DETAIL

NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE

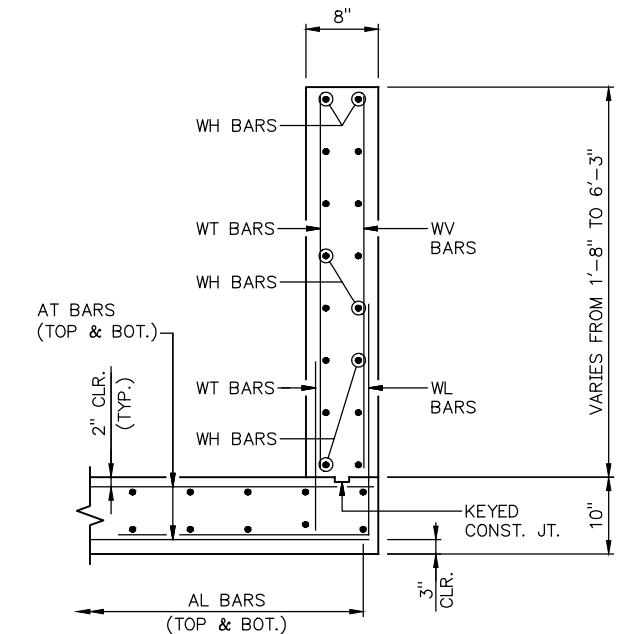
SEE CURTAIN WALL DETAIL



SOUTH END SECTION HEADWALL DETAIL AT EXTERIOR WALL



SOUTH END SECTION HEADWALL DETAIL AT INTERIOR WALL



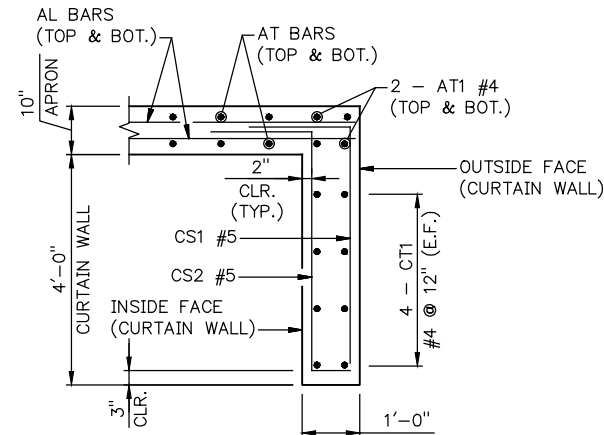
SOUTH END SECTION TYPICAL SECTION THRU WING

BRIDGE "A" DETAILS
 (DETAIL 4 OF 8)

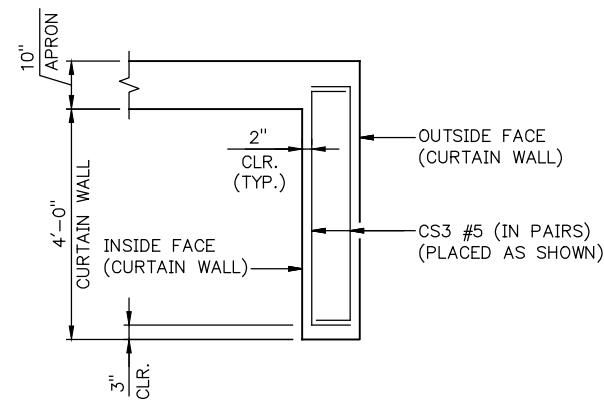
SOUTH END SECTION BAR LIST - APRON (INCLUDES HEADWALL AND CURTAIN WALL)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
AC1	4	#4	BNT.	3'-8"	
AD1	4	#4	STR.	16'-6"	
AL1	114	#4	STR.	17'-4"	
[1] AL2	28	#4	STR.	7'-8" AVG.	2'-6" TO 12'-10"
[2] AT1	4	#4	STR.	73'-6"	
[2] AT2	11	#4	STR.	67'-10" AVG.	62'-6" TO 73'-2"
[2] AT3	11	#5	STR.	67'-10" AVG.	62'-6" TO 73'-2"
AT4	5	#4	STR.	57'-3" AVG.	55'-1" TO 59'-5"
AT5	5	#5	STR.	57'-3" AVG.	55'-1" TO 59'-5"
CH1	4	#4	STR.	55'-8"	
CL1	57	#4	BNT.	4'-4"	
CL2	57	#4	BNT.	4'-3"	
CS1	71	#4	BNT.	5'-9"	
CS2	71	#4	BNT.	6'-10"	
CS3	8	#4	BNT.	5'-9"	
[2] CT1	8	#4	STR.	73'-6"	

SOUTH END SECTION BAR LIST - WING (ONE WING WALL SHOWN; TWO REQUIRED)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
WD1	10	#5	BNT.	8'-4"	
WH1	6	#4	STR.	16'-5"	
[3] WH2	8	#4	STR.	7'-10" AVG.	2'-7" TO 13'-1"
WH3	2	#5	STR.	16'-5"	
WL1	13	#5	BNT.	6'-1"	
WL2	8	#5	BNT.	5'-0" AVG.	4'-1" TO 5'-11"
WT1	12	#4	STR.	2'-10"	
WT2	3	#4	STR.	6'-1"	
WT3	9	#4	STR.	4'-10" AVG.	3'-9" TO 5'-11"
WT4	8	#4	STR.	3'-0" AVG.	2'-1" TO 3'-11"
WV1	2	#5	STR.	6'-1"	
WV2	9	#5	STR.	4'-10" AVG.	3'-9" TO 5'-11"

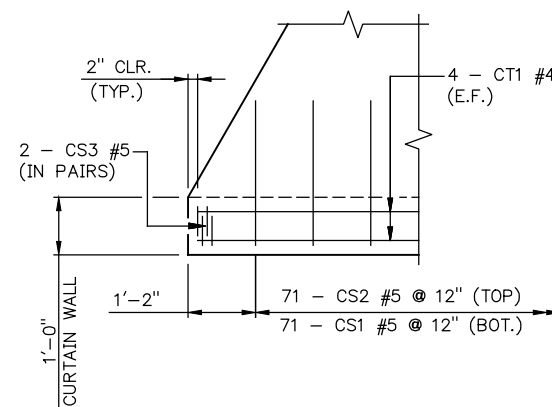
- [1] INCLUDES FOUR (4) SETS OF SEVEN (7) BARS EACH.
- [2] INCLUDES ONE (1) 2'-0" LAP SPLICE.
- [3] INCLUDES TWO (2) SETS OF FOUR (4) BARS EACH.



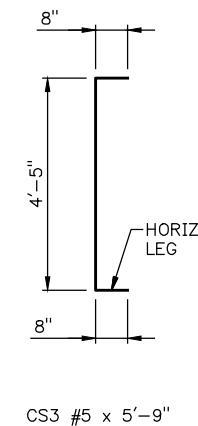
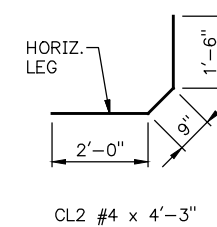
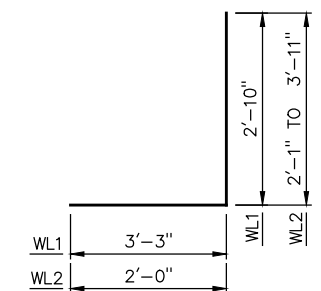
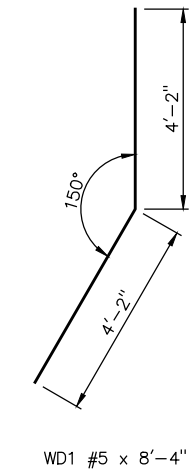
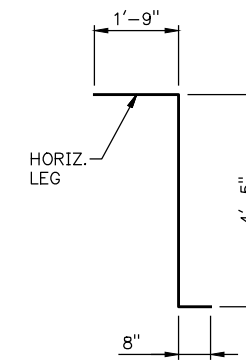
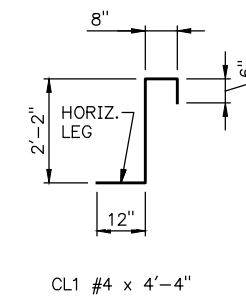
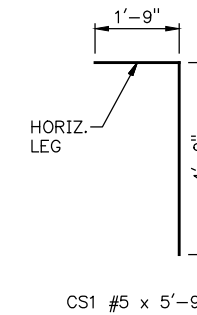
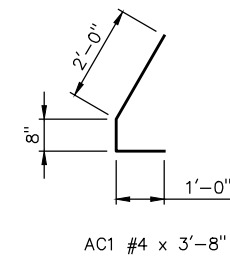
SOUTH END SECTION CURTAIN WALL DETAIL



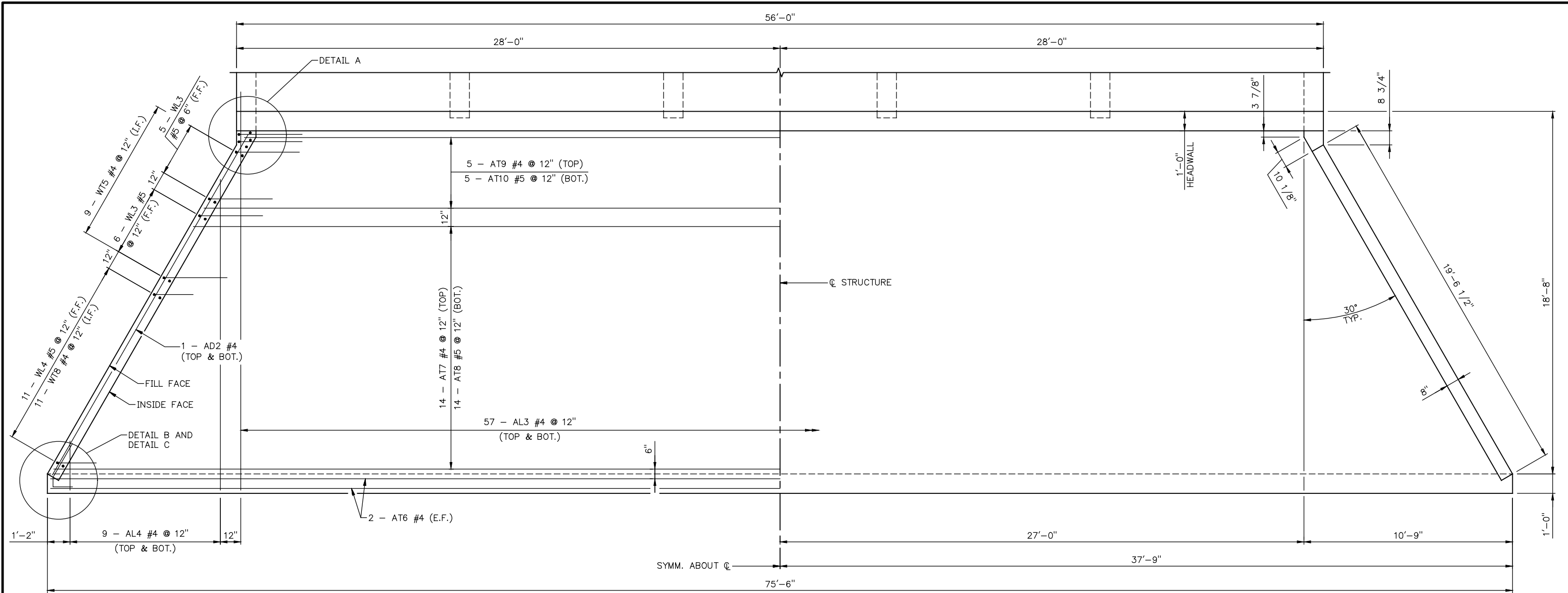
SOUTH END SECTION CURTAIN WALL END DETAIL



DETAIL C
(SHOWING CURTAIN WALL REINFORCING)



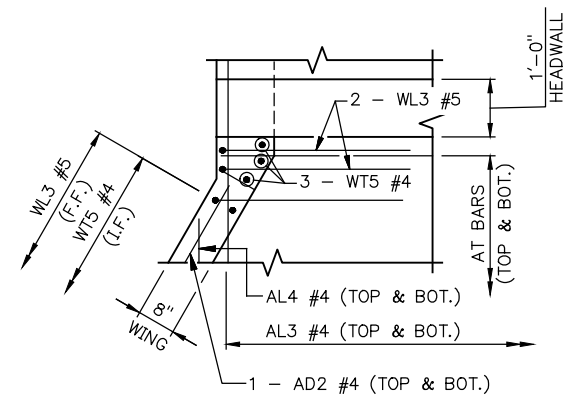
BAR BEND DETAILS



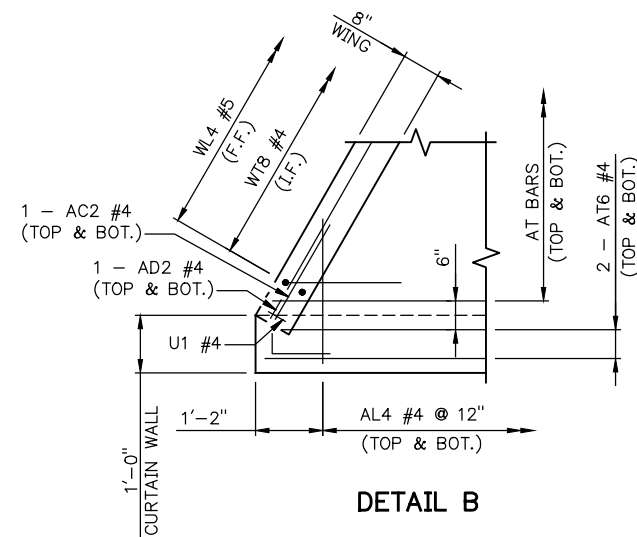
NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE

NORTH END SECTION APRON REINFORCING AND LAYOUT PLAN

NOTE:
 SEE "DETAIL C" ON SHEET B009
 FOR CURTAIN WALL REINFORCING DETAILS.

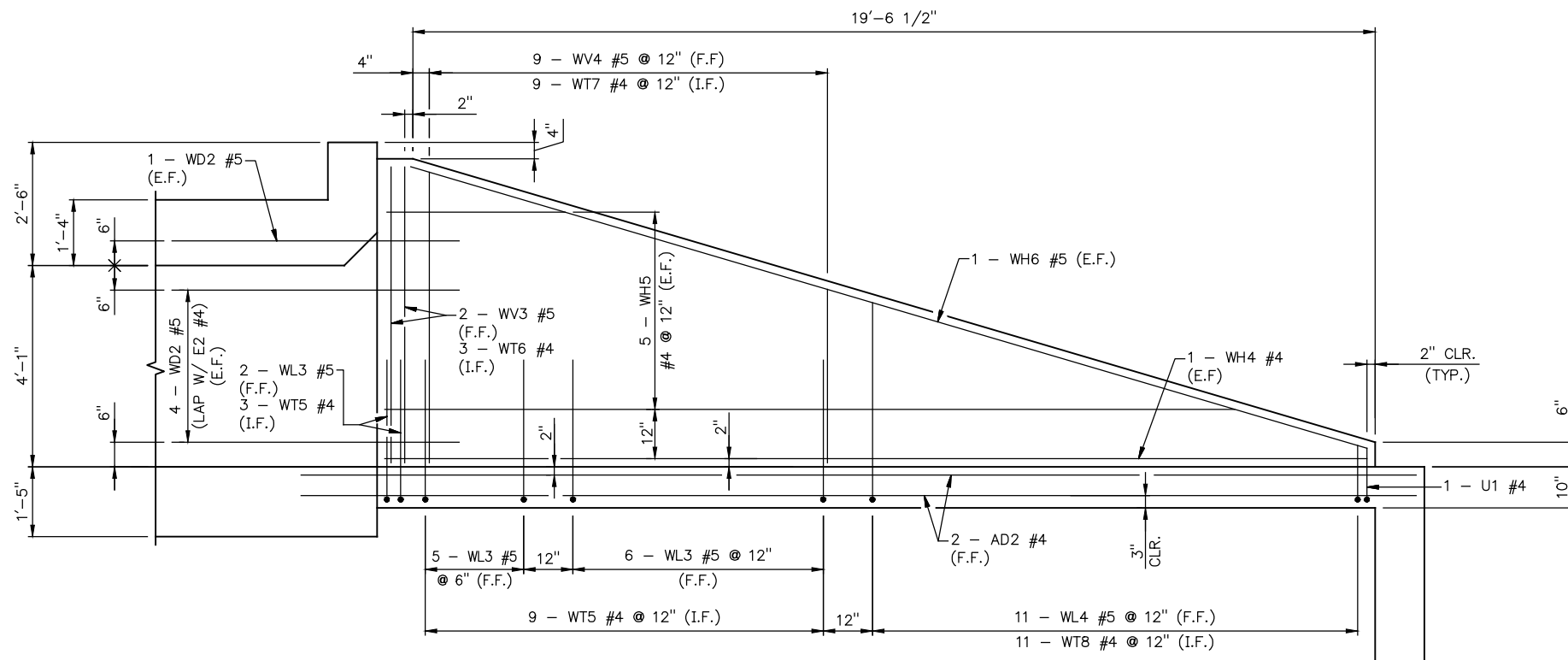


DETAIL A



DETAIL B

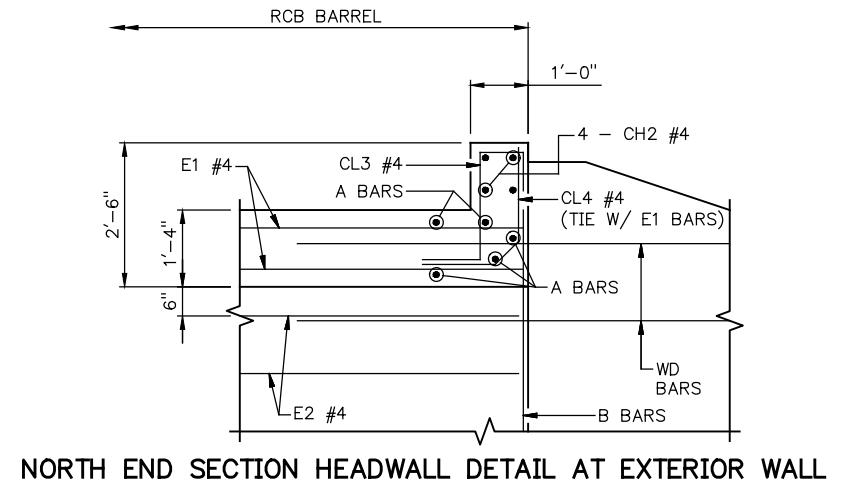
BRIDGE "A" DETAILS
 (DETAIL 6 OF 8)



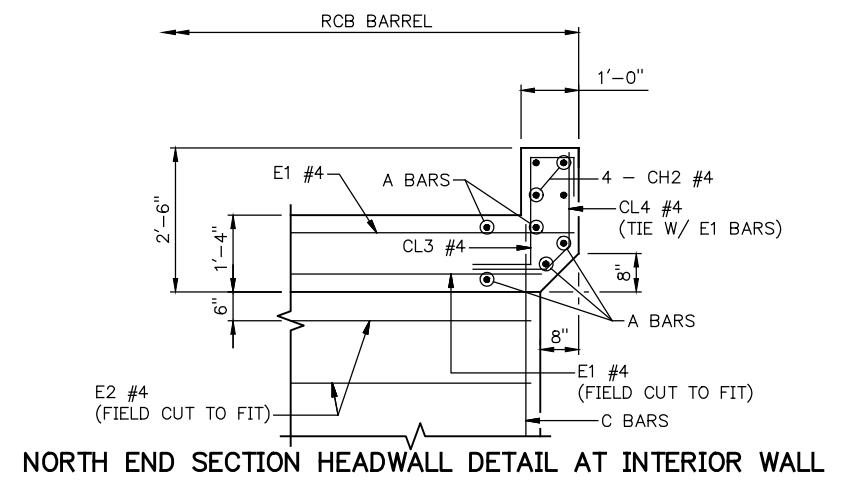
NORTH END SECTION WING DETAIL

NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE

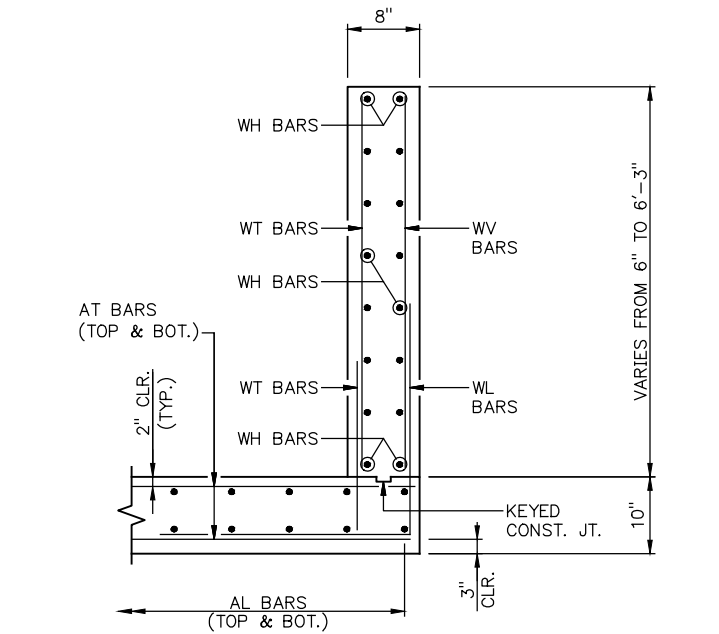
SEE CURTAIN WALL DETAIL



NORTH END SECTION HEADWALL DETAIL AT EXTERIOR WALL



NORTH END SECTION HEADWALL DETAIL AT INTERIOR WALL



NORTH END SECTION TYPICAL SECTION THRU WING

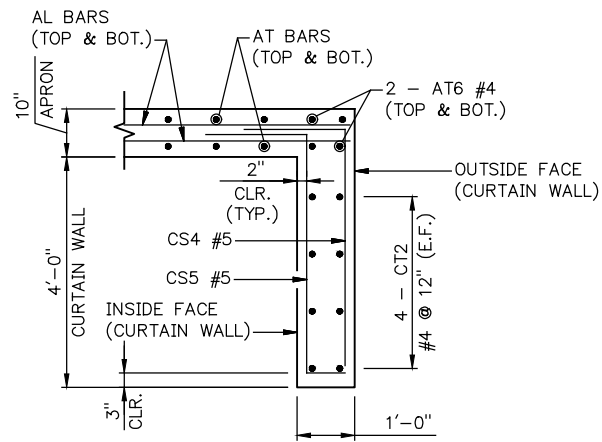
BRIDGE "A" DETAILS
 (DETAIL 7 OF 8)

State Job No. 29674(04) Sheet No. B008

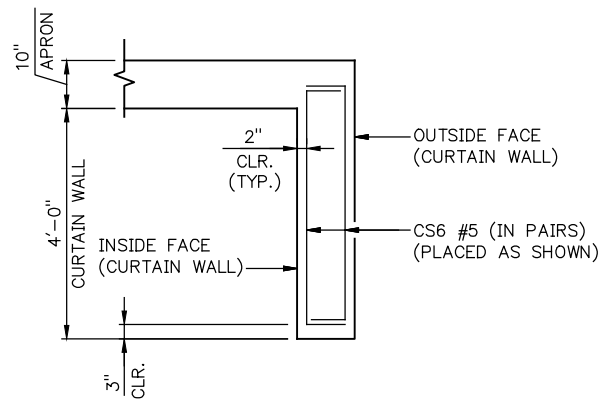
NORTH END SECTION BAR LIST - APRON (INCLUDES HEADWALL AND CURTAIN WALL)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
AC2	4	#4	BNT.	3'-8"	
AD2	4	#4	STR.	20'-2"	
AL3	114	#4	STR.	20'-6"	
[1] AL4	36	#4	STR.	9'-2" AVG.	2'-6" TO 15'-10"
[2] AT6	4	#4	STR.	77'-2"	
[2] AT7	14	#4	STR.	69'-8" AVG.	62'-6" TO 76'-10"
[2] AT8	14	#5	STR.	69'-8" AVG.	62'-6" TO 76'-10"
AT9	5	#4	STR.	57'-4" AVG.	55'-2" TO 59'-6"
AT10	5	#5	STR.	57'-4" AVG.	55'-2" TO 59'-6"
CH2	4	#4	STR.	55'-8"	
CL3	57	#4	BNT.	4'-4"	
CL4	57	#4	BNT.	4'-3"	
CS4	75	#5	BNT.	5'-9"	
CS5	75	#5	BNT.	6'-10"	
CS6	8	#5	BNT.	5'-9"	
[2] CT2	8	#4	STR.	77'-2"	

NORTH END SECTION BAR LIST - WING (ONE WING WALL SHOWN; TWO REQUIRED)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
WD2	10	#5	BNT.	8'-4"	
WH4	2	#4	STR.	20'-1"	
[3] WH5	10	#4	STR.	10'-7" AVG.	3'-10" TO 17'-4"
WH6	2	#5	STR.	20'-2"	
WL3	13	#5	BNT.	6'-1"	
WL4	11	#5	BNT.	4'-5" AVG.	3'-0" TO 5'-10"
WT5	12	#4	STR.	2'-10"	
WT6	3	#4	STR.	6'-1"	
WT7	9	#4	STR.	4'-9" AVG.	3'-7" TO 5'-11"
WT8	11	#4	STR.	2'-5" AVG.	1'-0" TO 3'-10"
WV3	2	#5	STR.	6'-1"	
WV4	9	#5	STR.	4'-9" AVG.	3'-7" TO 5'-11"
U1	1	#4	BNT.	2'-2"	

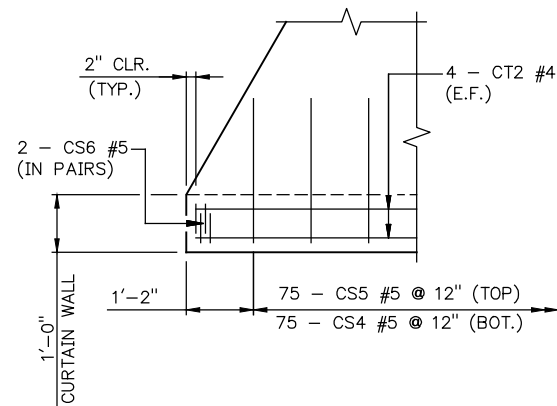
- [1] INCLUDES FOUR (4) SETS OF NINE (9) BARS EACH.
 [2] INCLUDES ONE (1) 2'-0" LAP SPLICE.
 [3] INCLUDES TWO (2) SETS OF FIVE (5) BARS EACH.



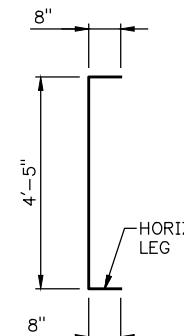
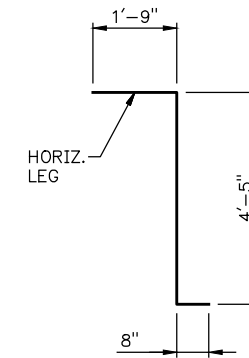
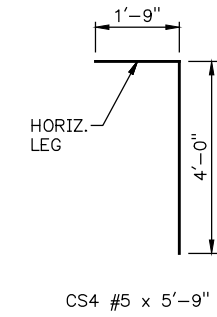
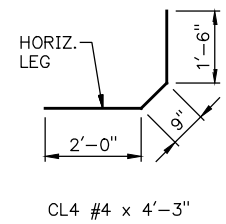
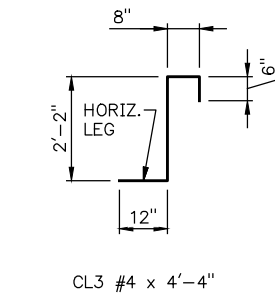
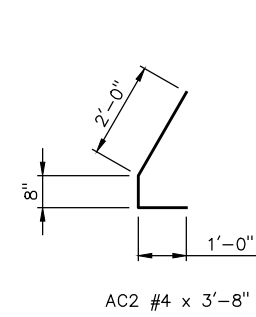
NORTH END SECTION CURTAIN WALL DETAIL



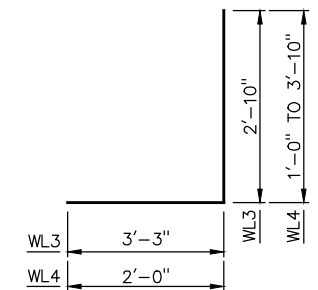
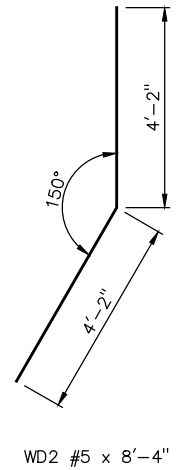
NORTH END SECTION CURTAIN WALL END DETAIL



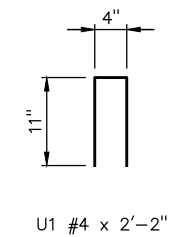
DETAIL C
(SHOWING CURTAIN WALL REINFORCING)



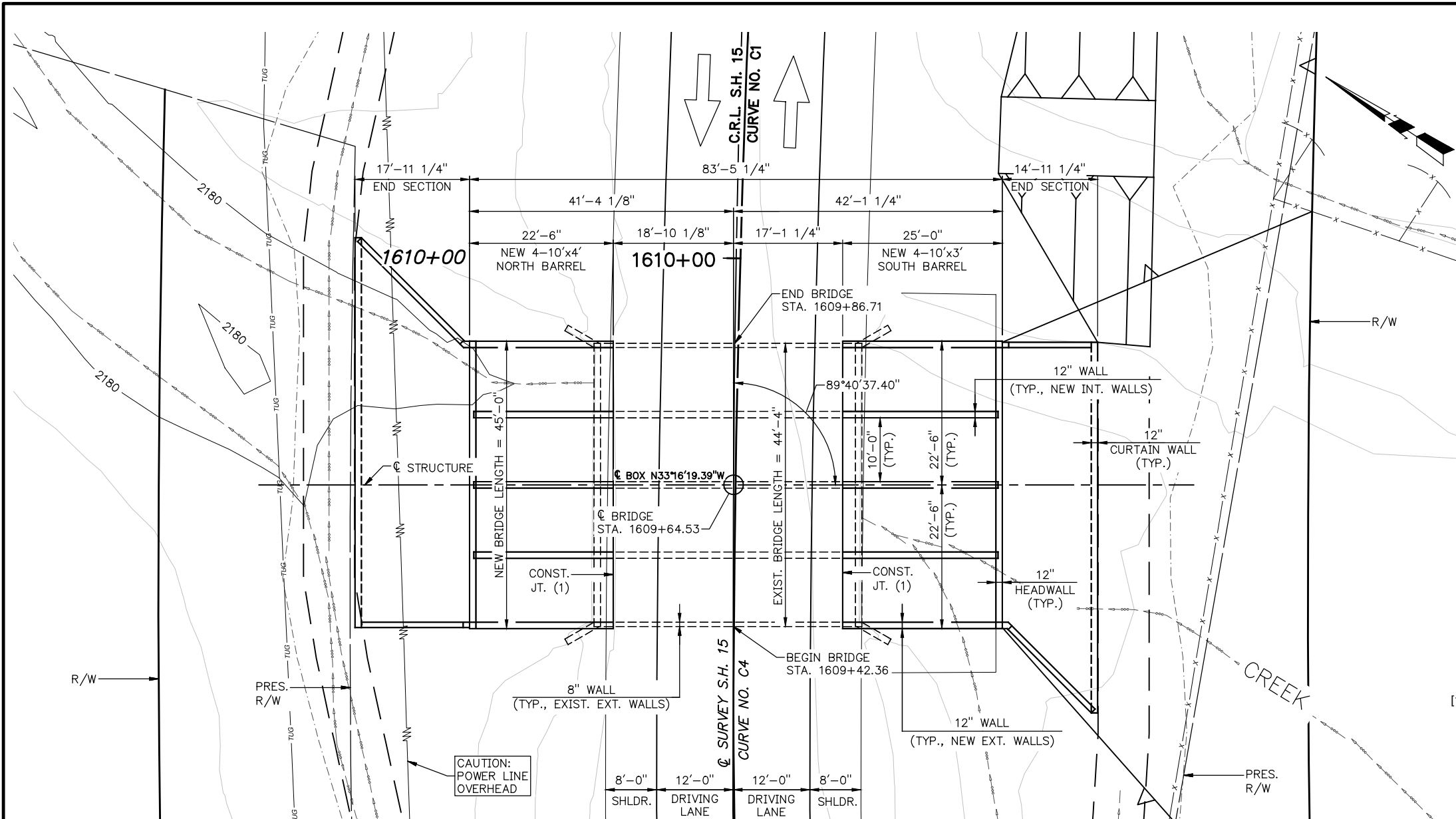
BAR BEND DETAILS



WL3 #5 x 6'-1"
WL4 #5 x 4'-5" AVG.



BRIDGE "A" DETAILS
(DETAIL 8 OF 8)



**LOAD AND RESISTANCE FACTOR DESIGN
(NEW CONSTRUCTION ONLY)**

DESIGN DATA

CLASS "AA" CONCRETE $F'_C = 4,000$ PSI
 REINFORCING STEEL $F_Y = 60,000$ PSI

LOADING: HL-93 AND ODOT OVERLOAD TRUCK

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2014 EDITION,
 WITH 2016 INTERIMS.

THE FOLLOWING STANDARDS SHALL BE REQUIRED:

SBI-4-2

SUMMARY OF QUANTITIES - BRIDGE "B"				
DESCRIPTION	UNIT	NORTH BARREL [1]	SOUTH BARREL [1]	TOTAL
UNCLASSIFIED EXCAVATION	CY	260.00	230.00	490.00
STRUCTURAL EXCAVATION UNCLASSIFIED	CY	96.00	95.00	191.00
REMOVAL OF CULVERT END	EA	1.00	1.00	2.00
CLASS AA CONCRETE	CY	167.00	162.10	329.10
REINFORCING STEEL	LB	23,610.00	23,360.00	46,970.00

[1] INCLUDES HEADWALL, APRON, CURTAIN WALL, AND WING WALLS.

NOTES: ALL STATIONING FOLLOWS C SURVEY S.H. 15, UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION.

FOR CHANNEL WORK DETAILS, SEE THE PLAN AND PROFILE SHEETS AND CROSS-SECTIONS. (ROADWAY ITEMS).

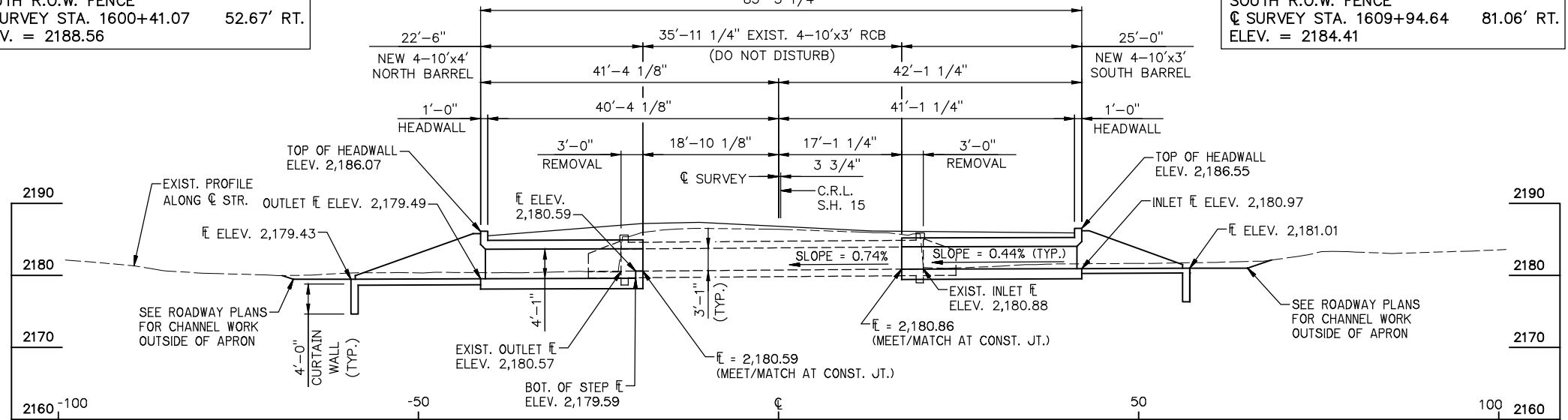
PLAN

SCALE 1" = 10'
 83'-5 1/4"

BM#112-3/4" IRON PIN IN
 SOUTH R.O.W. FENCE
 C SURVEY STA. 1600+41.07 52.67' RT.
 ELEV. = 2188.56

BM#111-3/4" IRON PIN IN
 SOUTH R.O.W. FENCE
 C SURVEY STA. 1609+94.64 81.06' RT.
 ELEV. = 2184.41

(1) STRIP CONCRETE AND EXPOSE LONGITUDINAL STEEL TO THIS LINE FOR BOND.



SECTION THRU C STRUCTURE

SCALE 1" = 10'

EXTEND 4-10x3' BRIDGE BOX WITH APRONS AND 4' CURTAIN WALLS, SKEWED 00°19'22.60" R.F.

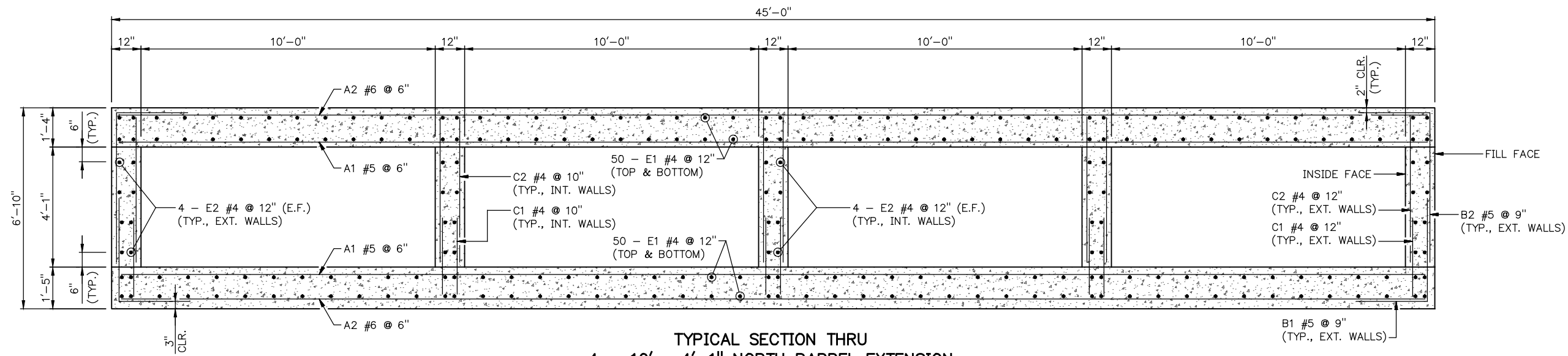
HYDRAULIC DATA

TOTAL D.A.	=	1.91 SQ. MI.		
CONTROLLED D.A.	=	0.00 SQ. MI.		
EFFECTIVE D.A.	=	1.91 SQ. MI.		
Q2	=	116 CFS	Q50	= 1,220 CFS
V2	=	2.87 FPS	V50	= 7.11 FPS
Q2 CHW	=	2,184.14 FT.	Q50 CHW	= 2,185.88 FT.
Q5	=	302 CFS	Q100	= 1,640 CFS
V5	=	4.45 FPS	V100	= 7.54 FPS
Q5 CHW	=	2,184.69 FT.	Q100 CHW	= 2,186.14 FT.
Q10	=	512 CFS	Q0.T. = Q380	= 2,550 CFS
V10	=	5.67 FPS	V0.T.	= 7.91 FPS
Q10 CHW	=	2,185.15 FT.	O.T. CHW	= 2,186.64 FT.
Q25	=	886 CFS		
V25	=	6.83 FPS		
Q25 CHW	=	2,185.66 FT.		

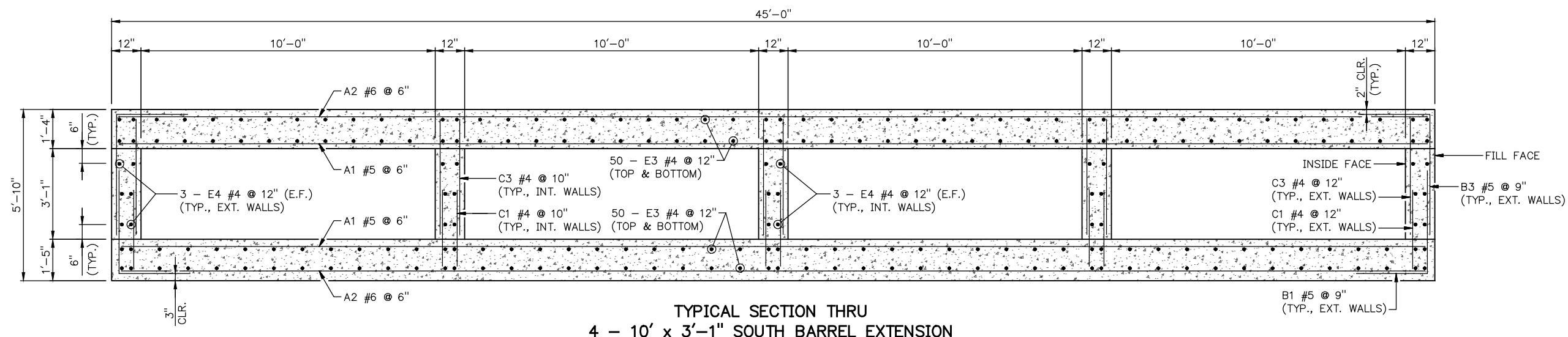
**GENERAL PLAN AND ELEVATION
(BRIDGE "B")**

BRIDGE "B" C SURVEY STA. 1609+64.53
 4-10x3'(4')x83.44' LG. BOX, SKEWED 00°19'22.60" R.F.
 State Job No. 29674(04) Sheet No. B010

S.H. 15
 ELLIS COUNTY



TYPICAL SECTION THRU
4 - 10' x 4'-1" NORTH BARREL EXTENSION



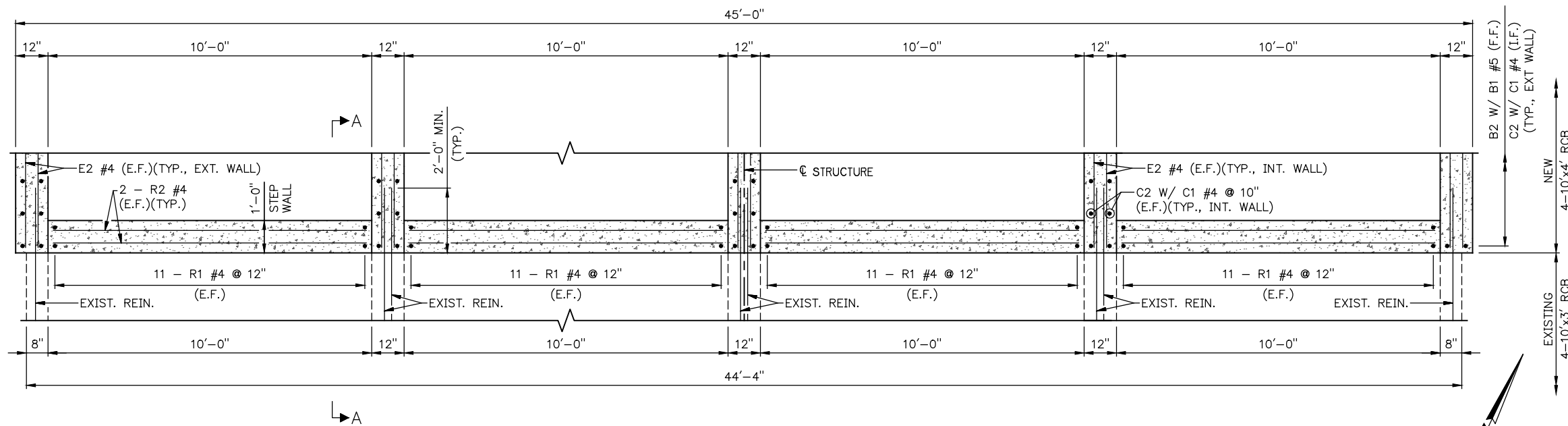
TYPICAL SECTION THRU
4 - 10' x 3'-1" SOUTH BARREL EXTENSION

NORTH BARREL EXTENSION BAR LIST (BRIDGE "B")					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
A1	92	#5	STR.	44'-8"	
A2	92	#6	STR.	44'-8"	
B1	62	#5	BNT.	6'-0"	
B2	62	#5	BNT.	7'-9"	
C1	216	#4	STR.	2'-10"	
C2	216	#4	STR.	5'-3"	
D1	6	#4	BNT.	3'-6"	
[1] D2	6	#4	BNT.	2'-11" AVG.	2'-8" TO 3'-2"
E1	200	#4	STR.	22'-2"	
E2	40	#4	STR.	22'-2"	
R1	88	#4	BNT.	2'-11"	
R2	16	#4	STR.	9'-8"	

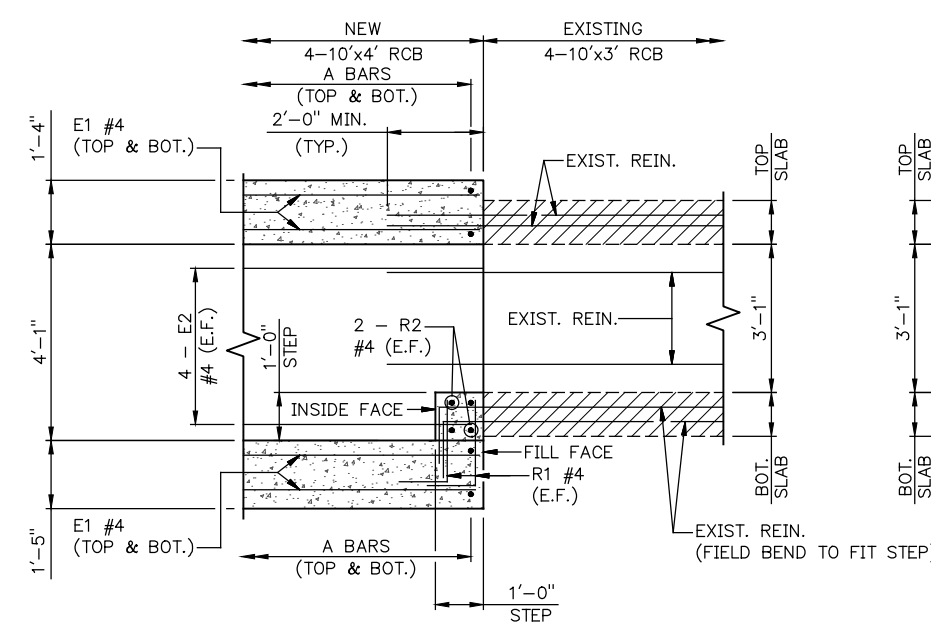
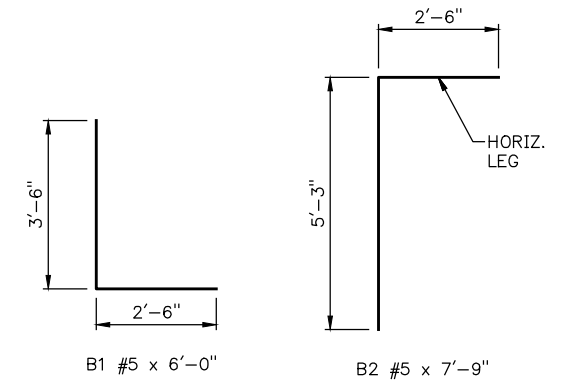
[1] TWO SETS OF THREE (3) BARS EACH.

SOUTH BARREL EXTENSION BAR LIST (BRIDGE "B")					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
A1	102	#5	STR.	44'-8"	
A2	102	#6	STR.	44'-8"	
B1	68	#5	BNT.	6'-0"	
B3	68	#5	BNT.	6'-9"	
C1	238	#4	STR.	2'-10"	
C3	238	#4	STR.	4'-3"	
D1	6	#4	BNT.	3'-6"	
[1] D2	6	#4	BNT.	2'-11" AVG.	2'-8" TO 3'-2"
E3	200	#4	STR.	24'-8"	
E4	30	#4	STR.	24'-8"	

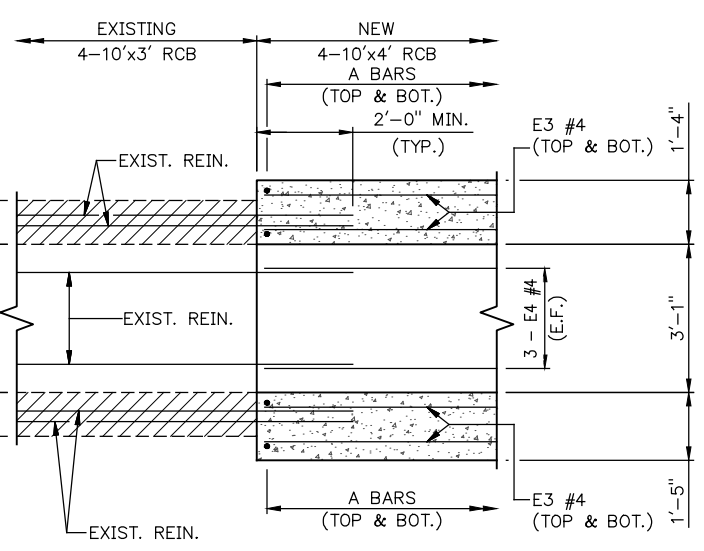
BRIDGE "B" DETAILS
(DETAIL 1 OF 8)



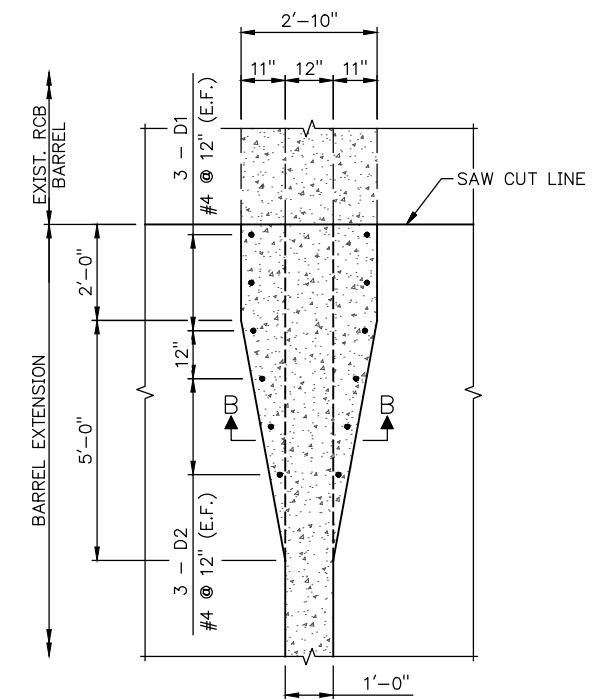
STEP AT NORTH BARREL EXTENSION PLAN



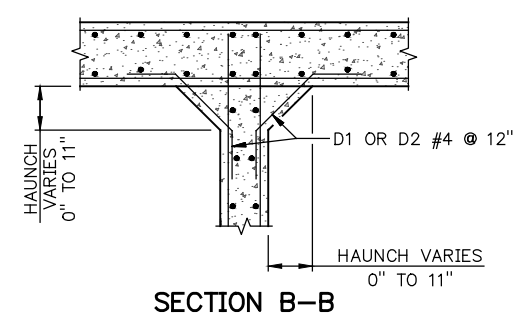
SECTION A-A



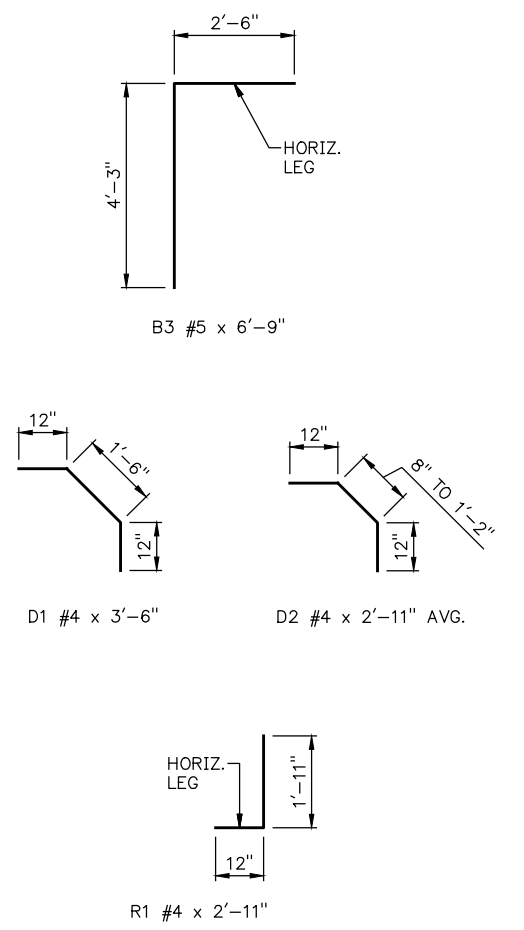
SOUTH BARREL EXTENSION SECTION



INTERIOR WALL HAUNCH TRANSITION SECTION PLAN



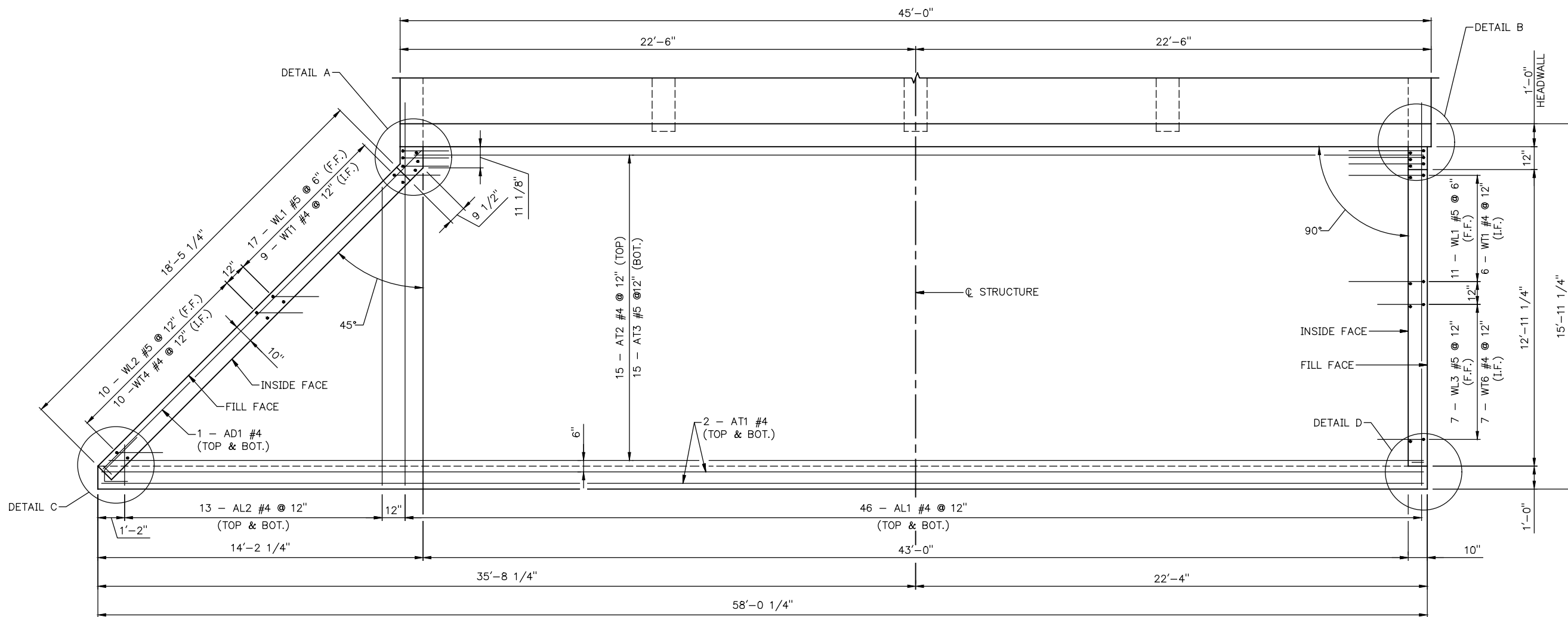
SECTION B-B



BAR BEND DETAILS

BRIDGE "B" DETAILS
(DETAIL 2 OF 8)

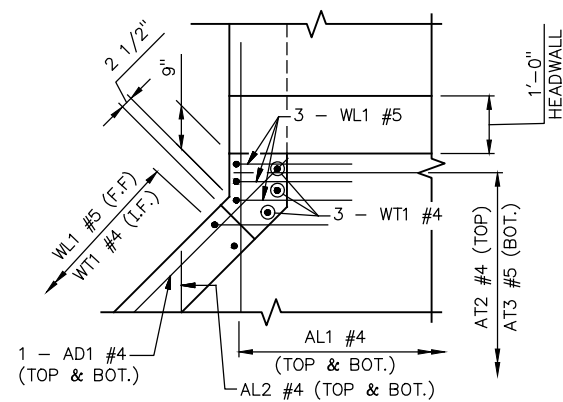
State Job No. 29674(04) Sheet No. B012



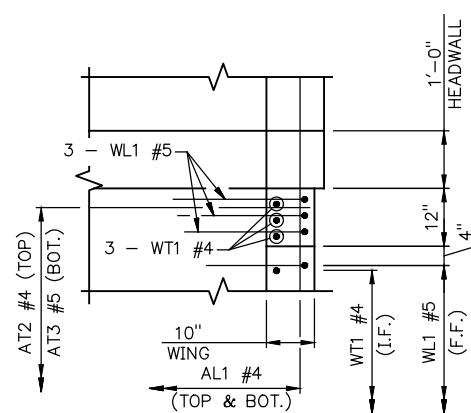
NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE

SOUTH END SECTION APRON REINFORCING AND LAYOUT PLAN

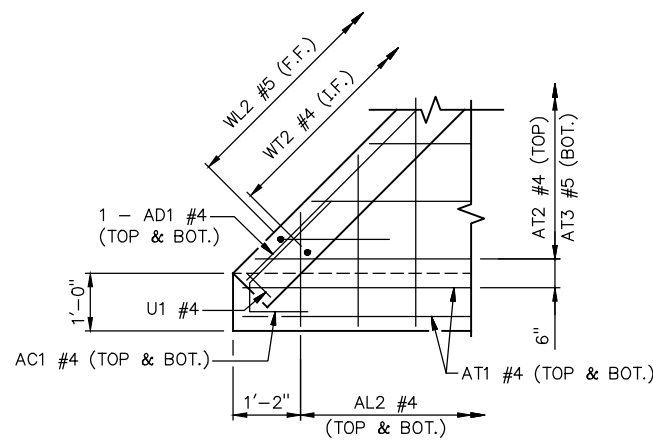
NOTE:
 SEE "DETAIL C" AND "DETAIL D" ON SHEET B015
 FOR CURTAIN WALL REINFORCING DETAILS.



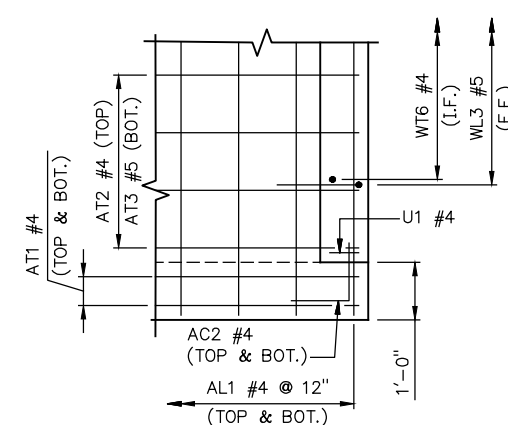
DETAIL A



DETAIL B

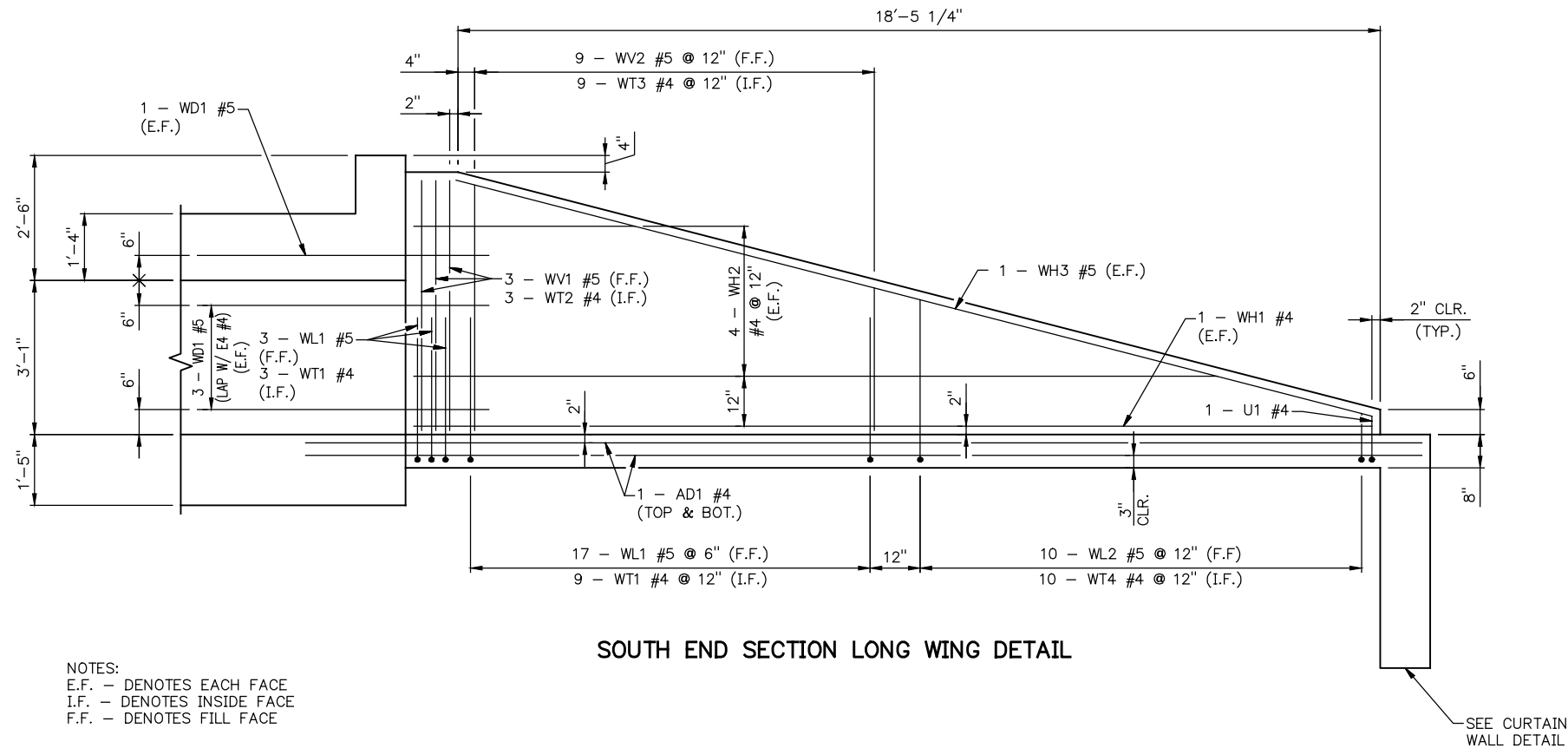


DETAIL C
 (SHOWING APRON REINFORCING)



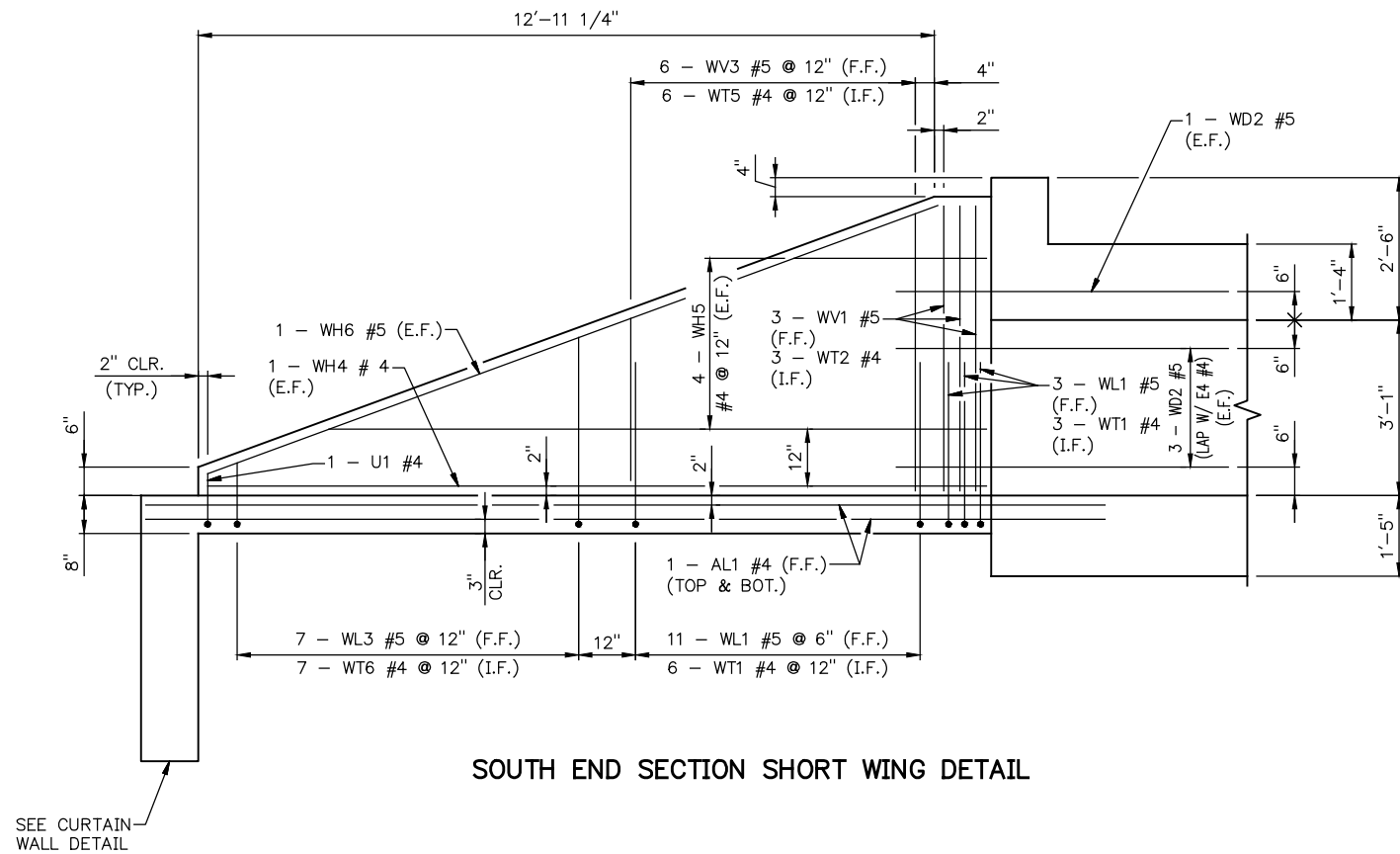
DETAIL D
 (SHOWING APRON REINFORCING)

BRIDGE "B" DETAILS
 (DETAIL 3 OF 8)



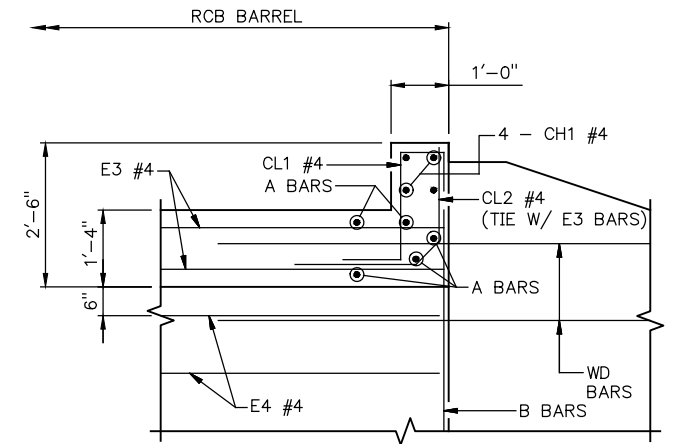
SOUTH END SECTION LONG WING DETAIL

NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE

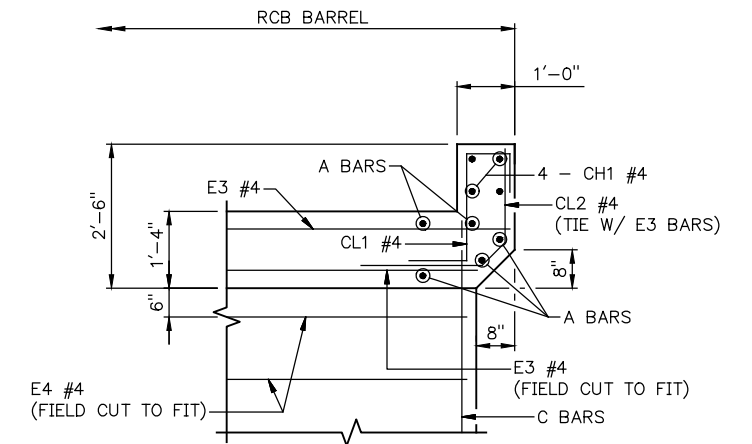


SOUTH END SECTION SHORT WING DETAIL

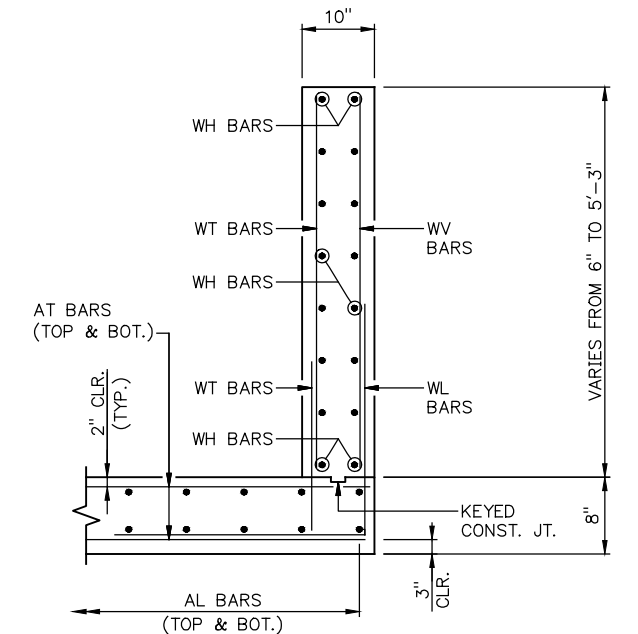
SEE CURTAIN WALL DETAIL



SOUTH END SECTION HEADWALL DETAIL AT EXTERIOR WALL



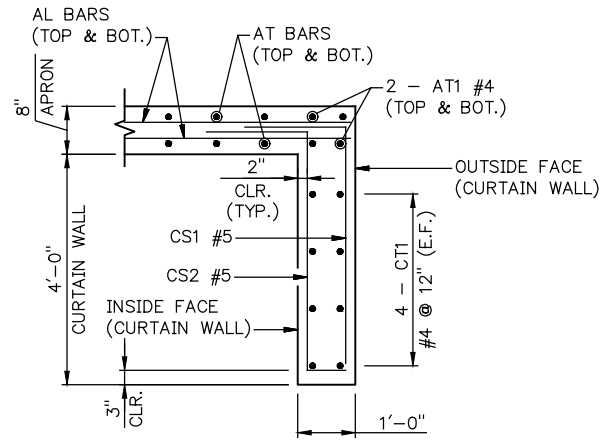
SOUTH END SECTION HEADWALL DETAIL AT INTERIOR WALL



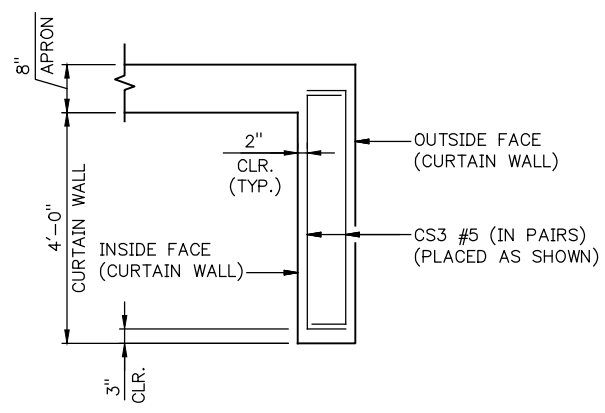
SOUTH END SECTION TYPICAL SECTION THRU WING

BRIDGE "B" DETAILS
 (DETAIL 4 OF 8)

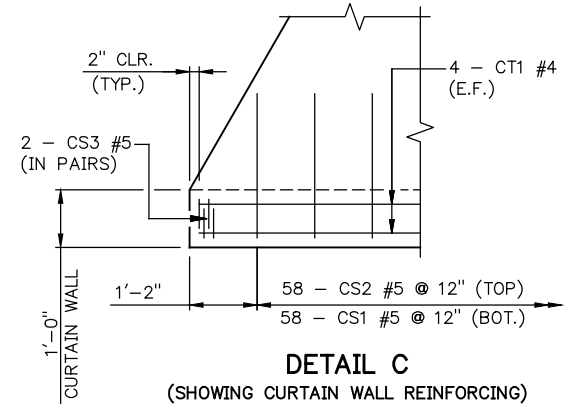
SOUTH END SECTION BAR LIST - APRON (INCLUDES HEADWALL AND CURTAIN WALL)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
AC1	2	#4	BNT.	3'-8"	
AC2	2	#4	BNT.	2'-0"	
AD1	2	#4	STR.	19'-7"	
AL1	92	#4	STR.	17'-9"	
[1] AL2	26	#4	STR.	7'-5" AVG.	1'-9" TO 13'-1"
AT1	4	#4	STR.	57'-8"	
AT2	15	#4	STR.	50'-7" AVG.	43'-10" TO 57'-4"
AT3	15	#5	STR.	50'-7" AVG.	43'-10" TO 57'-4"
CH1	4	#4	STR.	44'-8"	
CL1	46	#4	BNT.	4'-4"	
CL2	46	#4	BNT.	4'-3"	
CS1	58	#5	BNT.	5'-9"	
CS2	58	#5	BNT.	6'-8"	
CS3	6	#5	BNT.	5'-7"	
CT1	8	#4	STR.	57'-8"	



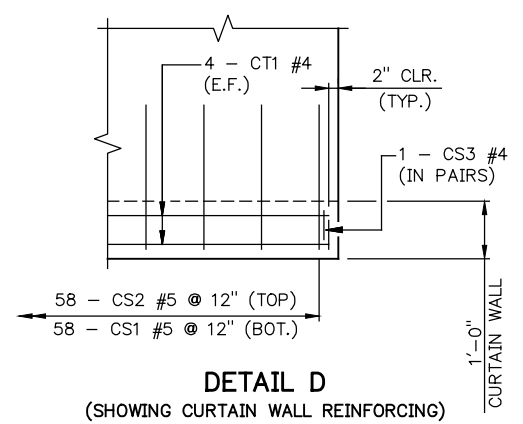
SOUTH END SECTION CURTAIN WALL DETAIL



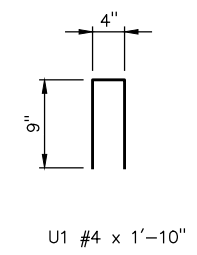
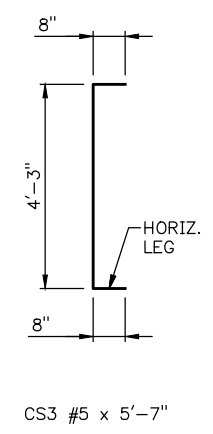
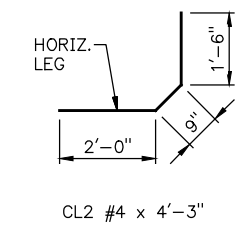
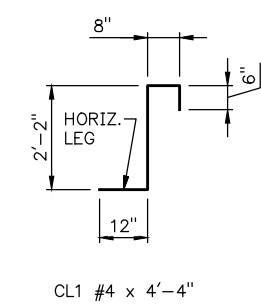
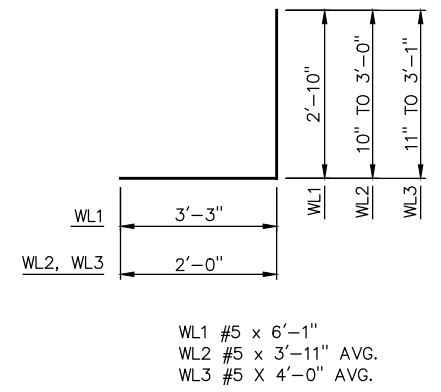
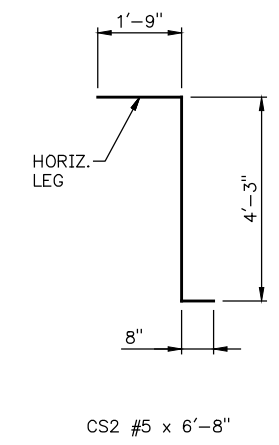
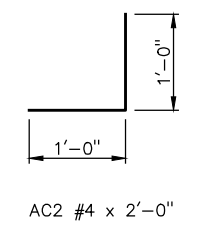
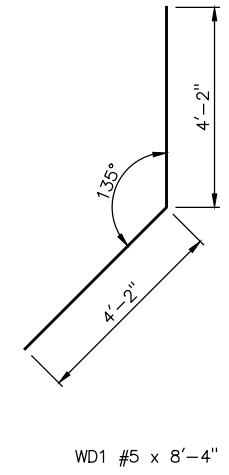
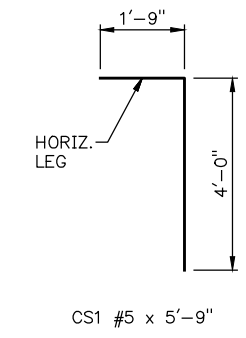
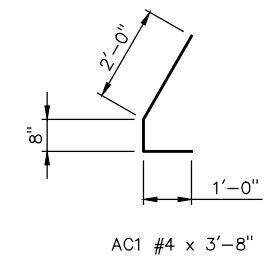
SOUTH END SECTION CURTAIN WALL END DETAIL



DETAIL C (SHOWING CURTAIN WALL REINFORCING)



DETAIL D (SHOWING CURTAIN WALL REINFORCING)



BAR BEND DETAILS

[1]

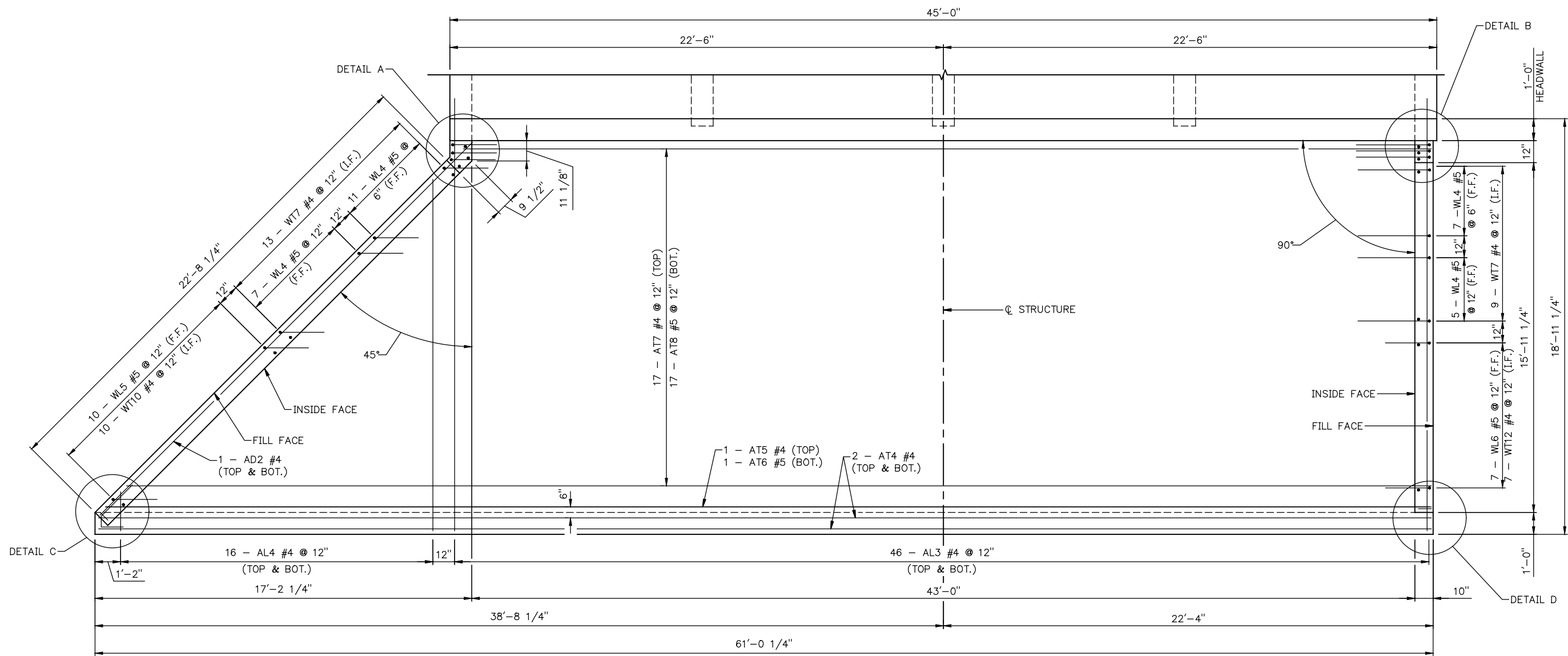
[2]

[2]

[1] INCLUDES TWO (2) SETS OF THIRTEEN (13) BARS EACH.
[2] INCLUDES TWO (2) SETS OF FOUR (4) BARS EACH.

BRIDGE "B" DETAILS
(DETAIL 5 OF 8)

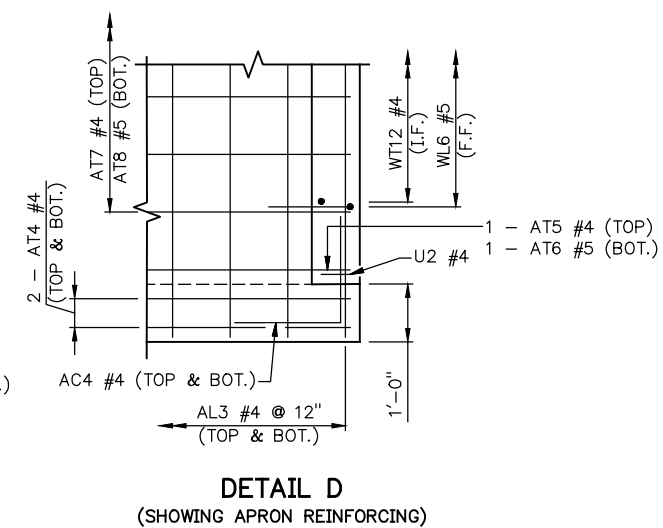
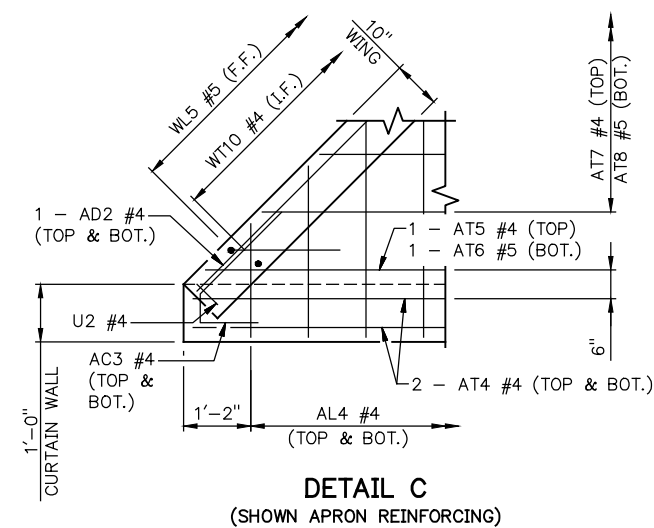
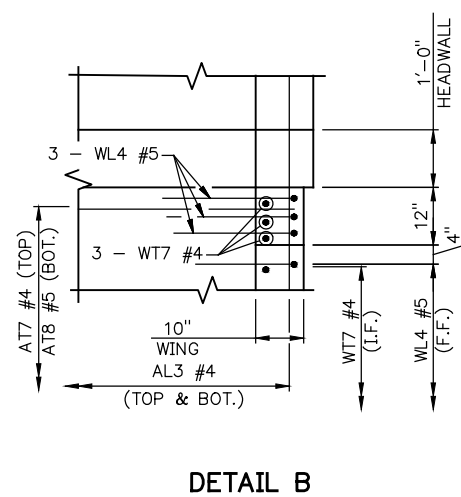
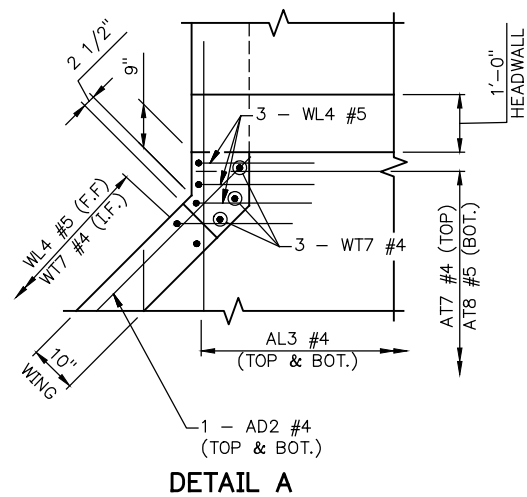
State Job No. 29674(04) Sheet No. B015



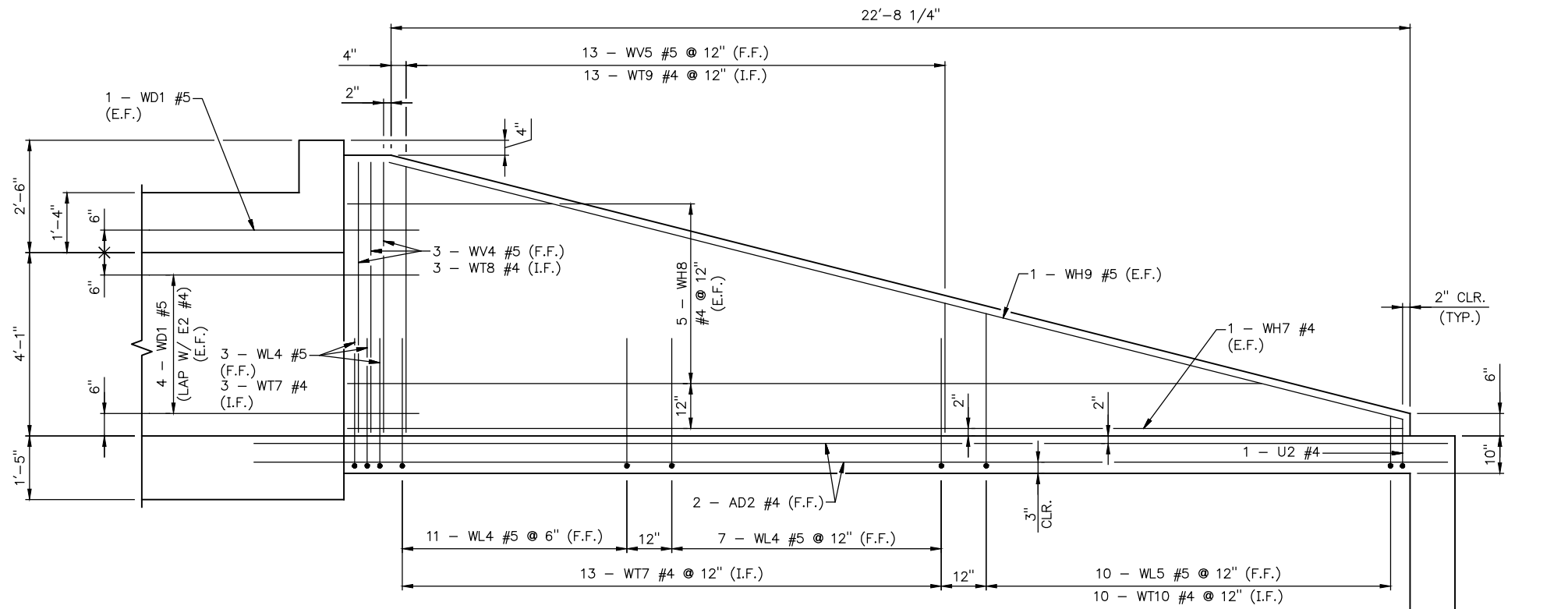
NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE

NORTH END SECTION APRON REINFORCING AND LAYOUT PLAN

NOTE:
 SEE "DETAIL C" AND "DETAIL D" ON SHEET B018
 FOR CURTAIN WALL REINFORCING DETAILS.

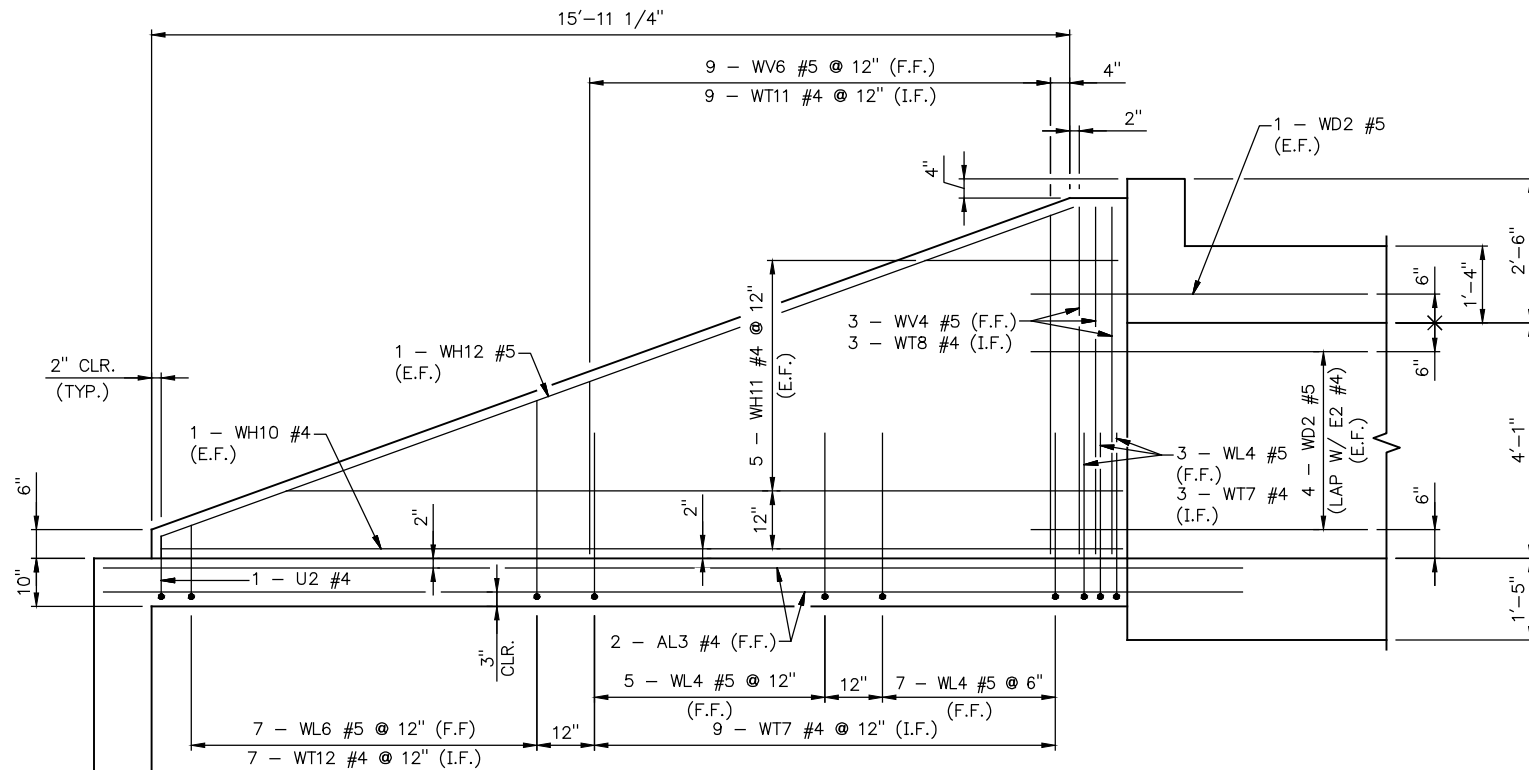


BRIDGE "B" DETAILS
 (DETAIL 6 OF 8)



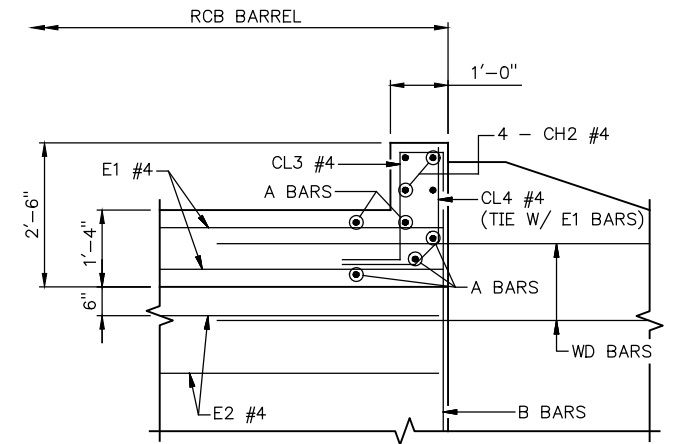
NORTH END SECTION LONG WING DETAIL

NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE

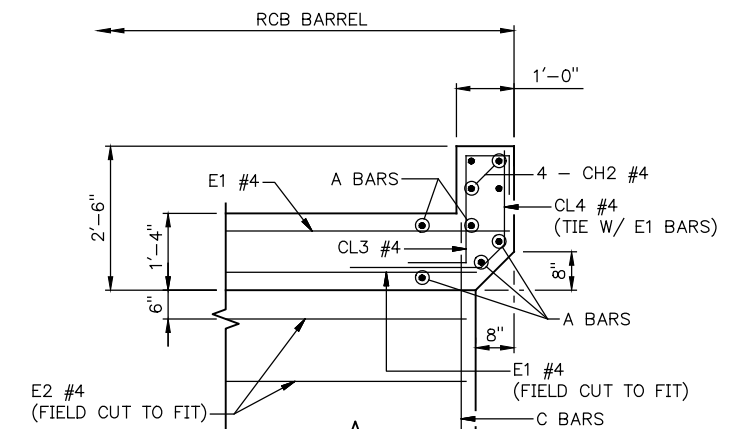


NORTH END SECTION SHORT WING DETAIL

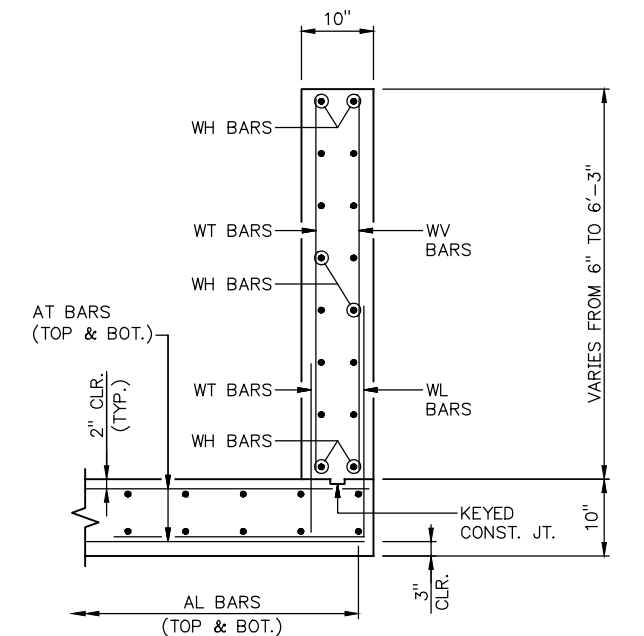
SEE CURTAIN WALL DETAIL



NORTH END SECTION HEADWALL DETAIL AT EXTERIOR WALL



NORTH END SECTION HEADWALL DETAIL AT INTERIOR WALL



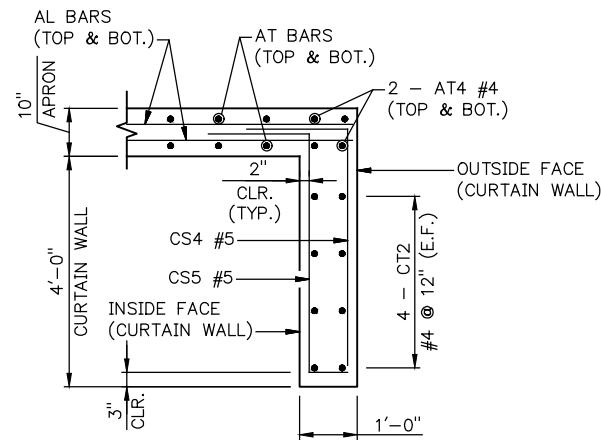
NORTH END SECTION TYPICAL SECTION THRU WING

BRIDGE "B" DETAILS
 (DETAIL 7 OF 8)

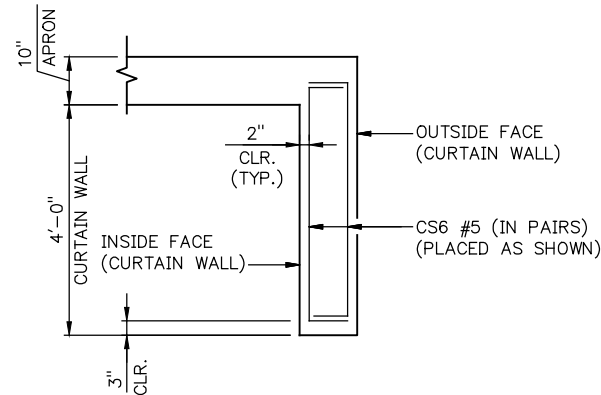
NORTH END SECTION BAR LIST - APRON (INCLUDES HEADWALL AND CURTAIN WALL)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
AC3	2	#4	BNT.	3'-8"	
AC4	2	#4	BNT.	2'-0"	
AD2	2	#4	STR.	23'-11"	
AL3	92	#4	STR.	19'-9"	
[1] AL4	32	#4	STR.	8'-10" AVG.	1'-8" TO 16'-0"
[2] AT4	4	#4	STR.	62'-8"	
[2] AT5	1	#4	STR.	62'-4"	
[2] AT6	1	#5	STR.	62'-4"	
AT7	17	#4	STR.	51'-8" AVG.	44'-0" TO 59'-4"
AT8	17	#5	STR.	51'-8" AVG.	44'-0" TO 59'-4"
CH2	4	#4	STR.	44'-8"	
CL3	46	#4	BNT.	4'-4"	
CL4	46	#4	BNT.	4'-3"	
CS4	81	#5	BNT.	5'-9"	
CS5	81	#5	BNT.	6'-10"	
CS6	6	#5	BNT.	5'-9"	
[2] CT2	8	#4	STR.	62'-8"	

NORTH END SECTION BAR LIST - WINGS (BRIDGE "B")					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
WD1	10	#5	BNT.	8'-4"	
WD2	10	#5	STR.	8'-4"	
WH7	2	#4	STR.	23'-2"	
[3] WH2	10	#4	STR.	12'-2" AVG.	4'-3" TO 20'-1"
WH9	2	#5	STR.	23'-3"	
WH10	2	#4	STR.	16'-7"	
[3] WH11	10	#5	STR.	8'-10" AVG.	3'-3" TO 14'-5"
WH12	2	#5	STR.	16'-9"	
WL4	36	#5	BNT.	6'-1"	
WL5	10	#5	BNT.	4'-2" AVG.	3'-0" TO 5'-4"
WL6	7	#5	BNT.	4'-2" AVG.	3'-1" TO 5'-3"
WT7	28	#4	STR.	2'-10"	
WT8	6	#4	STR.	6'-1"	
WT9	13	#4	STR.	4'-5" AVG.	2'-11" TO 5'-11"
WT10	10	#4	STR.	2'-2" AVG.	1'-0" TO 3'-4"
WT11	9	#4	STR.	4'-5" AVG.	3'-0" TO 5'-10"
WT12	7	#4	STR.	2'-2" AVG.	1'-1" TO 3'-3"
WV4	6	#5	STR.	6'-1"	
WV5	13	#5	STR.	4'-5" AVG.	2'-11" TO 5'-11"
WV6	9	#5	STR.	4'-5" AVG.	3'-0" TO 5'-10"
U2	2	#4	BNT.	2'-4"	

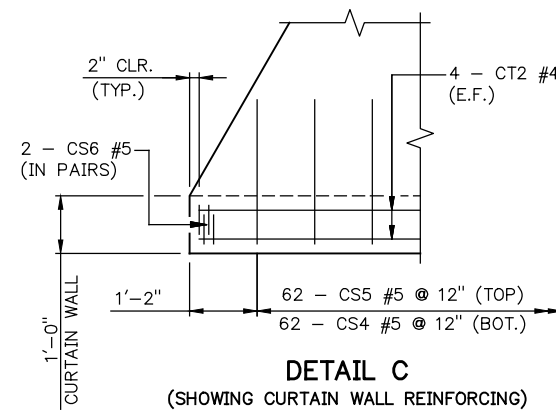
- [1] INCLUDES TWO (2) SETS OF SIXTEEN (16) BARS EACH.
- [2] INCLUDES ONE (1) 2'-0" LAP SPLICE.
- [3] INCLUDES TWO (2) SETS OF FIVE (5) BARS EACH.



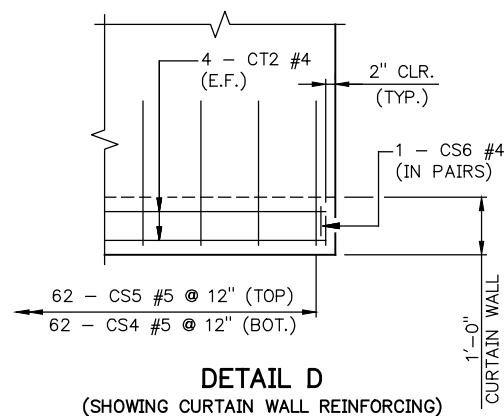
NORTH END SECTION CURTAIN WALL DETAIL



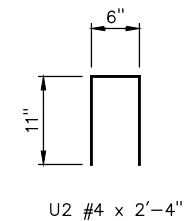
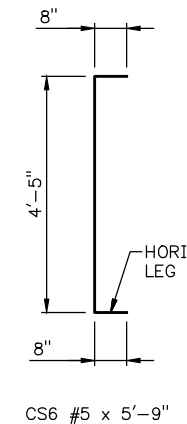
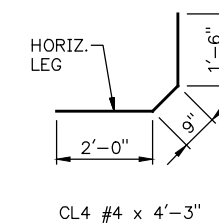
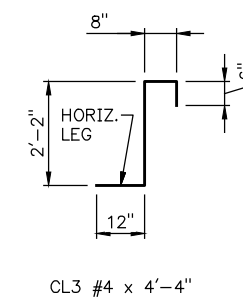
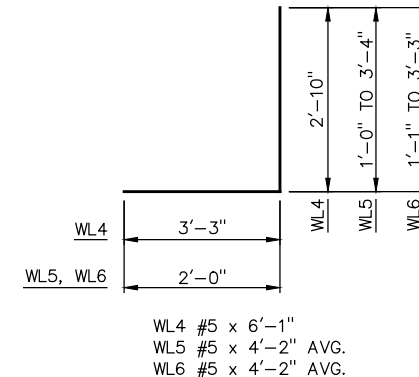
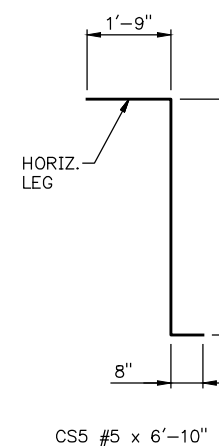
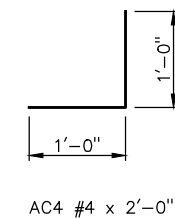
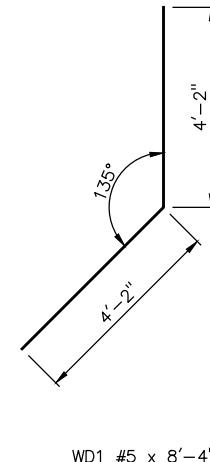
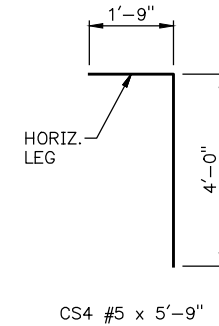
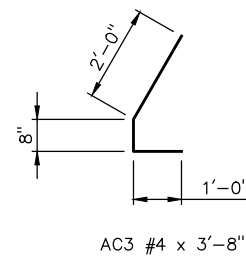
NORTH END SECTION CURTAIN WALL END DETAIL



DETAIL C (SHOWING CURTAIN WALL REINFORCING)

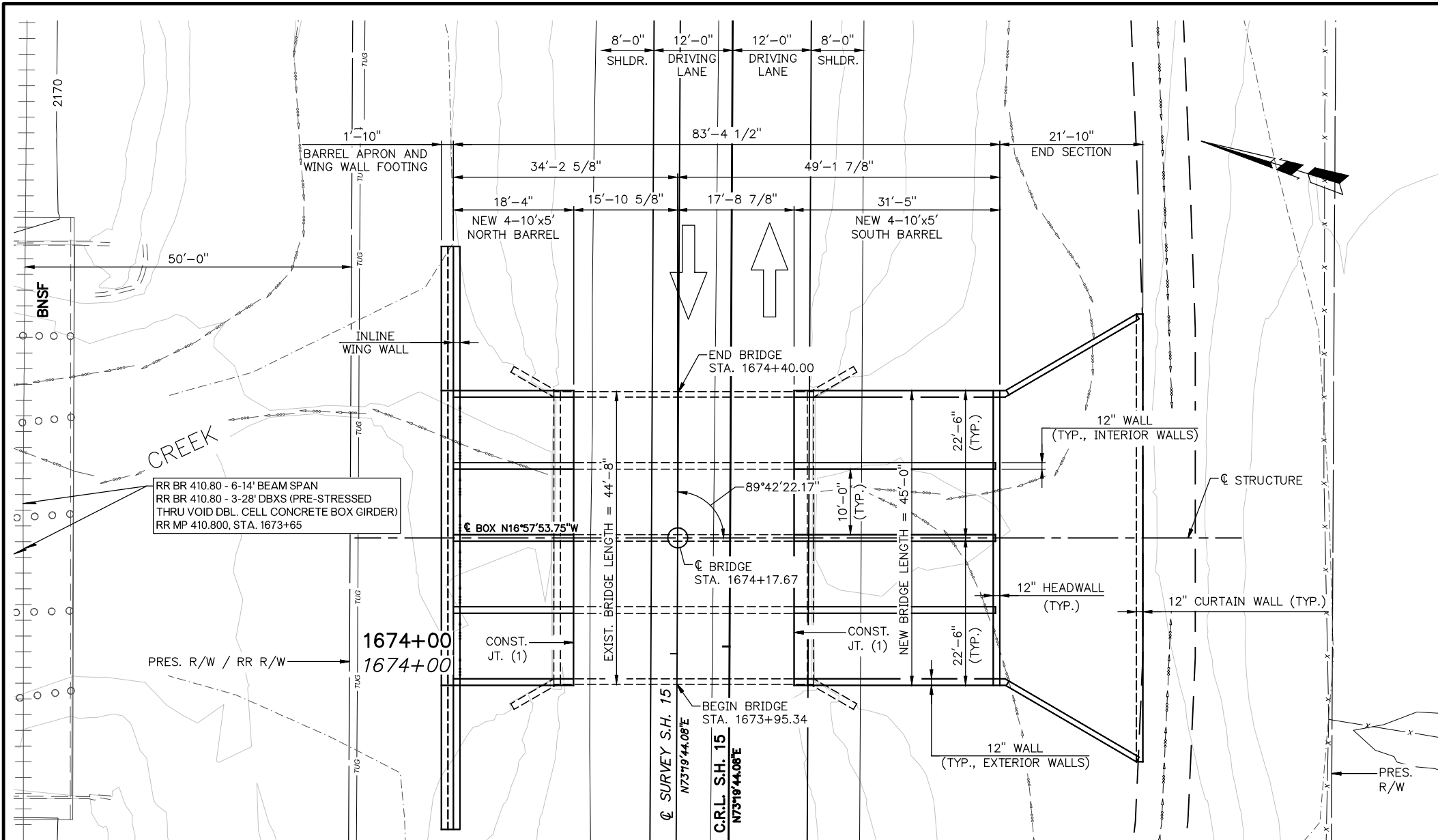


DETAIL D (SHOWING CURTAIN WALL REINFORCING)



BAR BEND DETAILS

BRIDGE "B" DETAILS
(DETAIL 8 OF 8)



LOAD AND RESISTANCE FACTOR DESIGN
(NEW CONSTRUCTION ONLY)

DESIGN DATA

CLASS "AA" CONCRETE $F'_C = 4,000$ PSI
 REINFORCING STEEL $F_Y = 60,000$ PSI
 LOADING: HL-93 AND ODOT OVERLOAD TRUCK
 DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2014 EDITION,
 WITH 2016 INTERIMS.
 THE FOLLOWING STANDARDS SHALL BE REQUIRED:
 SBI-4-2

SUMMARY OF QUANTITIES - BRIDGE "C"				
DESCRIPTION	UNIT	NORTH BARREL [1]	SOUTH BARREL [2]	TOTAL
UNCLASSIFIED EXCAVATION	CY	220.00	500.00	720.00
STRUCTURAL EXCAVATION UNCLASSIFIED	CY	95.00	126.00	221.00
REMOVAL OF CULVERT END	EA	1.00	1.00	2.00
CLASS AA CONCRETE	CY	147.50	230.40	377.90
REINFORCING STEEL	LB	20,260.00	29,830.00	50,090.00

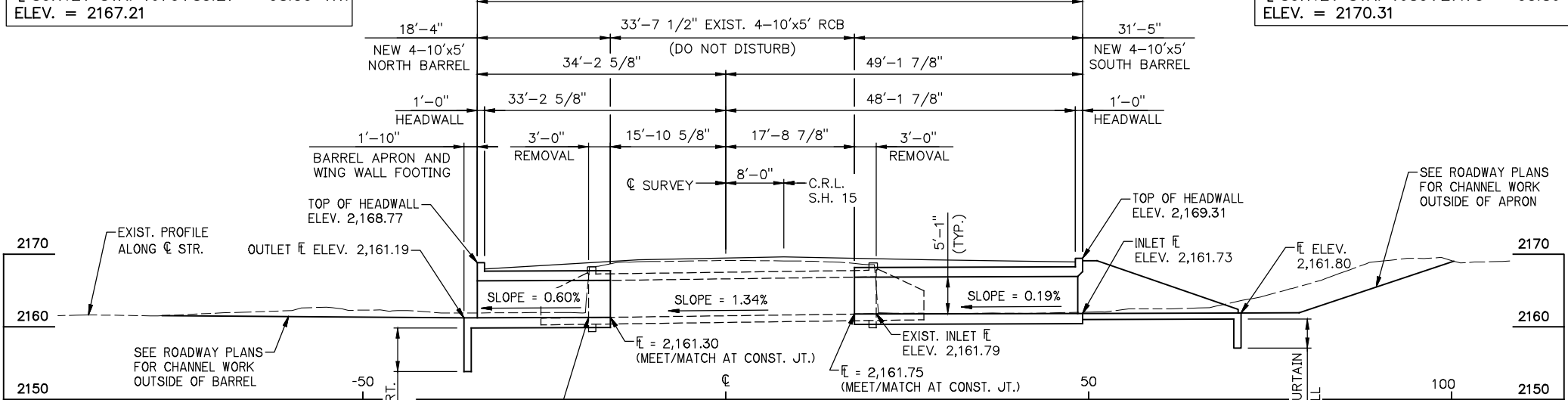
[1] INCLUDES HEADWALL, BARREL APRON, CURTAIN WALL, AND WING WALLS.
 [2] INCLUDES HEADWALL, APRON, CURTAIN WALL, AND WING WALLS.

NOTES: ALL STATIONING FOLLOWS C SURVEY S.H. 15, UNLESS NOTED OTHERWISE.
 THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
 FOR CHANNEL WORK DETAILS, SEE THE PLAN AND PROFILE SHEETS AND CROSS-SECTIONS. (ROADWAY ITEMS).

BM#105-3/4" IRON PIN IN SOUTH R.O.W. FENCE
 C SURVEY STA. 1670+85.21 98.30' RT.
 ELEV. = 2167.21

(1) STRIP CONCRETE AND EXPOSE LONGITUDINAL STEEL TO THIS LINE FOR BOND.

BM#104-3/4" IRON PIN IN SOUTH R.O.W. FENCE
 C SURVEY STA. 1680+27.75 95.86' RT.
 ELEV. = 2170.31



HYDRAULIC DATA

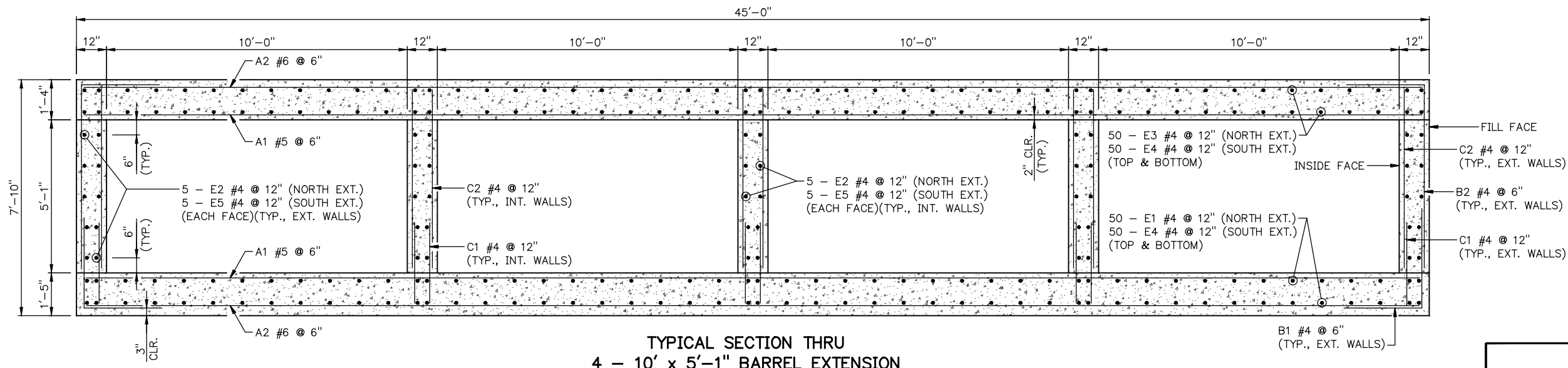
TOTAL D.A.	=	0.90 SQ. MI.		
CONTROLLED D.A.	=	0.00 SQ. MI.		
EFFECTIVE D.A.	=	0.90 SQ. MI.		
Q2	=	64.7 CFS	Q50	= 713 CFS
V2	=	1.06 FPS	V50	= 5.16 FPS
Q2 CHW	=	2,167.40 FT.	Q50 CHW	= 2,167.96 FT.
Q5	=	173 CFS	Q100	= 974 CFS
V5	=	2.19 FPS	V100	= 6.01 FPS
Q5 CHW	=	2,167.57 FT.	Q100 CHW	= 2,168.07 FT.
Q10	=	295 CFS	Q0.T. = Q490	= 1,760 CFS
V10	=	3.16 FPS	V0.T.	= 8.80 FPS
Q10 CHW	=	2,167.70 FT.	O.T. CHW	= 2,169.00 FT.
Q25	=	515 CFS		
V25	=	4.38 FPS		
Q25 CHW	=	2,167.84 FT.		

EXTEND 4-10'x5' BRIDGE BOX WITH APRON AND 4' AND 6' CURTAIN WALLS, SKEWED 00°17'37.83" R.F.

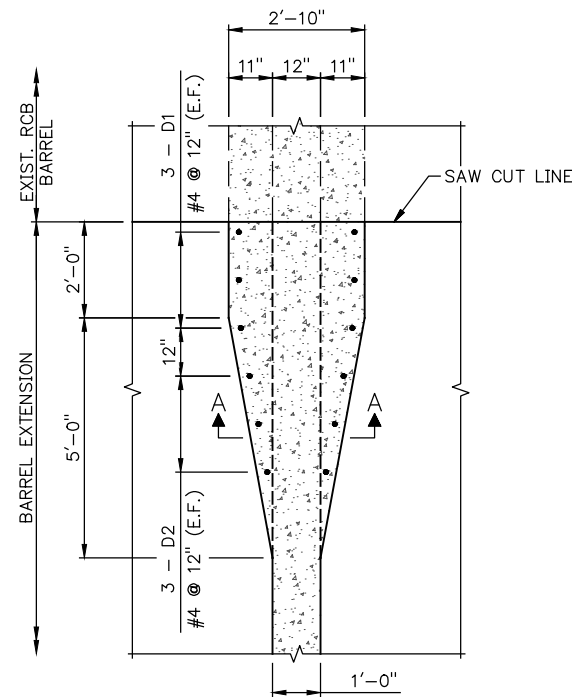
SECTION THRU C STRUCTURE
 SCALE 1" = 10'

GENERAL PLAN AND ELEVATION (BRIDGE "C")
 BRIDGE "C" C SURVEY STA. 1674+17.67
 4-10'x5'x83.38' LG. BOX, SKEWED 00°17'37.83" R.F.
 State Job No. 29674(04) Sheet No. B019

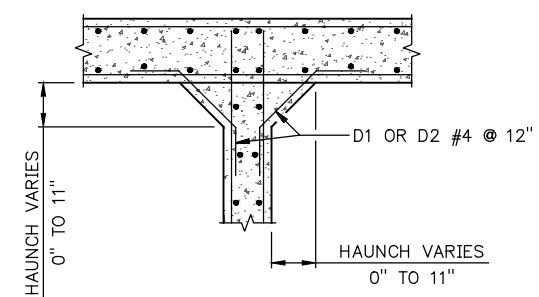
S.H. 15 ELLIS COUNTY



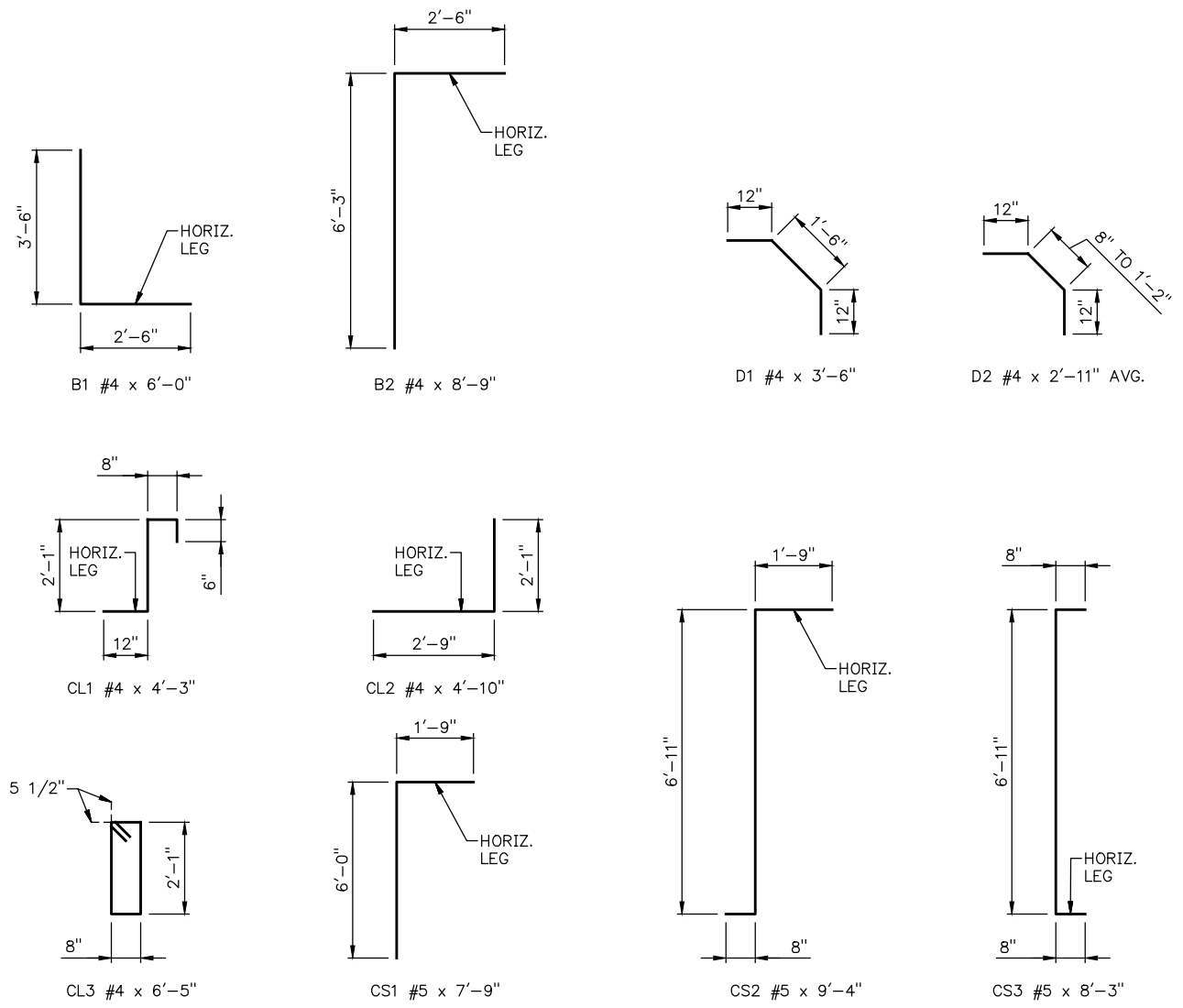
TYPICAL SECTION THRU
4 - 10' x 5'-1" BARREL EXTENSION



INTERIOR WALL HAUNCH
TRANSITION SECTION PLAN



SECTION A-A



BAR BEND DETAILS

NORTH BARREL EXTENSION BAR LIST (BRIDGE "C")					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
A1	78	#5	STR.	44'-8"	
A2	78	#6	STR.	44'-8"	
B1	74	#4	BNT.	6'-0"	
B2	74	#4	BNT.	8'-9"	
C1	152	#4	STR.	2'-10"	
C2	152	#4	STR.	6'-3"	
CH1	4	#4	STR.	44'-8"	
CL1	48	#4	BNT.	4'-3"	
CL2	48	#4	BNT.	4'-10"	
CL3	2	#4	BNT.	6'-5"	
CS1	48	#5	BNT.	7'-9"	
CS2	48	#5	BNT.	9'-4"	
CS3	4	#5	BNT.	8'-3"	
CT1	12	#4	STR.	44'-8"	
D1	6	#4	BNT.	3'-6"	
[1] D2	6	#4	BNT.	2'-11" AVG.	2'-8" TO 3'-2"
E1	100	#4	STR.	19'-10"	
E2	50	#4	STR.	18'-0"	
E3	100	#4	STR.	18'-0"	

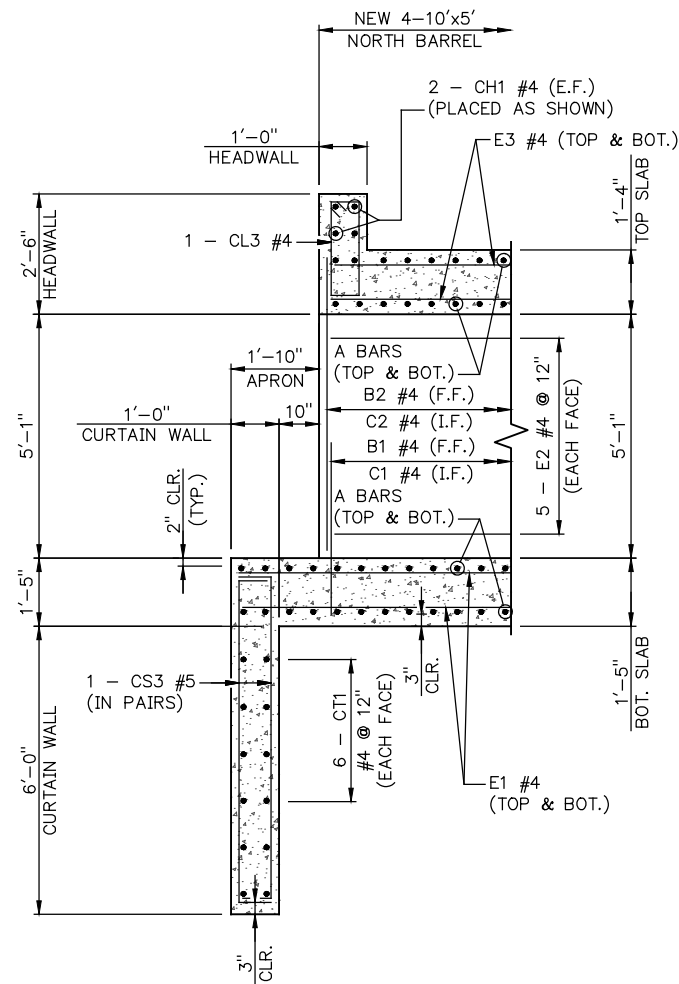
SOUTH BARREL EXTENSION BAR LIST (BRIDGE "C")					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
A1	128	#5	STR.	44'-8"	
A2	128	#6	STR.	44'-8"	
B1	128	#4	BNT.	6'-0"	
B2	128	#4	BNT.	8'-9"	
C1	256	#4	STR.	2'-10"	
C2	256	#4	STR.	6'-3"	
D1	6	#4	BNT.	3'-6"	
[1] D2	6	#4	BNT.	2'-11" AVG.	2'-8" TO 3'-2"
E3	200	#4	STR.	31'-1"	
E4	50	#4	STR.	31'-1"	

[1] TWO SETS OF THREE (3) BARS EACH.

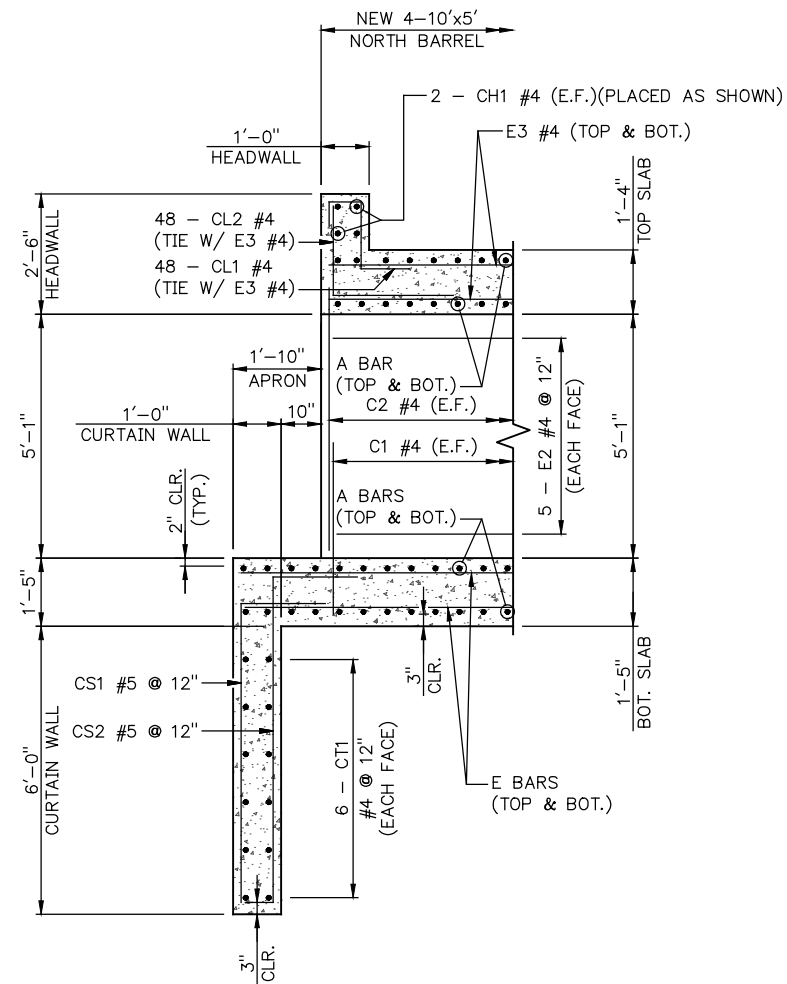
NOTE:
SEE SHEET B022 FOR WING WALL
REINFORCING DETAIL. DL BARS FROM WING
WALLS SHALL BE PLACED IN RCB BARREL
PRIOR TO CASTING CONCRETE.

BRIDGE "C" DETAILS
(DETAIL 1 OF 6)

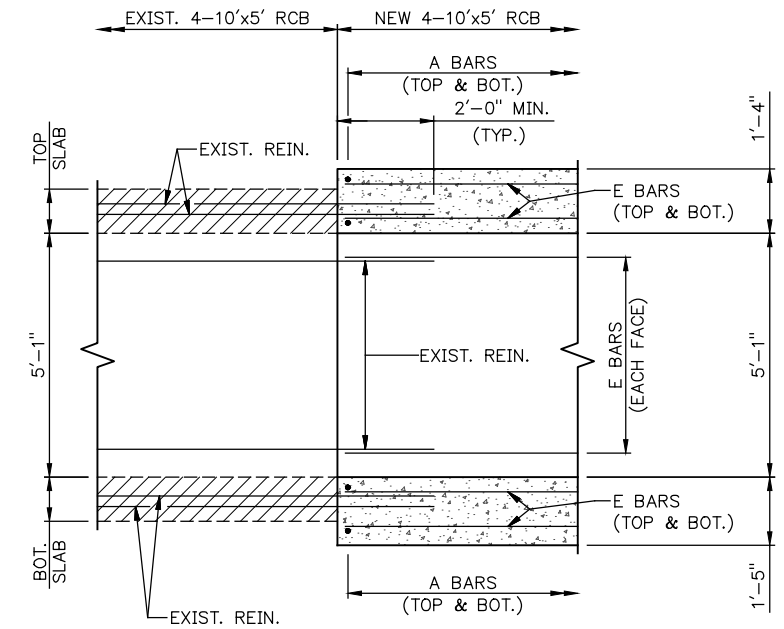
State Job No. 29674(04) Sheet No. B020



TYPICAL SECTION THRU END OF BARREL AT EXTERIOR WALL

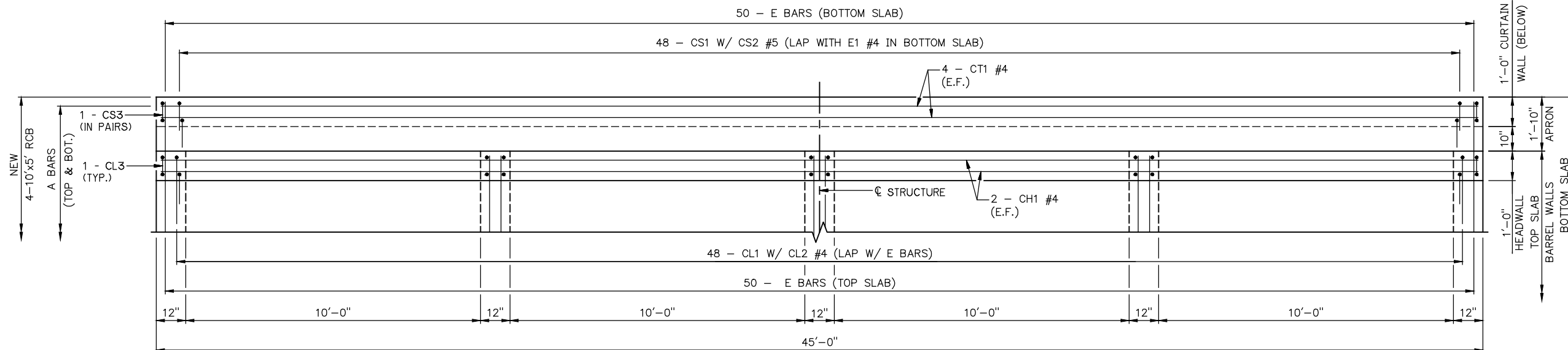


TYPICAL SECTION THRU END OF BARREL AT INTERIOR WALL



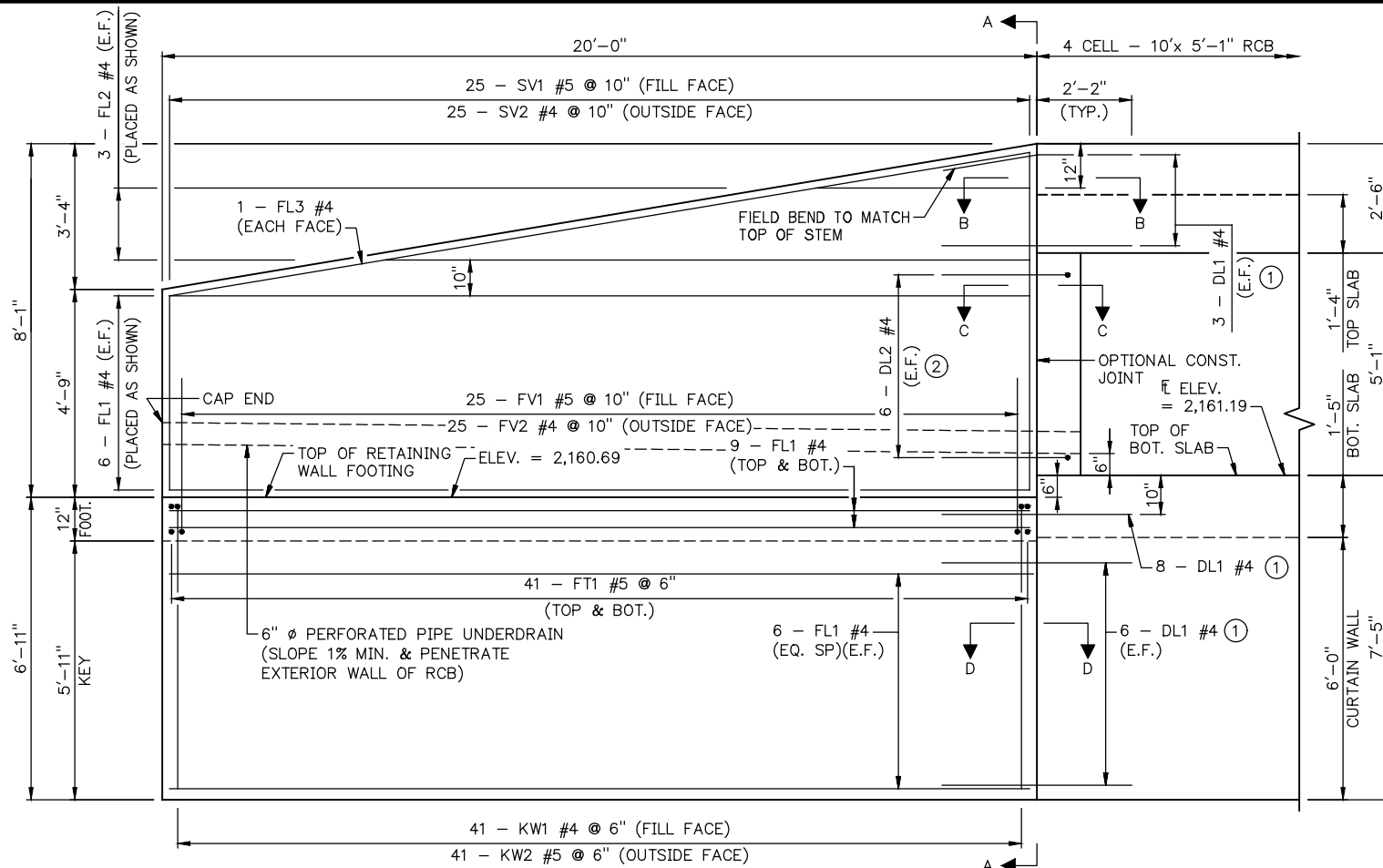
TYPICAL SECTION THRU BARREL CONNECTION
(SOUTH EXTENSION SHOWN, MIRROR FOR NORTH EXTENSION)

NOTE:
SEE SHEET B022 FOR WING WALL REINFORCING DETAIL. DL BARS FROM WING WALLS SHALL BE PLACED IN RCB BARREL PRIOR TO CASTING CONCRETE.



NORTH BARREL EXTENSION HEADWALL AND CURTAIN WALL REINFORCING PLAN
(NOT SHOWING WING WALLS OR BARREL WALL REINFORCING FOR CLARITY)

BRIDGE "C" DETAILS
(DETAIL 2 OF 6)



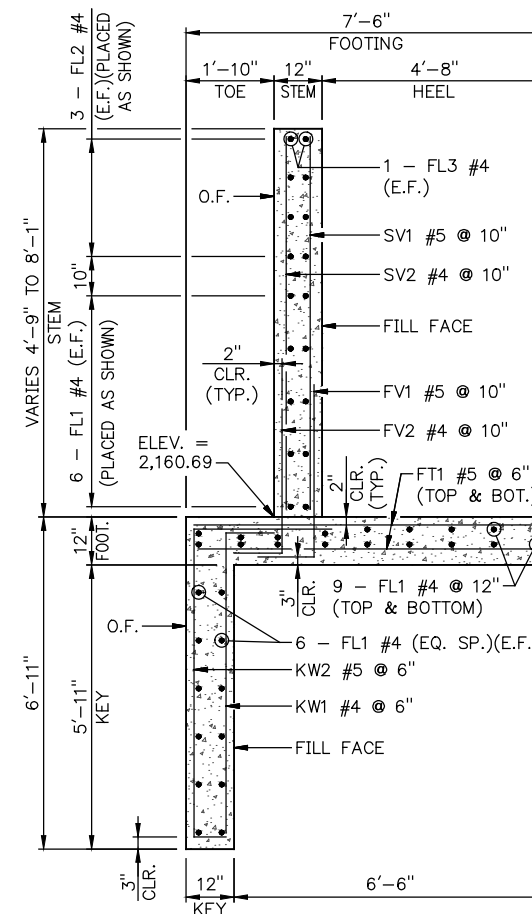
WING WALL ELEVATION

NOTE: EAST WING WALL SHOWN FROM OUTSIDE FACE. MIRROR FOR WEST WING WALL.

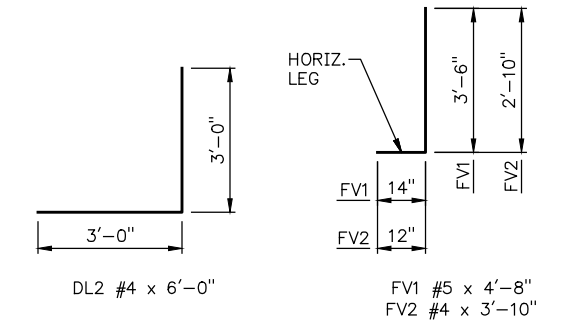
NOTES:
 E.F. = EACH FACE
 O.F. = OUTSIDE FACE
 F.F. = FILL FACE
 I.F. = INSIDE FACE

① DL1 BARS ARE TO BE INSTALLED DURING CONSTRUCTION OF THE RCB, AND ARE LAPPED WITH THE A AND CH BARS IN THE TOP SLAB, A BARS IN THE BOTTOM SLAB, AND CT BARS IN THE CURTAIN WALL.

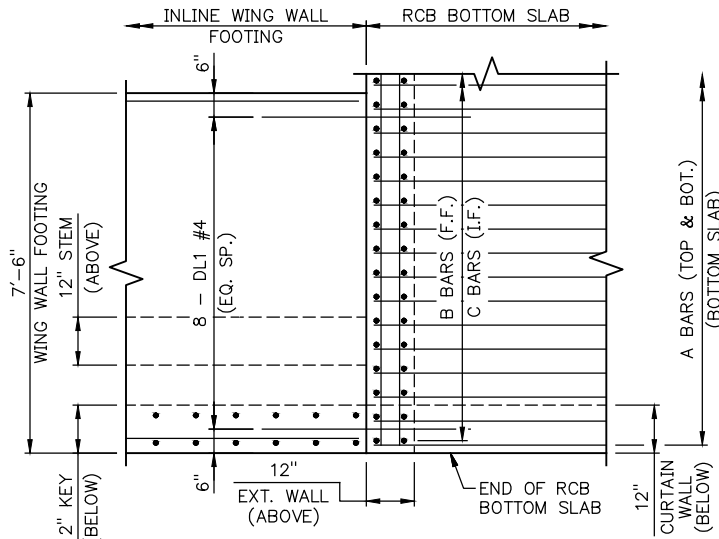
② DL2 BARS ARE TO BE INSTALLED DURING CONSTRUCTION OF THE RCB, AND ARE LAPPED WITH THE E BARS IN THE EXTERIOR WALL.



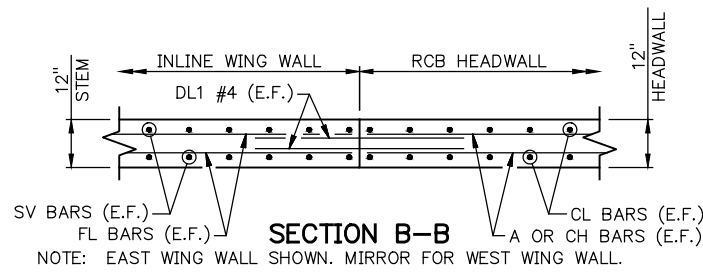
SECTION A-A



BAR BEND DETAILS

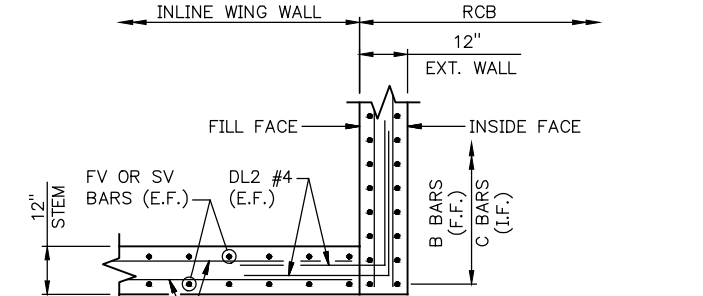


FOOTING CONSTRUCTION JOINT PLAN



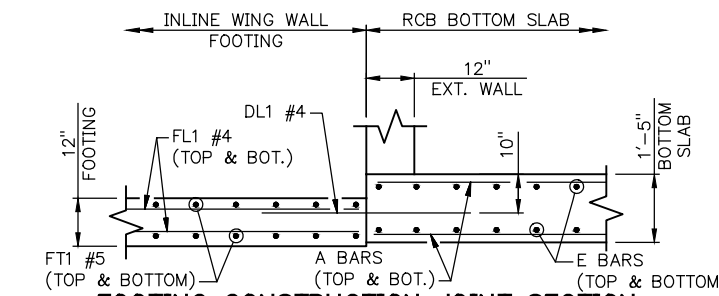
SECTION B-B

NOTE: EAST WING WALL SHOWN. MIRROR FOR WEST WING WALL.

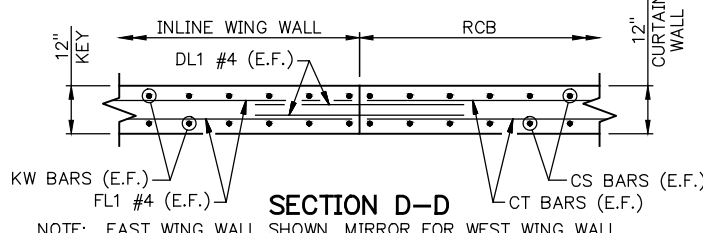


SECTION C-C

NOTE: EAST WING WALL SHOWN. MIRROR FOR WEST WING WALL.

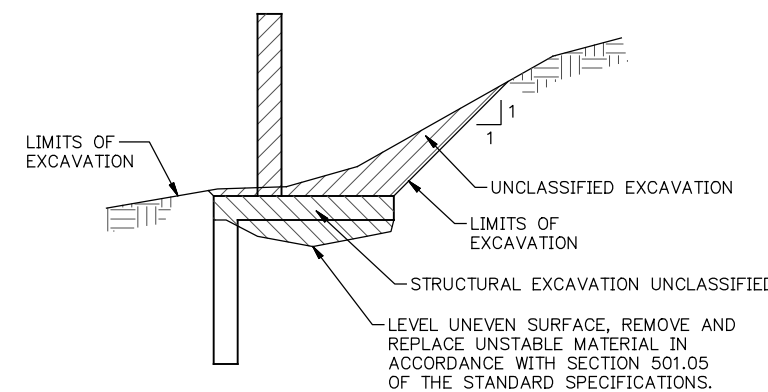


FOOTING CONSTRUCTION JOINT SECTION

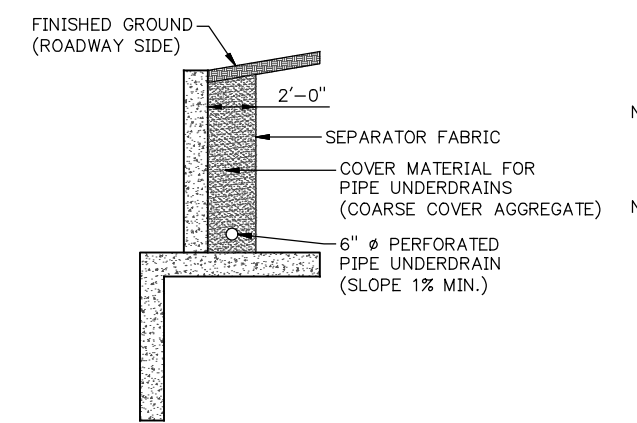


SECTION D-D

NOTE: EAST WING WALL SHOWN. MIRROR FOR WEST WING WALL.



WING WALL EXCAVATION



PIPE DRAIN DETAIL AT WING WALL

NORTH END SECTION WING WALL BAR LIST					
(ONE SHOWN, TWO REQUIRED)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
DL1	26	#4	STR.	4'-4"	
DL2	12	#4	BNT.	6'-0"	
FL1	42	#4	STR.	19'-8"	
[1] FL2	6	#4	STR.	9'-9" AVG.	4'-9" TO 14'-9"
FL3	2	#4	STR.	19'-11"	
FT1	82	#5	STR.	7'-2"	
FV1	25	#5	BNT.	4'-8"	
FV2	25	#4	BNT.	3'-10"	
KW1	41	#4	BNT.	7'-6"	
KW2	41	#5	BNT.	10'-4"	
SV1	25	#5	STR.	6'-2" AVG.	4'-6" TO 7'-10"
SV2	25	#4	STR.	6'-2" AVG.	4'-6" TO 7'-10"

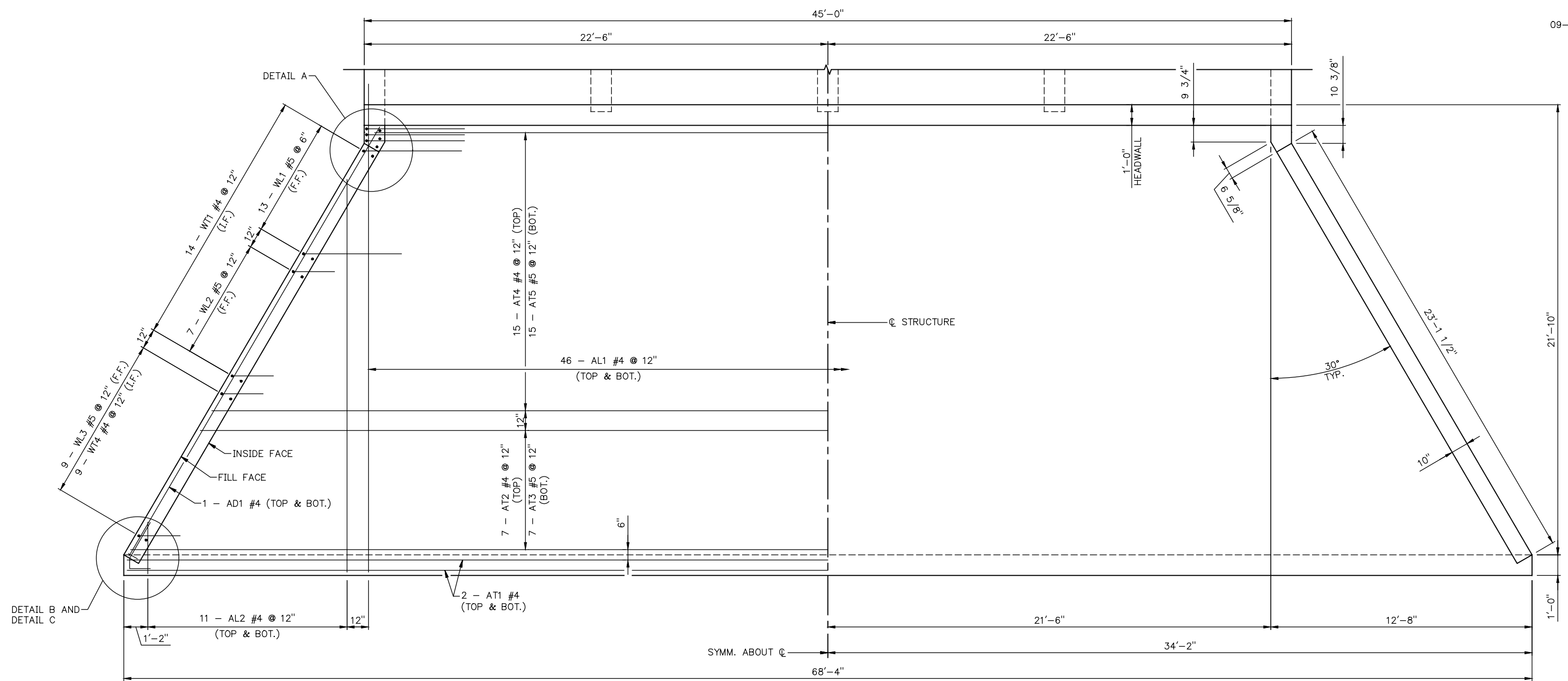
[1] TWO SET OF THREE (3) BARS EACH.

NOTES: FINISH GROUND ALONG OUTSIDE FACE OF WING WALL VARIES. SEE ROADWAY PLAN & PROFILE AND ROADWAY CROSS-SECTION SHEETS.

NOTES: ALL COSTS TO INSTALL THE PERFORATED PIPE UNDERDRAIN AS SHOWN ABOVE INCLUDING THE COST OF ALL PERFORATED PIPE, UNDERDRAIN COVER MATERIAL, SEPARATOR FABRIC, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF " 6" PERFORATED PIPE UNDERDRAIN ROUND ".

NOTE: EXTERIOR RCB WALL REINFORCING NOT SHOWN FOR CLARITY. EAST WING WALL SHOWN FROM OUTSIDE FACE. MIRROR FOR WEST WING WALL.

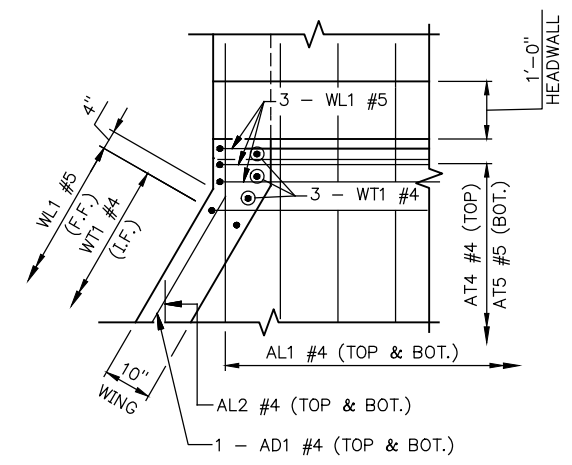
BRIDGE "C" DETAILS
 (DETAIL 3 OF 6)



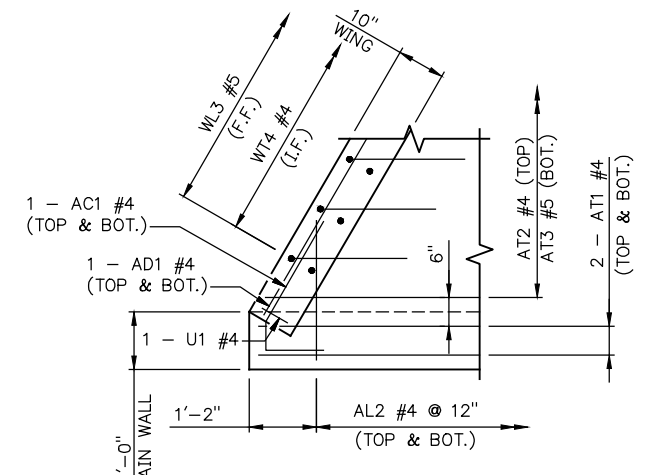
NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE

SOUTH END SECTION APRON REINFORCING AND LAYOUT PLAN

NOTE:
 SEE "DETAIL C" ON SHEET B025 FOR CURTAIN WALL REINFORCING DETAILS.



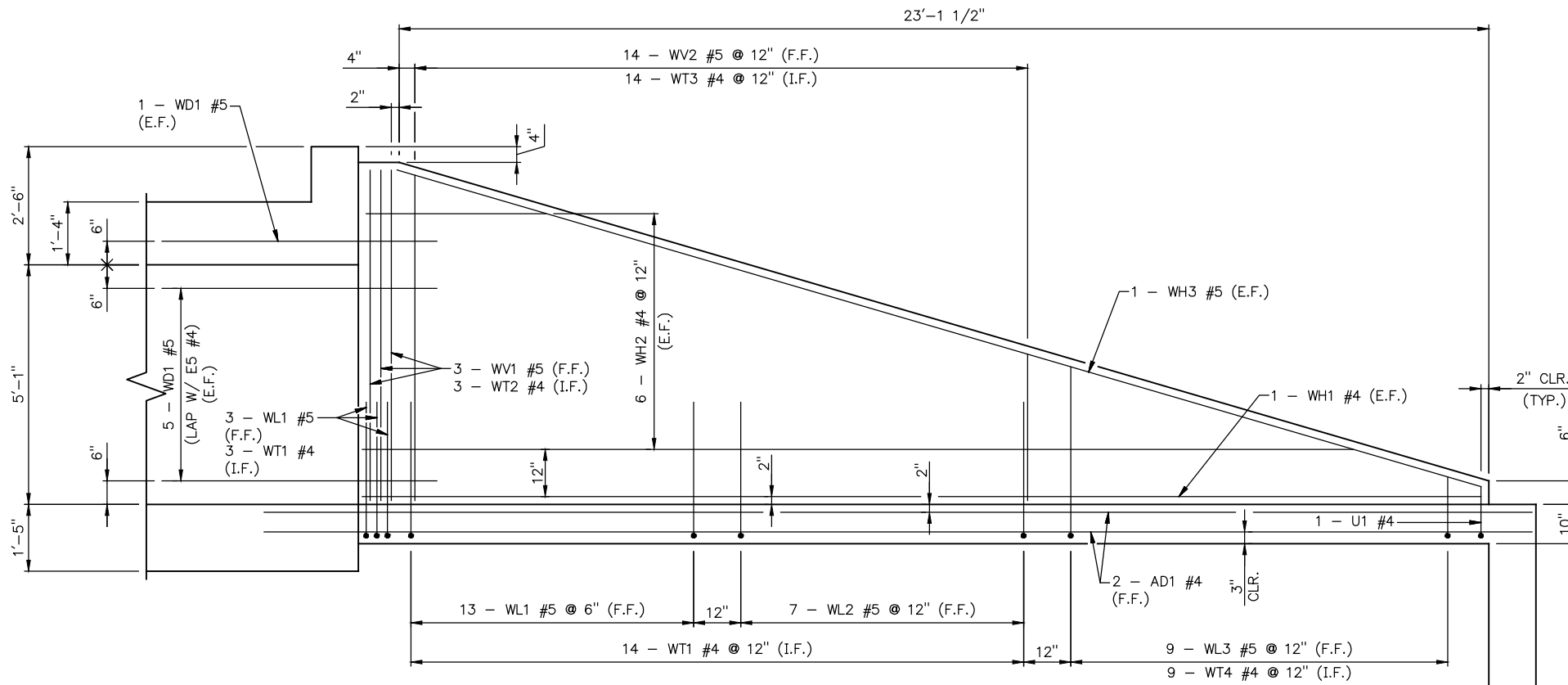
DETAIL A



DETAIL B

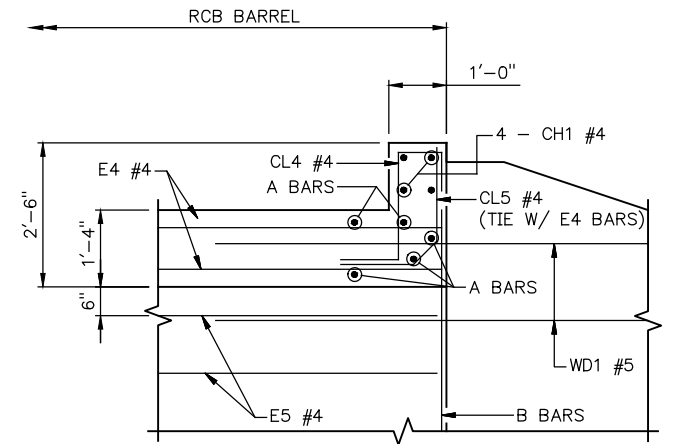
BRIDGE "C" DETAILS
 (DETAIL 4 OF 6)

State Job No. 29674(04) Sheet No. B023

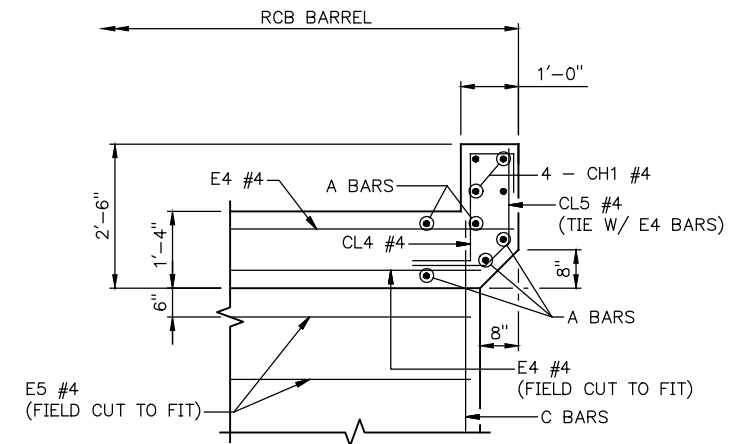


SOUTH END SECTION WING DETAIL

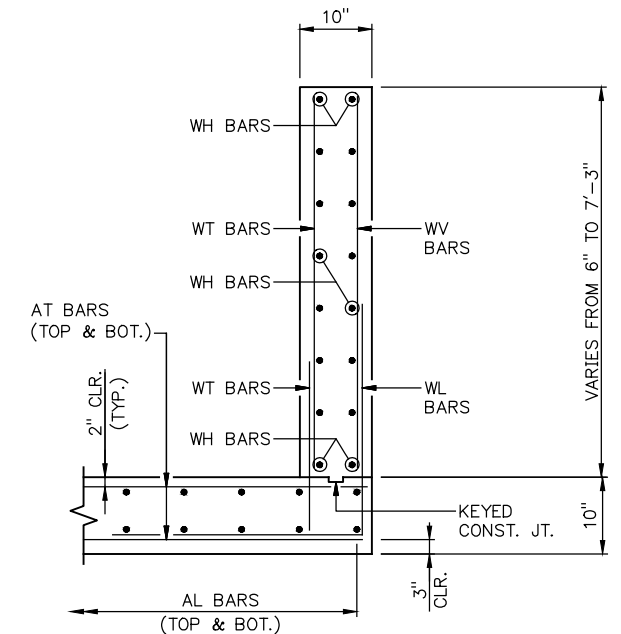
NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE



SOUTH END SECTION HEADWALL DETAIL AT EXTERIOR WALL



SOUTH END SECTION HEADWALL DETAIL AT INTERIOR WALL



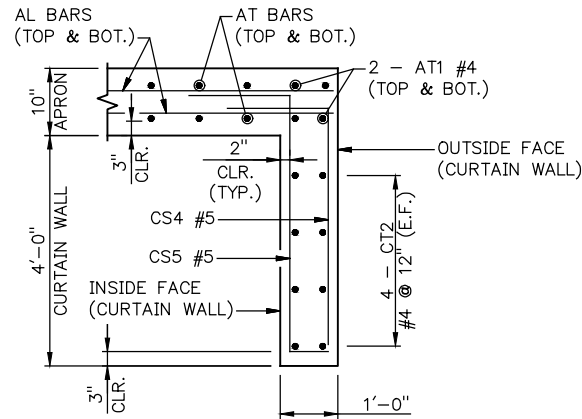
SOUTH END SECTION TYPICAL SECTION THRU WING

BRIDGE "C" DETAILS
 (DETAIL 5 OF 6)

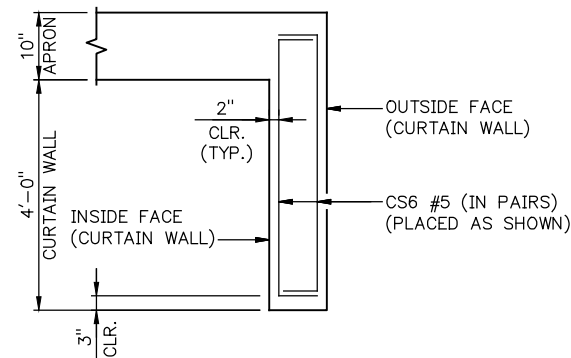
SOUTH END SECTION BAR LIST - APRON (INCLUDES HEADWALL AND CURTAIN WALL)						
MARK	NO.	SIZE	FORM	LENGTH	REMARKS	
PLAIN REINFORCING BARS						
	AC1	4	#4	BNT.	3'-8"	
	AD1	4	#4	STR.	24'-0"	
	AL1	92	#4	STR.	23'-8"	
[1]	AL2	44	#4	STR.	10'-9" AVG.	2'-6" TO 19'-0"
[2]	AT1	4	#4	STR.	70'-0"	
[2]	AT2	7	#4	STR.	66'-3" AVG.	62'-10" TO 69'-8"
[2]	AT3	7	#5	STR.	66'-3" AVG.	62'-10" TO 69'-8"
	AT4	15	#4	STR.	51'-9" AVG.	43'-9" TO 59'-9"
	AT5	15	#5	STR.	51'-9" AVG.	43'-9" TO 59'-9"
	CH1	4	#4	STR.	44'-8"	
	CL4	46	#4	BNT.	4'-4"	
	CL5	46	#4	BNT.	4'-3"	
	CS4	67	#5	BNT.	5'-9"	
	CS5	67	#5	BNT.	6'-10"	
	CS6	8	#5	BNT.	5'-9"	
[2]	CT2	8	#4	STR.	70'-0"	

SOUTH END SECTION BAR LIST - WING (ONE WING WALL SHOWN; TWO REQUIRED)						
MARK	NO.	SIZE	FORM	LENGTH	REMARKS	
PLAIN REINFORCING BARS						
	WD1	12	#5	BNT.	8'-4"	
	WH1	2	#4	STR.	23'-5"	
[3]	WH2	12	#4	STR.	12'-2" AVG.	3'-7" TO 20'-9"
	WH3	2	#5	STR.	23'-11"	
	WL1	16	#5	BNT.	7'-7"	
	WL2	7	#5	BNT.	4'-10"	
	WL3	9	#5	BNT.	4'-4" AVG.	3'-2" TO 5'-6"
	WT1	17	#4	STR.	2'-10"	
	WT2	3	#4	STR.	7'-1"	
	WT3	14	#4	STR.	5'-1" AVG.	3'-2" TO 7'-0"
	WT4	9	#4	STR.	2'-4" AVG.	1'-2" TO 3'-6"
	WV1	3	#5	STR.	7'-1"	
	WV2	14	#5	STR.	5'-1" AVG.	3'-2" TO 7'-0"
	U1	1	#4	BNT.	2'-4"	

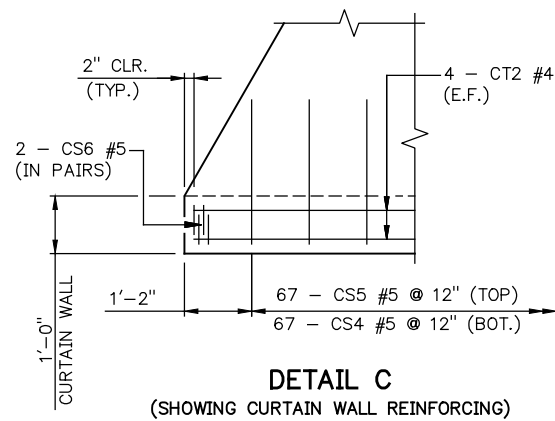
- [1] INCLUDES FOUR (4) SETS OF ELEVEN (11) BARS EACH.
- [2] INCLUDES ONE (1) 2'-0" LAP SPLICE.
- [3] INCLUDES TWO (2) SETS OF SIX (6) BARS EACH.



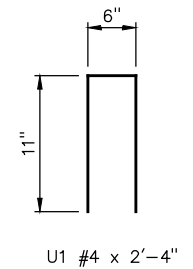
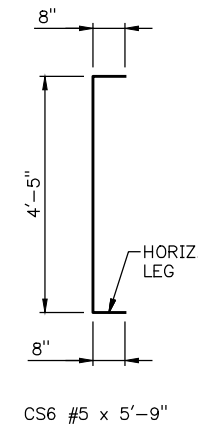
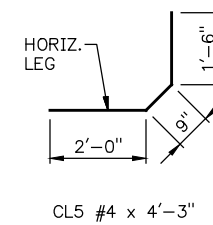
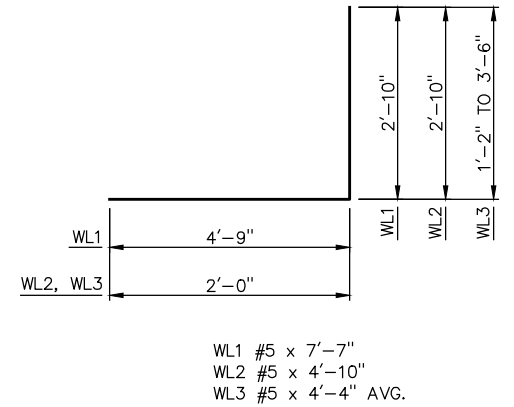
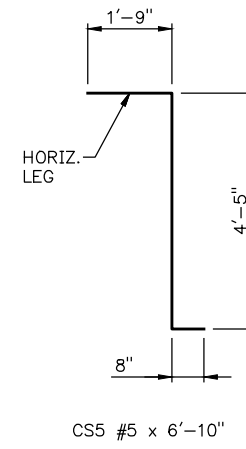
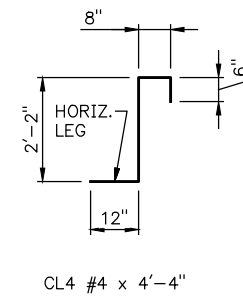
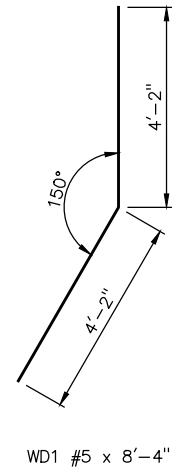
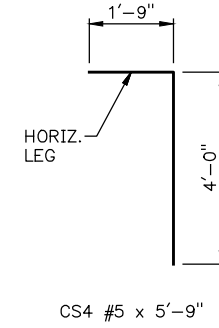
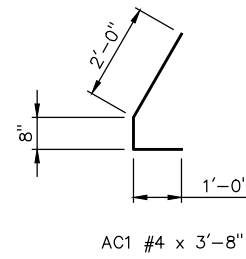
SOUTH END SECTION CURTAIN WALL DETAIL



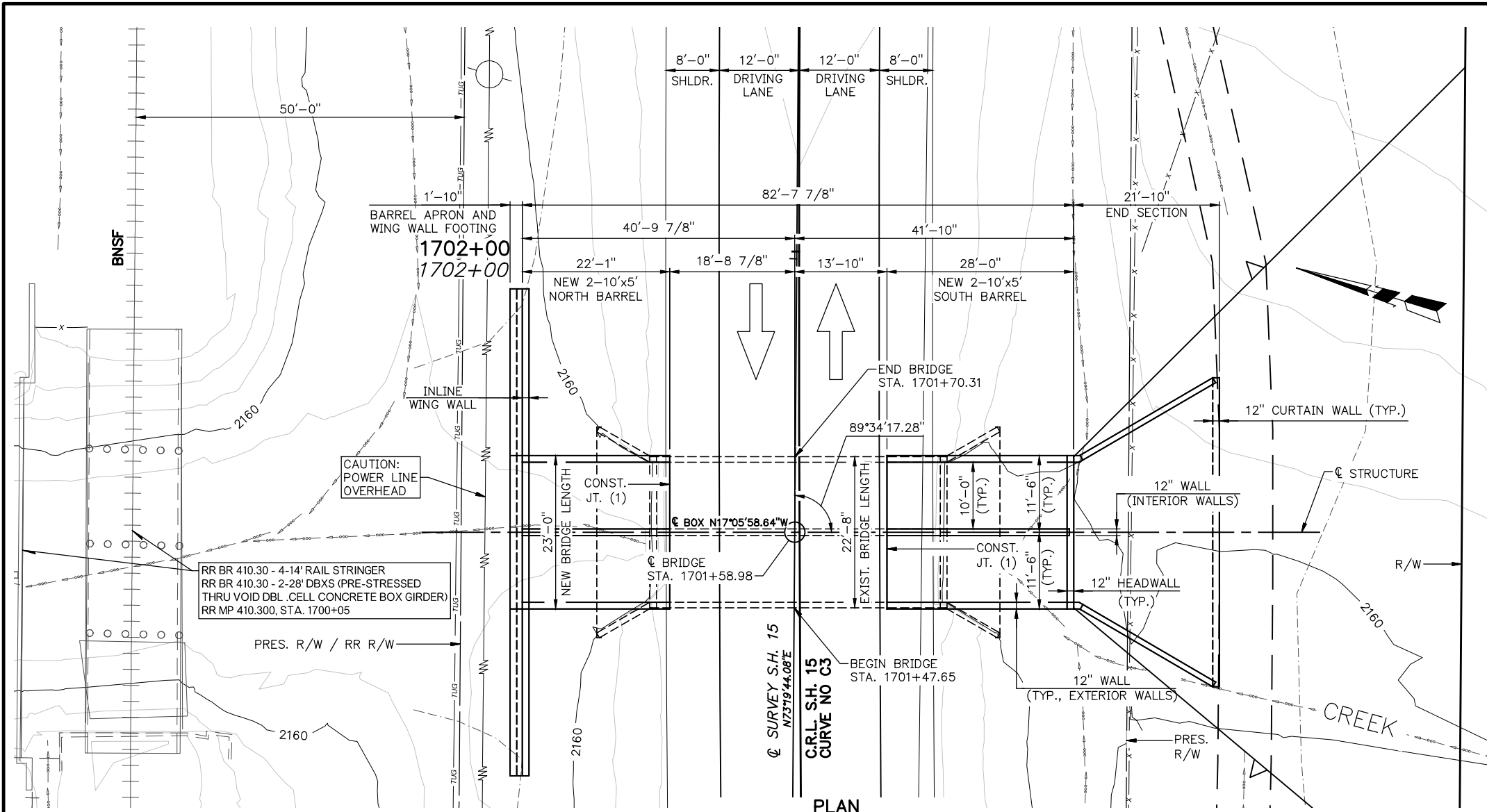
SOUTH END SECTION CURTAIN WALL END DETAIL



DETAIL C
(SHOWING CURTAIN WALL REINFORCING)



BAR BEND DETAILS



PLAN
SCALE 1" = 10'

LOAD AND RESISTANCE FACTOR DESIGN
(NEW CONSTRUCTION ONLY)

DESIGN DATA

CLASS "AA" CONCRETE $F'_c = 4,000$ PSI
REINFORCING STEEL $F_y = 60,000$ PSI

LOADING: HL-93 AND ODOT OVERLOAD TRUCK

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2014 EDITION,
WITH 2016 INTERIMS.

THE FOLLOWING STANDARDS SHALL BE REQUIRED:

SBI-4-2

SUMMARY OF QUANTITIES - BRIDGE "D"

DESCRIPTION	UNIT	NORTH BARREL [1]	SOUTH BARREL [2]	TOTAL
UNCLASSIFIED EXCAVATION	CY	130.00	330.00	460.00
STRUCTURAL EXCAVATION UNCLASSIFIED	CY	108.00	61.00	169.00
REMOVAL OF CULVERT END	EA	1.00	1.00	2.00
CLASS AA CONCRETE	CY	114.90	119.00	233.90
REINFORCING STEEL	LB	17,320.00	16,310.00	33,630.00

[1] INCLUDES HEADWALL, BARREL APRON, CURTAIN WALL, AND WING WALLS.
[2] INCLUDES HEADWALL, APRON, CURTAIN WALL, AND WING WALLS.

NOTES: ALL STATIONING FOLLOWS C SURVEY S.H. 15, UNLESS NOTED OTHERWISE.

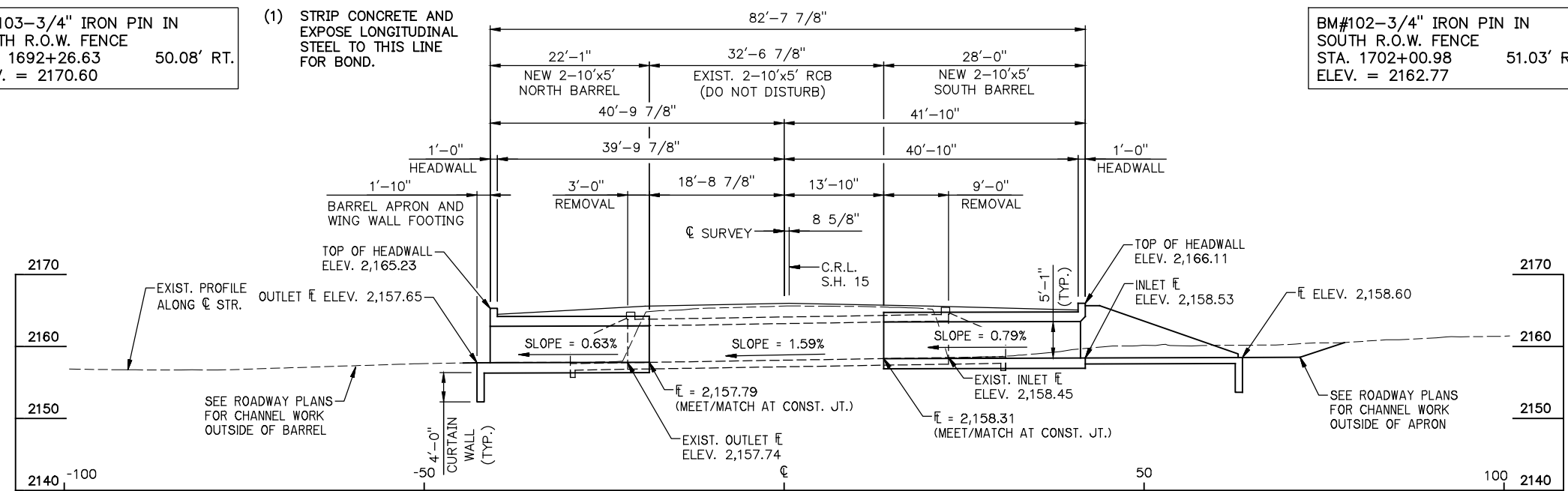
THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION.

FOR CHANNEL WORK DETAILS, SEE THE PLAN AND PROFILE SHEETS AND CROSS-SECTIONS. (ROADWAY ITEMS).

BM#103-3/4" IRON PIN IN
SOUTH R.O.W. FENCE
STA. 1692+26.63
ELEV. = 2170.60

(1) STRIP CONCRETE AND
EXPOSE LONGITUDINAL
STEEL TO THIS LINE
FOR BOND.

BM#102-3/4" IRON PIN IN
SOUTH R.O.W. FENCE
STA. 1702+00.98
ELEV. = 2162.77



SECTION THRU C STRUCTURE
SCALE 1" = 10'

HYDRAULIC DATA

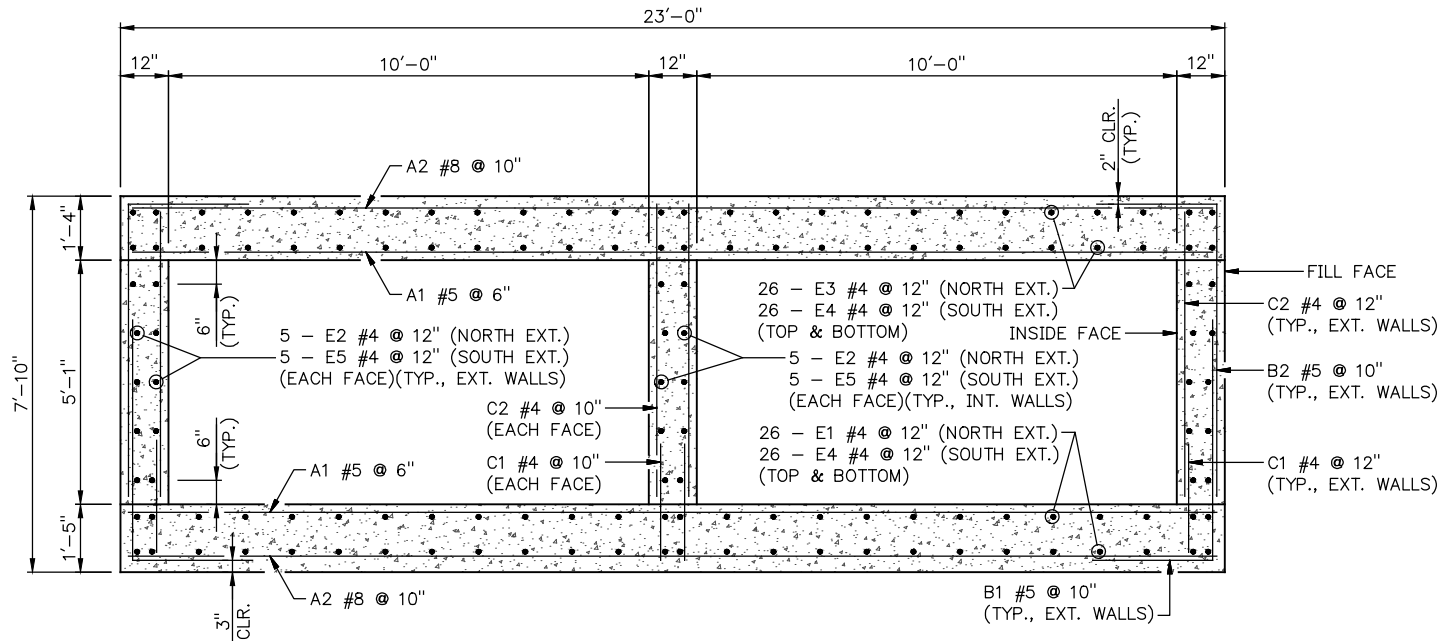
TOTAL D.A.	=	0.99 SQ. MI.		
CONTROLLED D.A.	=	0.00 SQ. MI.		
EFFECTIVE D.A.	=	0.99 SQ. MI.		
Q2	=	66.3 CFS	Q50	= 721 CFS
V2	=	3.42 FPS	V50	= 8.40 FPS
Q2 CHW	=	2,161.99 FT.	Q50 CHW	= 2,164.43 FT.
Q5	=	175 CFS	Q0.T. = Q82	= 890 CFS
V5	=	4.78 FPS	V0.T.	= 9.01 FPS
Q5 CHW	=	2,162.36 FT.	O.T. CHW	= 2,165.57 FT.
Q10	=	299 CFS	Q100	= 985 CFS
V10	=	5.85 FPS	V100	= 9.80 FPS
Q10 CHW	=	2,162.54 FT.	Q100 CHW	= 2,165.69 FT.
Q25	=	519 CFS		
V25	=	7.33 FPS		
Q25 CHW	=	2,163.36 FT.		

EXTEND 2-10x5' BRIDGE BOX WITH
APRON AND 4' CURTAIN WALLS,
SKEWED 00°25'42.72" R.F.

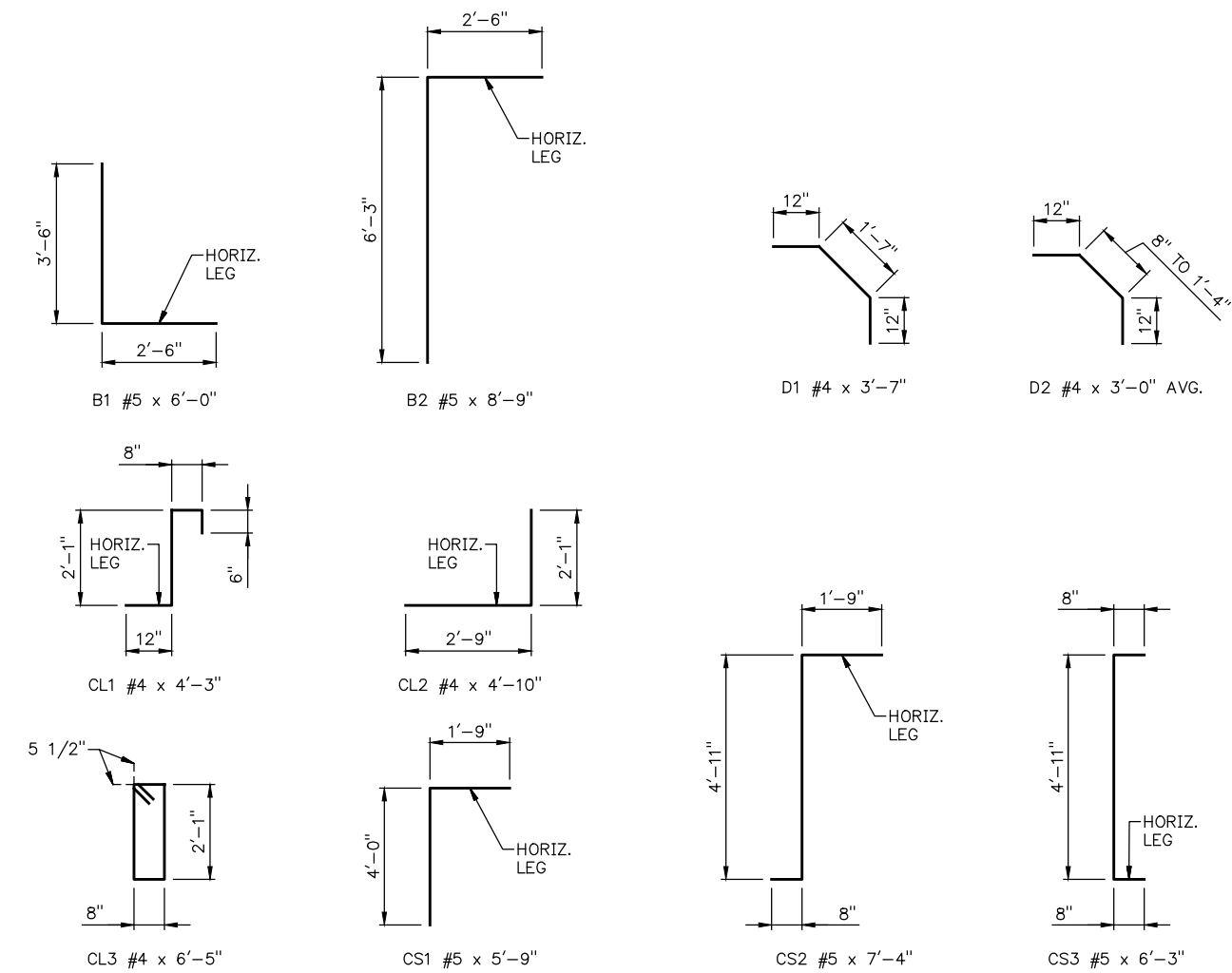
GENERAL PLAN AND ELEVATION
(BRIDGE "D")

BRIDGE "D" C SURVEY STA. 1701+58.98
2-10'x5'x82.66' LG. BOX, SKEWED 00°25'42.72" R.F.
State Job No. 29674(04) Sheet No. B026

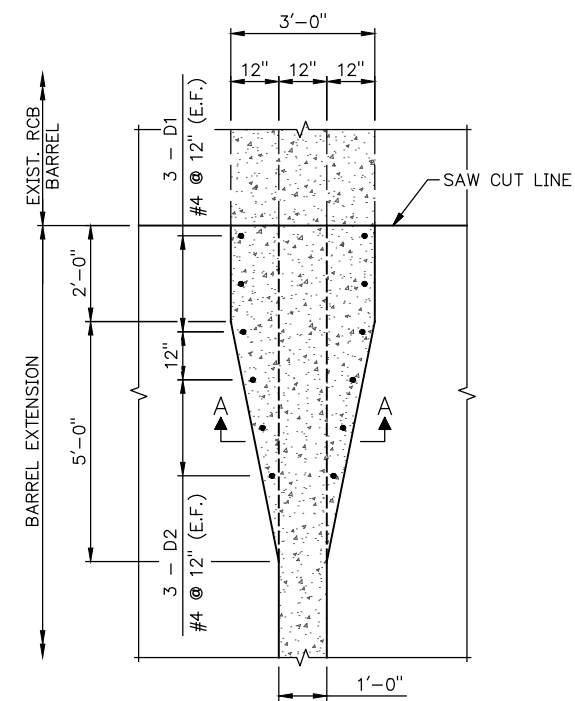
S.H. 15
ELLIS COUNTY



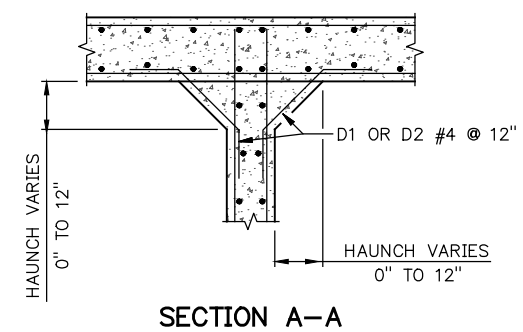
TYPICAL SECTION THRU
2 - 10' x 5'-1" BARREL EXTENSION



BAR BEND DETAILS



INTERIOR WALL HAUNCH
TRANSITION SECTION PLAN



SECTION A-A

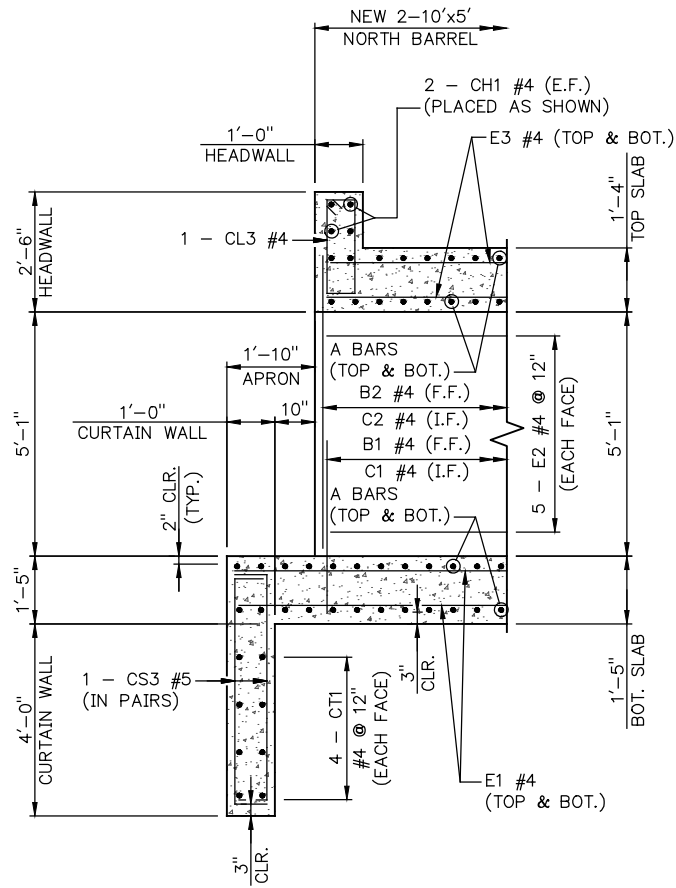
NORTH BARREL EXTENSION BAR LIST (BRIDGE "D")					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
A1	94	#5	STR.	22'-8"	
A2	58	#8	STR.	22'-8"	
B1	56	#5	BNT.	6'-0"	
B2	56	#5	BNT.	8'-9"	
C1	102	#4	STR.	2'-10"	
C2	102	#4	STR.	6'-3"	
CH1	4	#4	STR.	22'-8"	
CL1	24	#4	BNT.	4'-3"	
CL2	24	#4	BNT.	4'-10"	
CL3	2	#4	BNT.	6'-5"	
CS1	24	#5	BNT.	5'-9"	
CS2	24	#5	BNT.	7'-4"	
CS3	4	#5	BNT.	6'-3"	
CT1	8	#4	BNT.	22'-8"	
D1	6	#4	BNT.	3'-7"	
[1] D2	6	#4	BNT.	3'-0" AVG.	2'-8" TO 3'-4"
E1	52	#4	STR.	23'-7"	
E2	30	#4	STR.	21'-9"	
E3	52	#4	STR.	21'-9"	

SOUTH BARREL EXTENSION BAR LIST (BRIDGE "D")					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
A1	114	#5	STR.	22'-8"	
A2	70	#8	STR.	22'-8"	
B1	70	#5	BNT.	6'-0"	
B2	70	#5	BNT.	8'-9"	
C1	128	#4	STR.	2'-10"	
C2	128	#4	STR.	6'-3"	
D1	6	#4	BNT.	3'-7"	
[1] D2	6	#4	BNT.	3'-0" AVG.	2'-8" TO 3'-4"
E4	104	#4	STR.	27'-8"	
E5	30	#4	STR.	27'-8"	

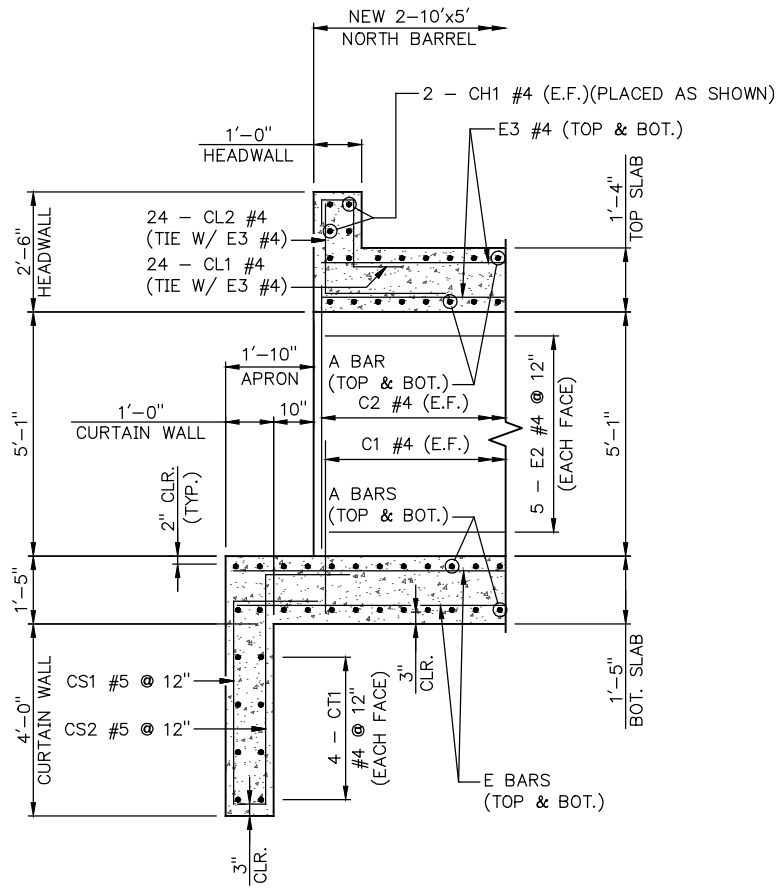
[1] TWO SETS OF THREE (3) BARS EACH.

NOTE:
SEE SHEETS B029 AND B030 FOR WING WALL
REINFORCING DETAIL. DL BARS FROM WING
WALLS SHALL BE PLACED IN RCB BARREL
PRIOR TO CASTING CONCRETE.

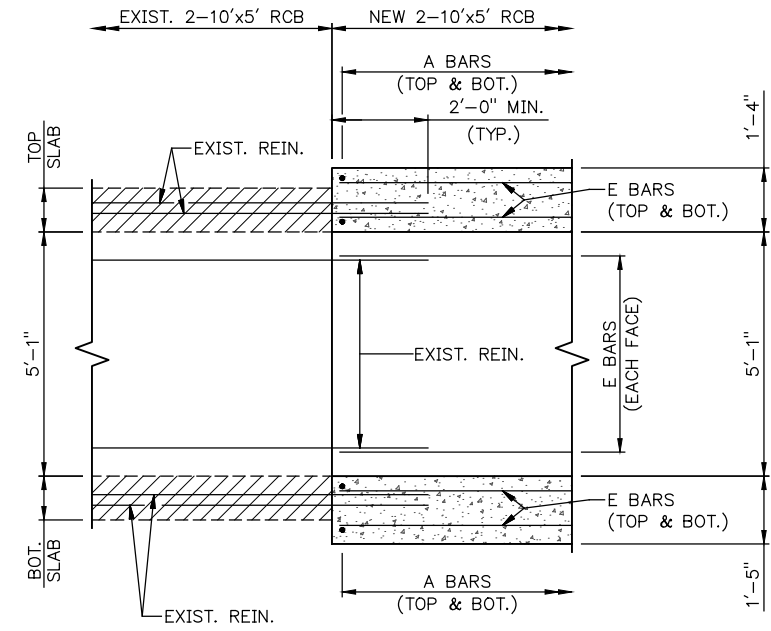
BRIDGE "D" DETAILS
(DETAIL 1 OF 7)



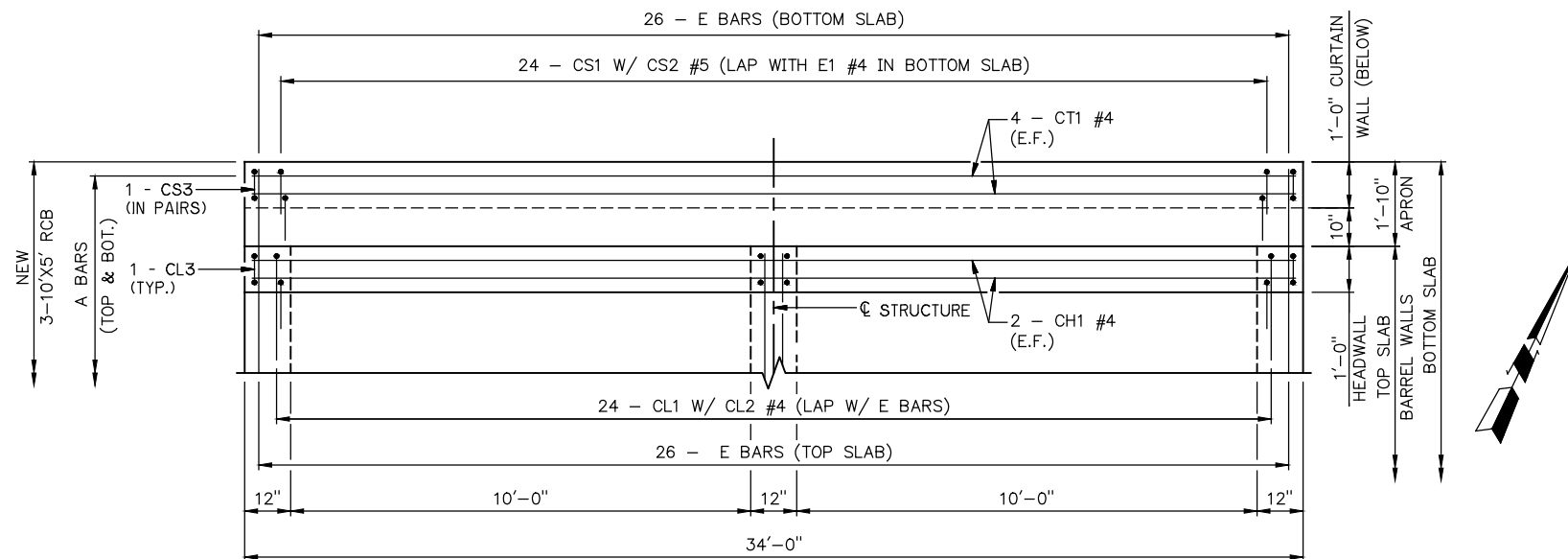
TYPICAL SECTION THRU END OF BARREL AT EXTERIOR WALL



TYPICAL SECTION THRU END OF BARREL AT INTERIOR WALL



TYPICAL SECTION THRU BARREL CONNECTION
(SOUTH EXTENSION SHOWN, MIRROR FOR NORTH EXTENSION)



NORTH BARREL EXTENSION HEADWALL AND CURTAIN WALL REINFORCING PLAN
(NOT SHOWING WING WALLS OR BARREL WALL REINFORCING FOR CLARITY)

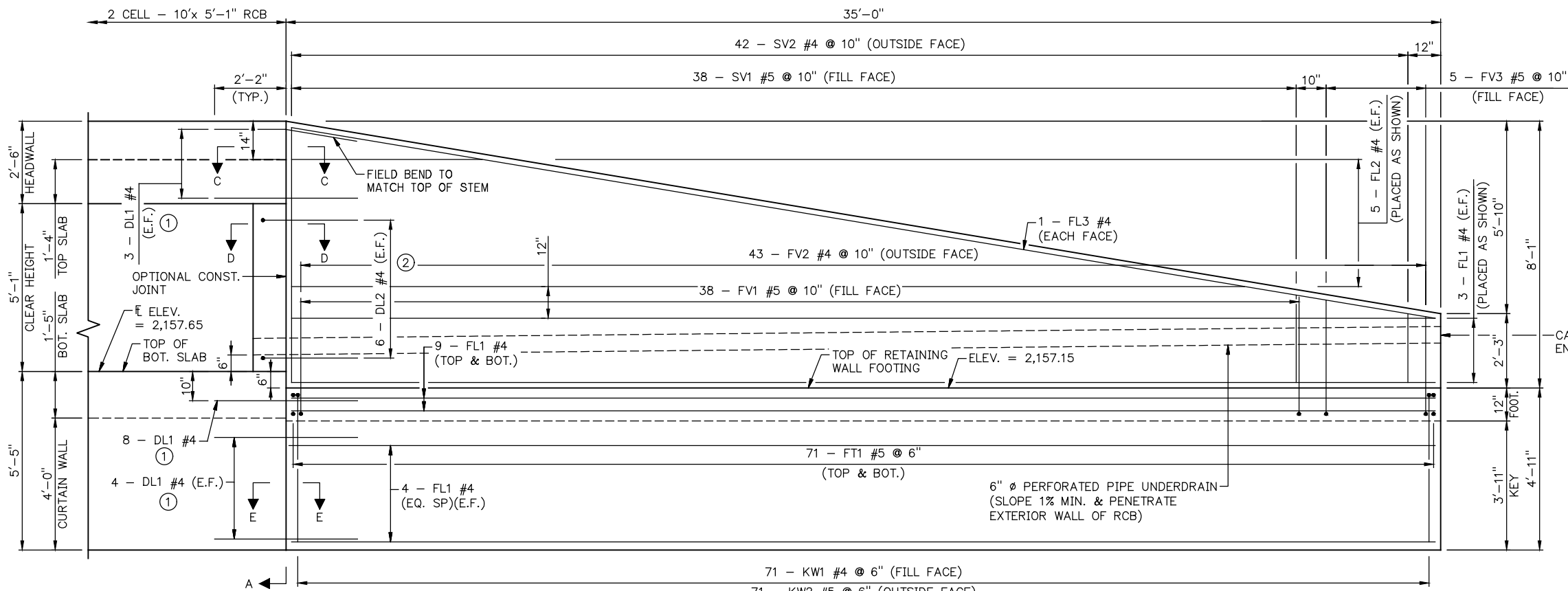
NOTE:
SEE SHEETS B029 AND B030 FOR WING WALL REINFORCING DETAIL. DL BARS FROM WING WALLS SHALL BE PLACED IN RCB BARREL PRIOR TO CASTING CONCRETE.

BRIDGE "D" DETAILS
(DETAIL 2 OF 7)

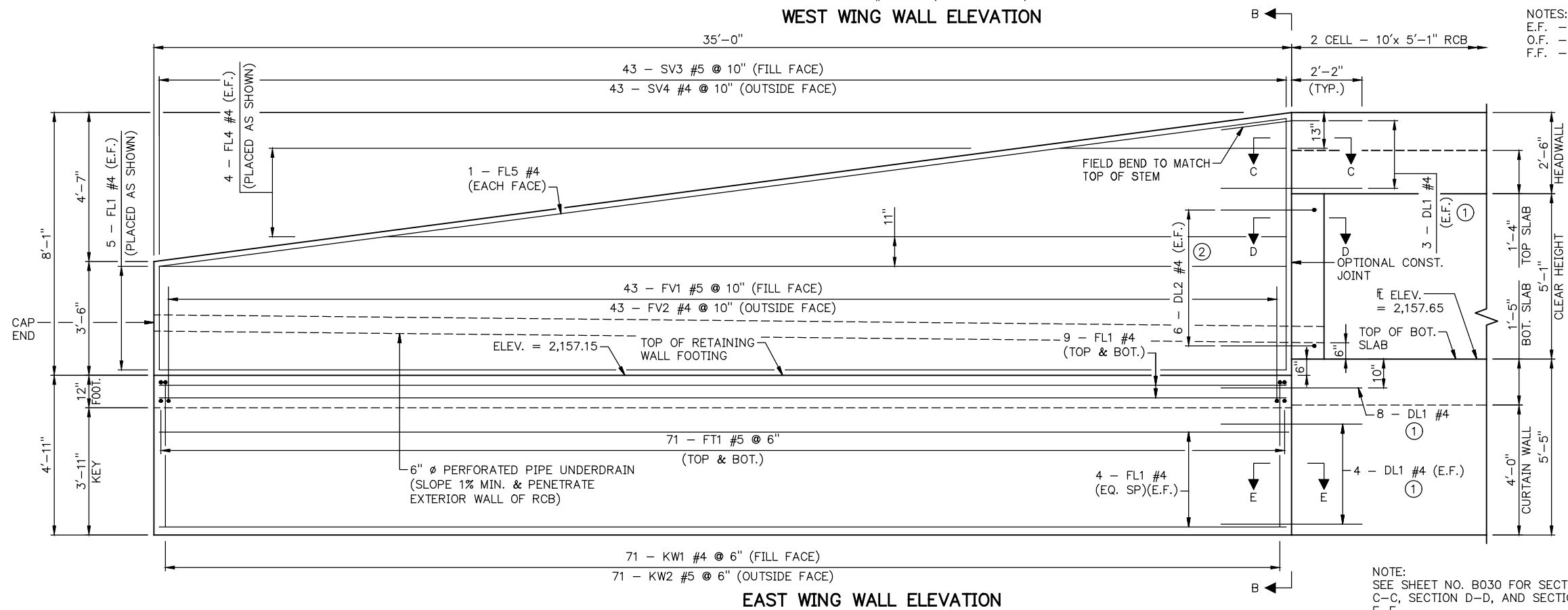
State Job No. 29674(04) Sheet No. B028

① DL1 BARS ARE TO BE INSTALLED DURING CONSTRUCTION OF THE RCB, AND ARE LAPPED WITH THE A AND CH BARS IN THE TOP SLAB, A BARS IN THE BOTTOM SLAB, AND CT BARS IN THE CURTAIN WALL.

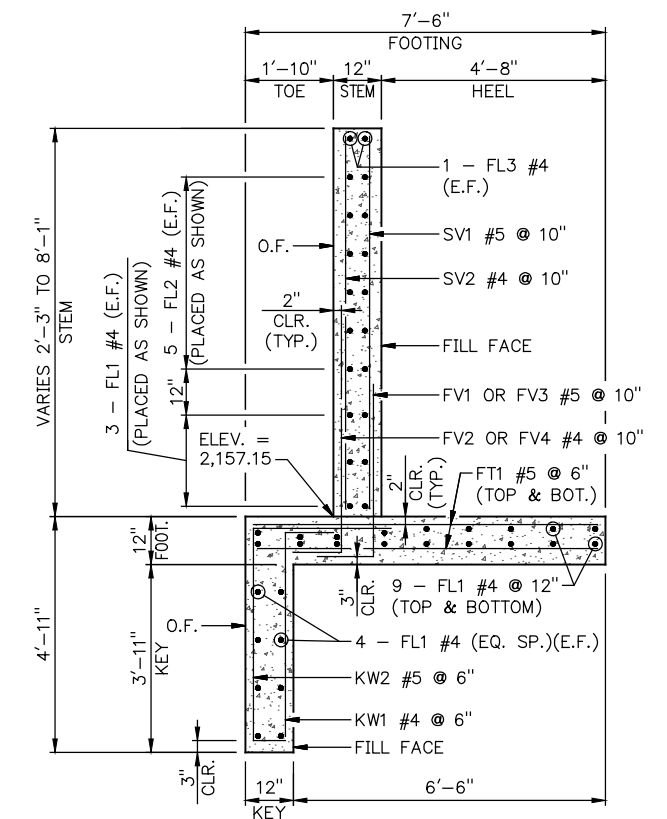
② DL2 BARS ARE TO BE INSTALLED DURING CONSTRUCTION OF THE RCB, AND ARE LAPPED WITH THE E BARS IN THE EXTERIOR WALL.



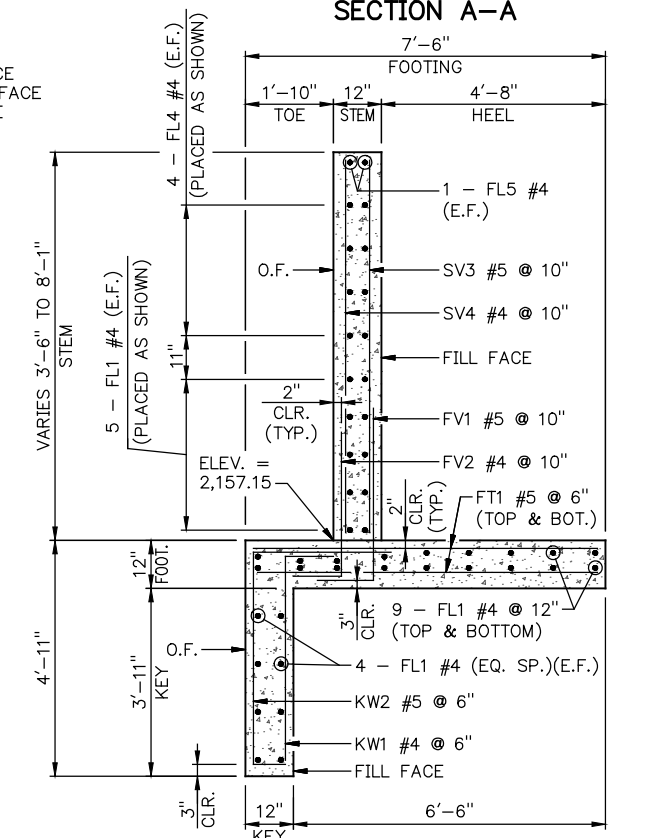
WEST WING WALL ELEVATION



EAST WING WALL ELEVATION



SECTION A-A

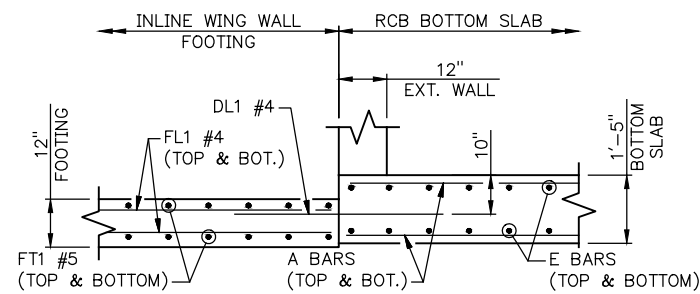


SECTION B-B

NOTES: ALL COSTS TO INSTALL THE PERFORATED PIPE UNDERDRAIN AS SHOWN ABOVE INCLUDING THE COST OF ALL PERFORATED PIPE, UNDERDRAIN COVER MATERIAL, SEPARATOR FABRIC, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF "6" PERFORATED PIPE UNDERDRAIN ROUND".

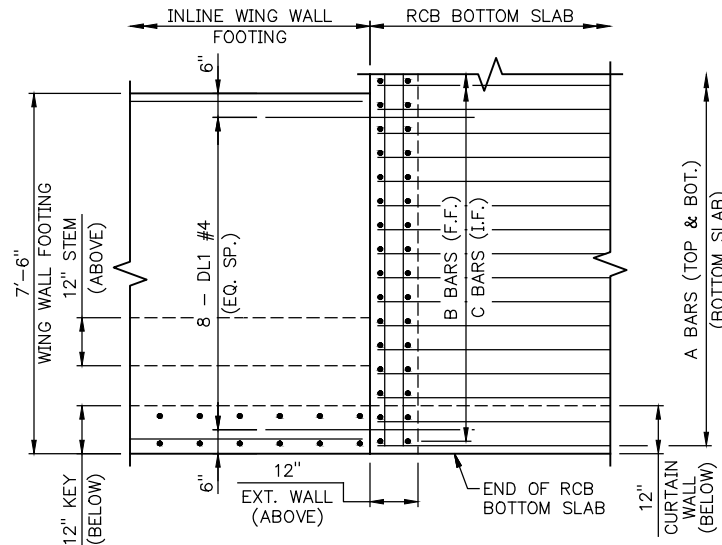
NOTES: FINISH GROUND ALONG OUTSIDE FACE OF WING WALL VARIES. SEE ROADWAY PLAN & PROFILE AND ROADWAY CROSS-SECTION SHEETS.

BRIDGE "D" DETAILS
(DETAIL 3 OF 7)



FOOTING CONSTRUCTION JOINT SECTION

NOTES: EXTERIOR RCB WALL REINFORCING NOT SHOWN FOR CLARITY. EAST WING WALL SHOWN FROM OUTSIDE FACE. MIRROR FOR WEST WING WALL.



FOOTING CONSTRUCTION JOINT PLAN

NOTES: EAST WING WALL SHOWN. MIRROR FOR WEST WING WALL.

NORTH END SECTION WEST WING WALL BAR LIST (BRIDGE "D")

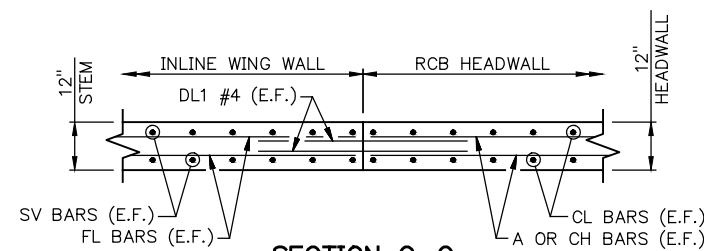
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
DL1	22	#4	STR.	4'-4"	
DL2	12	#4	BNT.	6'-0"	
FL1	32	#4	STR.	34'-8"	
[1] FL2	10	#4	STR.	17'-3" AVG.	5'-8" TO 28'-10"
FL3	2	#4	STR.	35'-1"	
FT1	142	#5	STR.	7'-2"	
FV1	38	#5	BNT.	4'-8"	
FV2	43	#4	BNT.	3'-10"	
FV3	5	#5	BNT.	4'-3" AVG.	4'-0" TO 4'-6"
KW1	71	#4	BNT.	5'-6"	
KW2	71	#5	BNT.	8'-4"	
SV1	38	#5	STR.	5'-3" AVG.	2'-8" TO 7'-10"
SV2	42	#4	STR.	5'-0" AVG.	2'-2" TO 7'-10"

[1] TWO SETS OF FIVE (5) BARS EACH.

NORTH END SECTION EAST WING WALL BAR LIST (BRIDGE "D")

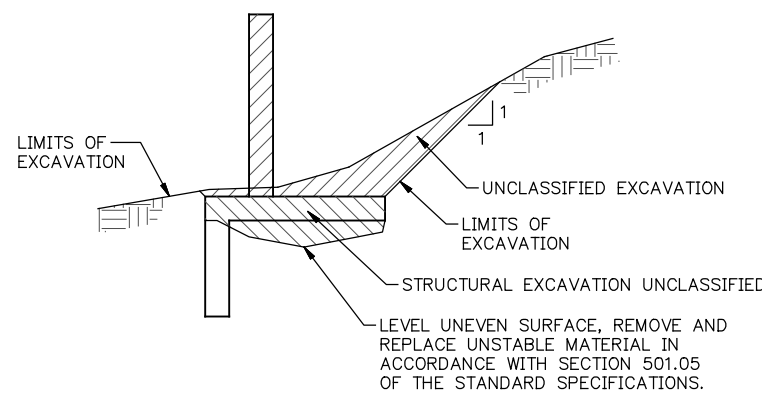
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
DL1	22	#4	STR.	4'-4"	
DL2	12	#4	BNT.	6'-0"	
FL1	36	#4	STR.	34'-8"	
[2] FL4	8	#4	STR.	17'-3" AVG.	6'-10" TO 27'-8"
FL5	2	#4	STR.	34'-11"	
FT1	142	#5	STR.	7'-2"	
FV1	43	#5	BNT.	4'-8"	
FV2	43	#4	BNT.	3'-10"	
KW1	71	#4	BNT.	5'-6"	
KW2	71	#5	BNT.	8'-4"	
SV3	43	#5	STR.	5'-7" AVG.	3'-4" TO 7'-10"
SV4	43	#4	STR.	5'-7" AVG.	3'-4" TO 7'-10"

[2] TWO SETS OF FOUR (4) BARS EACH.

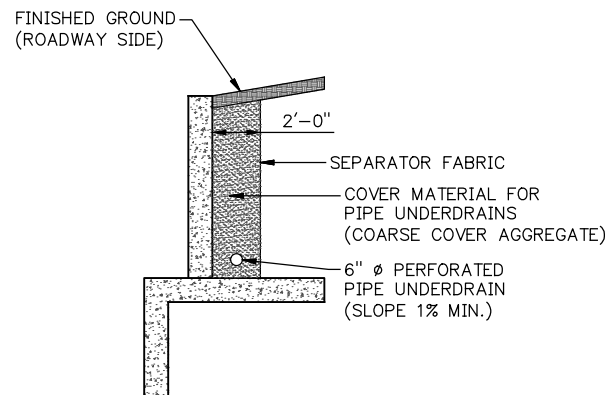


SECTION C-C

NOTES: EAST WING WALL SHOWN. MIRROR FOR WEST WING WALL.



WING WALL EXCAVATION

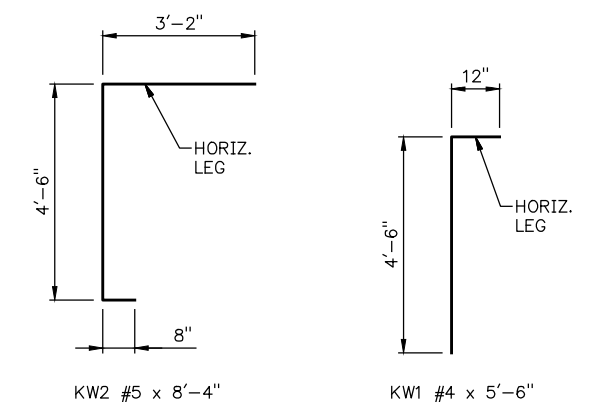
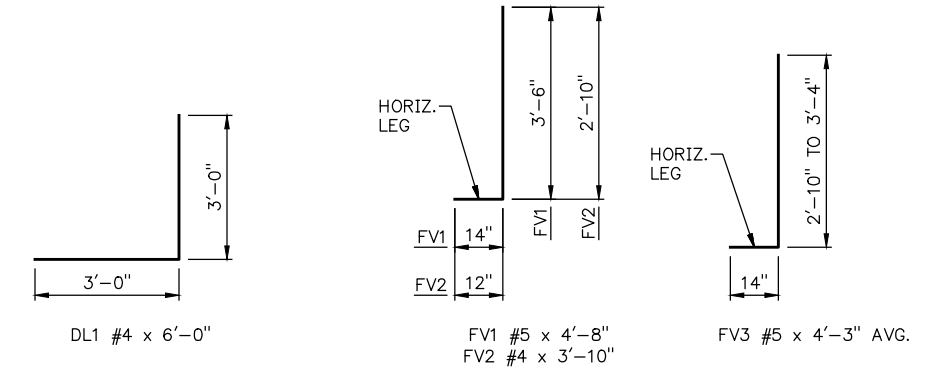


PIPE DRAIN DETAIL AT WING WALL

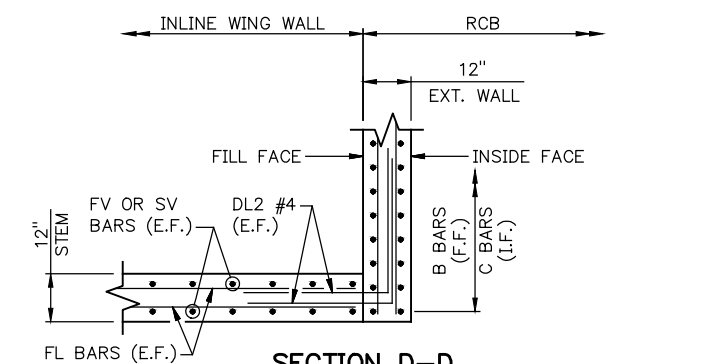
NOTES:
E.F. - EACH FACE
O.F. - OUTSIDE FACE
F.F. - FILL FACE
I.F. - INSIDE FACE

NOTES: FINISH GROUND ALONG OUTSIDE FACE OF WING WALL VARIES. SEE ROADWAY PLAN & PROFILE AND ROADWAY CROSS-SECTION SHEETS.

NOTES: ALL COSTS TO INSTALL THE PERFORATED PIPE UNDERDRAIN AS SHOWN ABOVE INCLUDING THE COST OF ALL PERFORATED PIPE, UNDERDRAIN COVER MATERIAL, SEPARATOR FABRIC, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF " 6" PERFORATED PIPE UNDERDRAIN ROUND ".

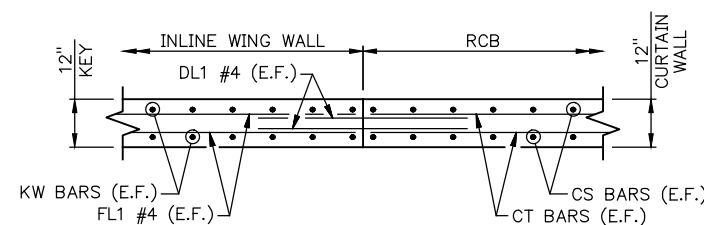


BAR BEND DETAILS



SECTION D-D

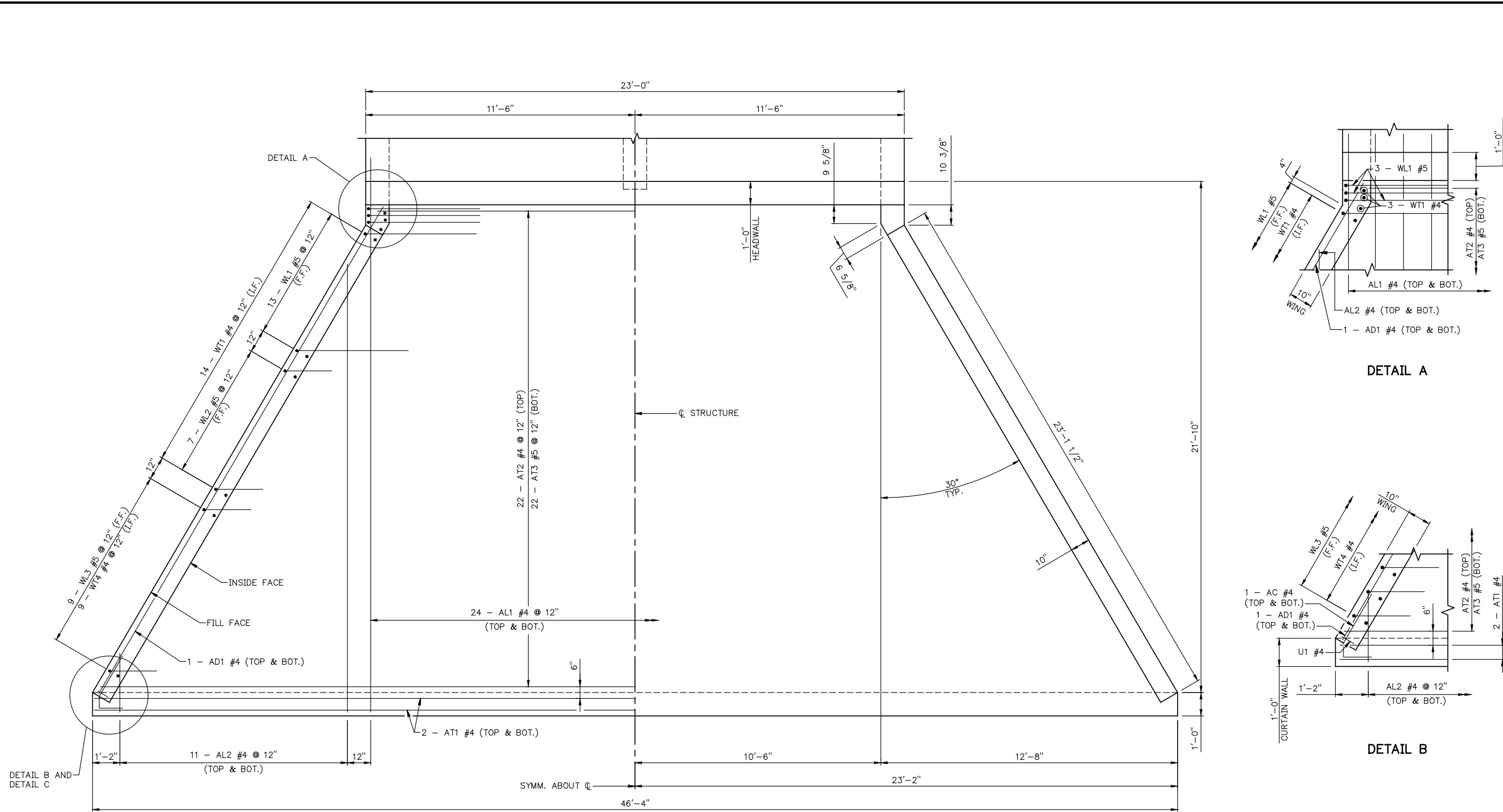
NOTES: EAST WING WALL SHOWN. MIRROR FOR WEST WING WALL.



SECTION E-E

NOTES: EAST WING WALL SHOWN. MIRROR FOR WEST WING WALL.

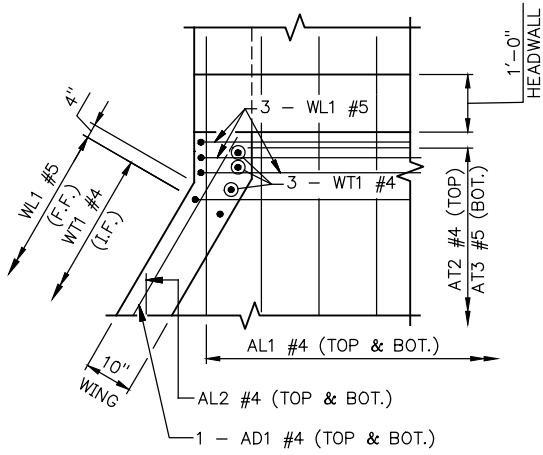
BRIDGE "D" DETAILS (DETAIL 4 OF 7)



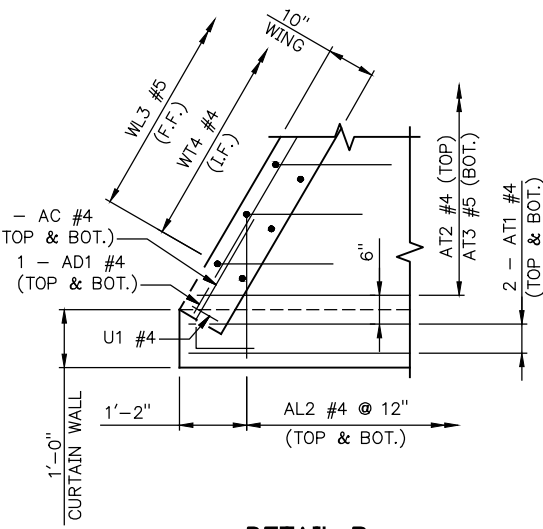
SOUTH END SECTION APRON REINFORCING AND LAYOUT PLAN

NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE

NOTE:
 SEE "DETAIL C" AND ON SHEET B033
 FOR CURTAIN WALL REINFORCING DETAILS.



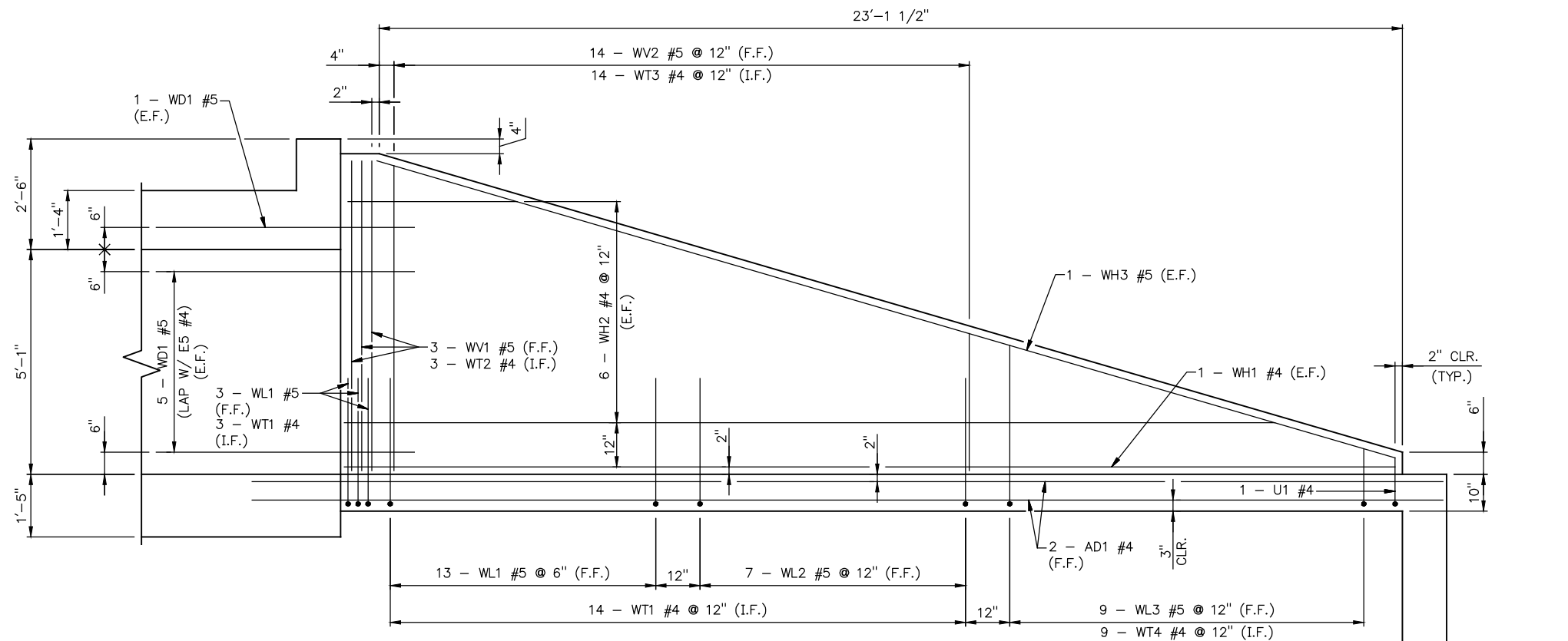
DETAIL A



DETAIL B

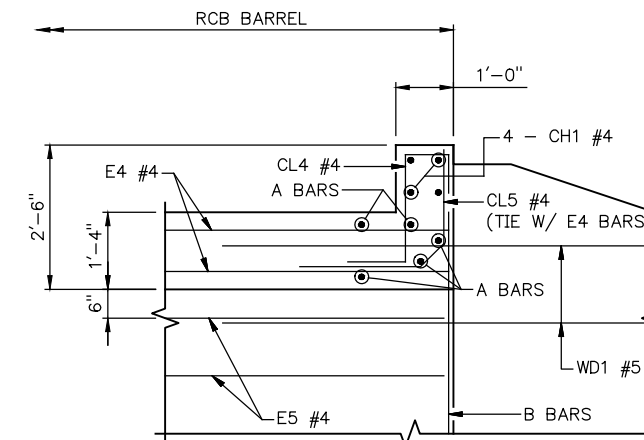
BRIDGE "D" DETAILS
 (DETAIL 5 OF 7)

State Job No. 29674(04) Sheet No. B031

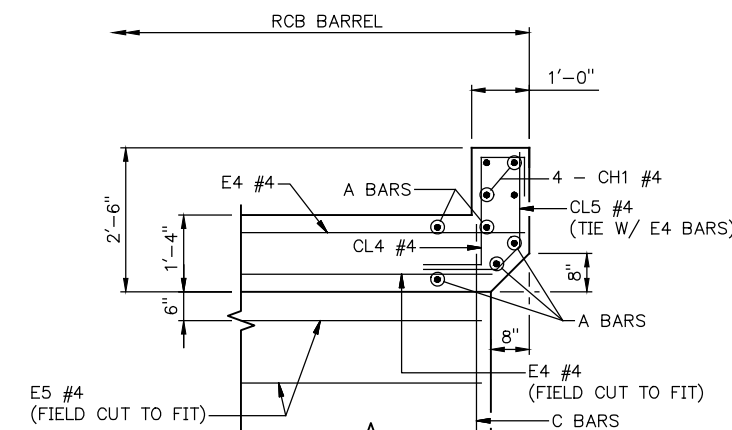


SOUTH END SECTION WING DETAIL

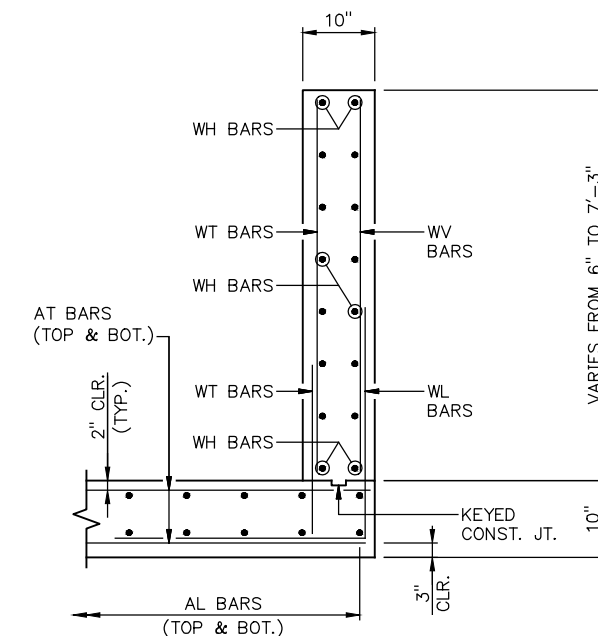
NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE



SOUTH END SECTION HEADWALL DETAIL AT EXTERIOR WALL



SOUTH END SECTION HEADWALL DETAIL AT INTERIOR WALL



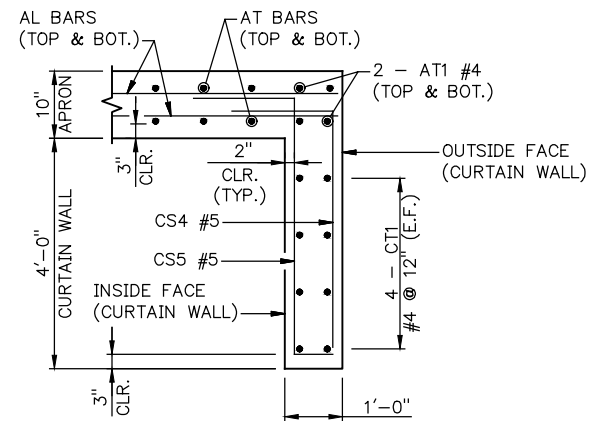
SOUTH END SECTION TYPICAL SECTION THRU WING

BRIDGE "D" DETAILS
 (DETAIL 6 OF 7)

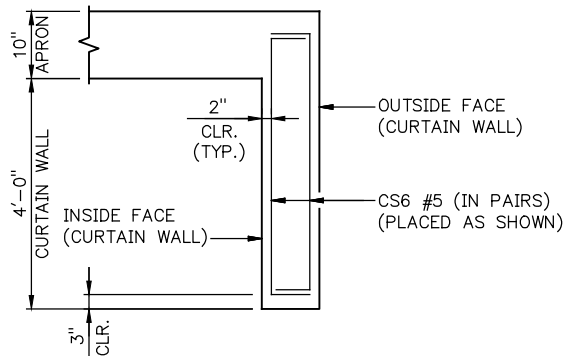
SOUTH END SECTION BAR LIST - APRON (INCLUDES HEADWALL AND CURTAIN WALL)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
AC1	4	#4	BNT.	3'-8"	
AD1	4	#4	STR.	23'-11"	
AL1	48	#4	STR.	23'-8"	
[1] AL2	44	#4	STR.	10'-8" AVG.	2'-4" TO 19'-0"
AT1	4	#4	STR.	46'-0"	
AT2	22	#4	STR.	33'-8" AVG.	21'-9" TO 45'-7"
AT3	22	#5	STR.	33'-8" AVG.	21'-9" TO 45'-7"
CH1	4	#4	STR.	22'-8"	
CL4	24	#4	BNT.	4'-4"	
CL5	24	#4	BNT.	4'-3"	
CS4	45	#5	BNT.	5'-9"	
CS5	45	#5	BNT.	6'-10"	
CS6	8	#5	BNT.	5'-9"	
CT1	8	#4	STR.	46'-0"	

SOUTH END SECTION BAR LIST - WING (ONE WING WALL SHOWN; TWO REQUIRED)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
WD1	12	#5	BNT.	8'-4"	
WH1	2	#4	STR.	23'-6"	
[2] WH2	12	#4	STR.	12'-3" AVG.	3'-8" TO 20'-10"
WH3	2	#5	STR.	23'-11"	
WL1	16	#5	BNT.	7'-7"	
WL2	7	#5	BNT.	4'-10"	
WL3	9	#5	BNT.	4'-4" AVG.	3'-2" TO 5'-6"
WT1	17	#4	STR.	2'-10"	
WT2	3	#4	STR.	7'-1"	
WT3	14	#4	STR.	5'-1" AVG.	3'-2" TO 7'-0"
WT4	9	#4	STR.	2'-4" AVG.	1'-2" TO 3'-6"
WV1	3	#5	STR.	7'-1"	
WV2	14	#5	STR.	5'-1" AVG.	3'-2" TO 7'-0"
U1	1	#4	BNT.	2'-4"	

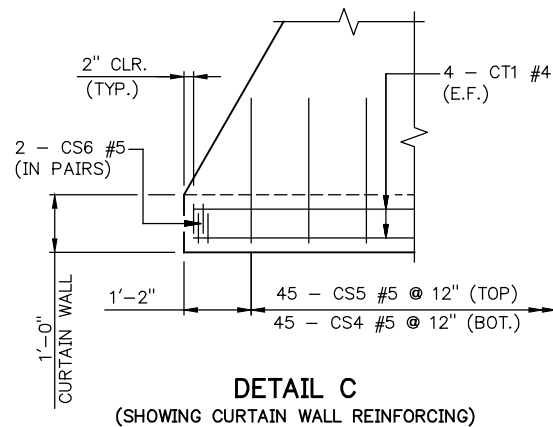
[1] INCLUDES FOUR (4) SETS OF ELEVEN (11) BARS EACH.
 [2] INCLUDES TWO (2) SETS OF SIX (6) BARS EACH.



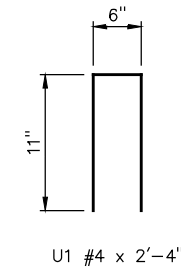
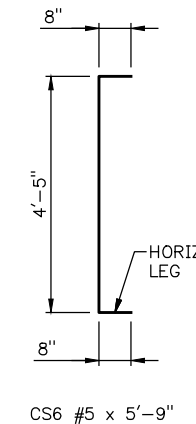
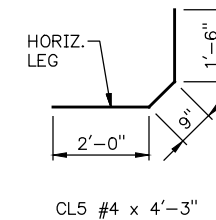
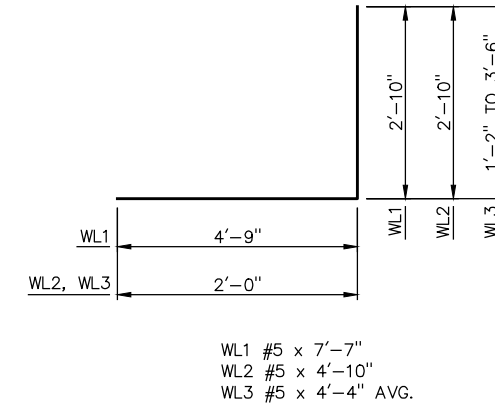
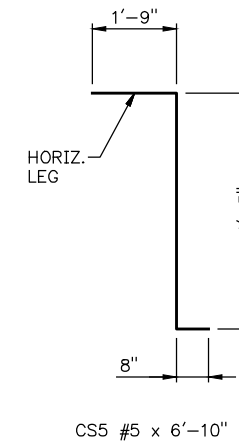
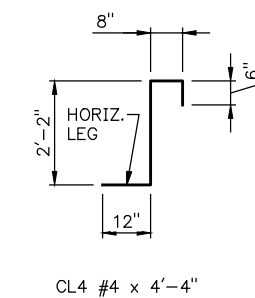
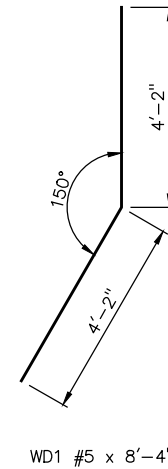
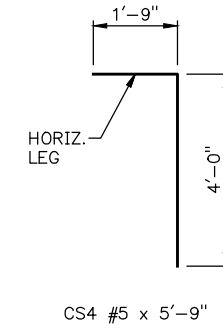
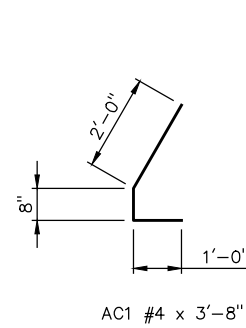
SOUTH END SECTION CURTAIN WALL DETAIL



SOUTH END SECTION CURTAIN WALL END DETAIL



DETAIL C
(SHOWING CURTAIN WALL REINFORCING)



BAR BEND DETAILS

BRIDGE "D" DETAILS
(DETAIL 7 OF 7)

REVISIONS		
REV. NO.	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT CONDITIONS

404 PERMIT INFORMATION

PERMIT GENERAL CONDITIONS

PERMIT GENERAL CONDITIONS

NATIONWIDE PERMIT NO. _____

TO BE PROVIDED AT A LATER DATE

SECTION 404 OF THE CLEAN WATER ACT REQUIRES PRIOR AUTHORIZATION FROM SECRETARY OF THE ARMY (CORPS) FOR THE DISCHARGE OF DREDGED OR FILL MATERIAL INTO WATERS OF THE UNITED STATES.

- NO PRE-CONSTRUCTION NOTIFICATION REQUIRED: PROJECT DOES NOT REQUIRE NOTIFICATION TO THE US ARMY CORPS OF ENGINEERS (USACE) IN ORDER TO COMMENCE.
- PRE-CONSTRUCTION NOTIFICATION REQUIRED: RESIDENT ENGINEER MUST NOTIFY THE USACE WITHIN 30 DAYS OF THE START OF CONSTRUCTION AND 30 DAYS PRIOR TO COMPLETION OF CONSTRUCTION, FORMS LOCATED IN THE CONTRACT.
- INDIVIDUAL PERMIT: WILL BE MONITORED CLOSELY BY THE USACE.
- GENERAL PERMIT: PROJECT WITHIN A DESIGNATED CRITICAL RESOURCE WATER AND WILL REQUIRE PRE-CONSTRUCTION NOTIFICATION SEE ABOVE FOR EXPLANATION OF PRE-CONSTRUCTION NOTIFICATION.
- NO PERMIT REQUIRED

SWT TRACKING NO. _____

SPECIAL CONDITIONS

- NAVIGABLE WATER OF THE U.S.
- ON-SITE MITIGATION
- ENDANGERED SPECIES PRESENT
- HISTORIC PROPERTIES PRESENT
- DESIGNATED CRITICAL RESOURCE WATERS

THE CONTRACTOR SHALL BE RESPONSIBLE BUT NOT LIMITED TO THE FOLLOWING HIGHLIGHTS OF THE 404 PERMIT (SEE CONTRACT FOR COMPLETE LIST):

TEMPORARY FILLS:
 APPROPRIATE MEASURES MUST BE TAKEN TO MAINTAIN NORMAL DOWNSTREAM FLOWS AND MINIMIZE FLOODING TO THE MAXIMUM EXTENT PRACTICABLE. WHEN TEMPORARY STRUCTURES (WORK ROADS, WORK PADS, ETC.) WORK, AND DISCHARGES, INCLUDING COFFERDAMS, ARE NECESSARY FOR CONSTRUCTION ACTIVITIES, ACCESS FILLS, OR DE WATERING OF CONSTRUCTION SITES. TEMPORARY FILLS MUST CONSIST OF MATERIALS, AND BE PLACED IN A MANNER, THAT WILL NOT BE ERODED BY EXPECTED HIGH FLOWS. TEMPORARY FILLS MUST BE REMOVED IN THEIR ENTIRETY AND THE AFFECTED AREAS RETURNED TO PRE-CONSTRUCTION ELEVATIONS. THE AREAS AFFECTED BY TEMPORARY FILLS MUST BE RE VEGETATED, AS APPROPRIATE.

NAVIGATION:
 NO ACTIVITY MAY CAUSE MORE THAN A MINIMAL ADVERSE EFFECT ON NAVIGATION WITHIN A NAVIGABLE WATER OF THE U.S. IF THIS PROJECT IS LOCATED WITHIN A NAVIGABLE WATER OF THE U.S., IT WILL BE IDENTIFIED IN THE SPECIAL CONDITIONS.

AQUATIC LIFE MOVEMENTS & ADVERSE EFFECTS FROM IMPOUNDMENTS:
 NO ACTIVITY MAY LARGELY DISRUPT THE NECESSARY LIFE CYCLE MOVEMENTS OF THOSE SPECIES INDIGENOUS TO THE BODY OF WATER, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. CULVERTS WILL BE DESIGNED TO PROVIDE SUFFICIENT PASSAGE FOR AQUATIC LIFE AND INSTALLED TO MAINTAIN LOW FLOW. RATE OF FLOW CANNOT BE MADE HIGHER THAN WHAT WAS PRIOR TO THE START OF CONSTRUCTION. EROSION CONTROL MEASURES SHOULD BE UTILIZED AROUND THE PERIMETER OF NEW STRUCTURES TO AVOID SILT BUILD UP. CAUTION SHOULD BE TAKEN TO MINIMIZE HARM IF CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN A STREAM OR RIVER CHANNEL AND CREATE A CONFINED BODY OF WATER, CAUSE ADVERSE EFFECTS TO THE AQUATIC SYSTEM IN ANY WAY, AND/OR RESTRICTING ITS FLOW.

MANAGEMENT OF WATER FLOWS:
 CONSTRUCTION ACTIVITIES MAY NOT IMPEDE THE PASSAGE OF NORMAL OR HIGH FLOWS. TO THE GREATEST EXTENT POSSIBLE, THE PRE- CONSTRUCTION COURSE, CONDITIONS, CAPACITY AND LOCATION OF OPEN WATERS MUST BE MAINTAINED. THIS INCLUDES STREAM CANALIZATION AND STORM WATER MANAGEMENT.

SUITABLE MATERIAL:
 NO ACTIVITY MAY USE UNSUITABLE MATERIAL (E.G., TRASH, DEBRIS, CAR BODIES, ASPHALT, ETC.). MATERIALS USED FOR CONSTRUCTION OR DISCHARGED MUST BE FREE FROM TOXIC POLLUTANTS IN TOXIC AMOUNTS (SEE SECTION 307 OF CLEAN WATER ACT).

PROPER MAINTENANCE:
 ANY AUTHORIZED STRUCTURE OR FILL SHALL BE PROPERLY MAINTAINED, INCLUDING MAINTENANCE TO ENSURE PUBLIC SAFETY AND COMPLIANCE WITH APPLICABLE NATION WIDE PERMIT GENERAL CONDITIONS, AS WELL AS ANY ACTIVITY- SPECIFIC CONDITIONS ADDED BY THE DISTRICT ENGINEER TO AN NATIONWIDE PERMIT AUTHORIZATION

HAZARDOUS MATERIALS:
 HAZARDOUS MATERIALS, CHEMICALS, FUELS, LUBRICATING OILS AND OTHER SUCH SUBSTANCES SHOULD BE STORED AWAY FROM ANY STREAM OR RIVER CHANNEL (SEE SECTION 307 OF CLEAN WATER ACT)

EQUIPMENT:
 HEAVY EQUIPMENT WORKING IN WETLANDS OR MUDFLATS MUST BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE; FOR EXAMPLE IF WETLANDS ARE PRESENT WITHIN THE CONSTRUCTION, THE FOOTPRINT WILL BE SHOWN ON THE PLANS. MEASURES SHOULD BE TAKEN TO PREVENT DISCHARGE INTO ANY WATERS OF THE STATE (e.g. CONCRETE WASHOUT).

SOIL EROSION AND SEDIMENT CONTROLS:
 APPROPRIATE SOIL EROSION AND SEDIMENT CONTROLS MUST BE USED AND MAINTAINED IN EFFECTIVE OPERATING CONDITION DURING CONSTRUCTION, AND ALL EXPOSED SOILS AND OTHER FILLS, AS WELL AS ANY WORK WITHIN STREAM OR RIVER CHANNELS OR BANKS, MUST BE PERMANENTLY STABILIZED AS SOON AS POSSIBLE.

404 COMPLIANCE:
 IN ORDER TO REMAIN COMPLIANT WITH THE 404 PERMIT, THE PROJECT MUST COMPLY WITH ALL FEDERAL ENVIRONMENTAL PROTECTION LAWS ASSOCIATED AND, THE ENVIRONMENTAL COMMITMENTS AS SHOWN ON THE PLANS. THIS INCLUDES BUT IS NOT LIMITED TO COMPLIANCE WITH ALL ENVIRONMENTAL NOTES IN THE PLANS, INCLUDING CULTURAL RESOURCES, HAZARDOUS WASTE, BIOLOGICAL FOR PROTECTED SPECIES, AND DEQ STORM WATER REGULATIONS AS THEY PERTAIN TO THE SWMP SHEET WITHIN THE PLANS. ALL OF THE 404 PERMIT GENERAL AND SPECIFIC CONDITIONS MUST BE ADHERED TO. A COPY OF THESE CONDITIONS CAN BE FOUND IN THE CONTRACT WITH THE 404 PERMIT.

FUELING:
 ALL FUELING AND SERVICING OF VEHICLES AND EQUIPMENT SHALL BE DONE ABOVE THE ORDINARY HIGH WATER MARK (OHWM).

MATERIAL STORAGE:
 STORE MATERIAL AND FUEL OUTSIDE OF THE ORDINARY HIGH WATER MARK OR ANY AREA LIKELY TO FLOOD.

DEBRIS STORAGE:
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY MATERIALS, DEBRIS, OR REFUSE WHICH HAS FALLEN INTO ANY STREAM OR RIVER CHANNELS RESULTING FROM THE EXECUTION OF THE PROJECT AS SOON AS POSSIBLE

SEE NATIONWIDE PERMIT 14 IN THE CONTRACT

401 CERTIFICATION CONDITIONS

THE CONTRACTOR SHALL BE RESPONSIBLE BUT NOT LIMITED TO THE FOLLOWING HIGHLIGHTS OF THE 401 CERTIFICATION (SEE CONTRACT FOR COMPLETE LIST):

- ALL SPILLS OF FUEL OR POLLUTANTS IN EXCESS OF FIVE GALLONS SHALL BE REPORTED TO ODEQ WITHIN 24 HRS AND REPORTED TO POLLUTION PREVENTION HOTLINE (1-800-522-0206)
- ALL FUELING AND SERVICING OF VEHICLES AND EQUIPMENT SHALL BE DONE OUTSIDE THE ORDINARY HIGH WATER MARK
- THE PERMITTEE SHALL PROVIDE ACCESS TO THE PROPERTY TO ODEQ FOR INSPECTIONS.
- ANY STOCKPILE SHALL BE ABOVE ORDINARY HIGH WATER MARK AND REMOVED FROM LIKELY FLOOD ZONE
- BEST MANAGEMENT PRACTICES SHOULD BE USED TO CONTROL SOIL EROSION AND MAINTAIN COMPLIANCE WITH WATER QUALITY STANDARDS.
- FOR ANY PROJECT THAT INVOLVES BANK STABILIZATION, THE PERMITTEE SHALL CONSIDER INSTALLING BIOENGINEERING PRACTICES IN PLACE OF STRUCTURAL PRACTICES (RIPRAP) TO MINIMIZE IMPACTS TO AQUATIC RESOURCES

	DETAIL	
	REVIEW	
	APPROVED	
ENVIRONMENTAL DIVISION		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION	
	JOB/PIECE NO.	SHEET NO.

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: 1.3 MILES NORTHEAST OF US 283 JUNCTION EXTENDING NORTHEAST 3.26 MILES.

PROJECT DESCRIPTION: 3R-WIDEN AND RESURFACE.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: PRIOR TO INITIATING SOIL DISTURBING ACTIVITIES, THE CONTRACTOR WILL INSTALL ALL PERIMETER TEMPORARY SEDIMENT CONTROLS SPECIFIED, STRIP, STOCKPILE AND STABILIZE TOPSOIL. CLEAR AND GRUB ONLY IN NECESSARY AREAS, PRESERVING AS MUCH NATIVE VEGETATION AS POSSIBLE. INSTALL, MAINTAIN AND/OR MOVE TEMPORARY SEDIMENT ITEMS WITH CONSTRUCTION OPERATIONS AS PRACTICAL. IF DIRECTED BY THE ENGINEER, PLANT TEMPORARY SEEDING, REPLACE TOPSOIL AND DEVICES WHEN AN ACCEPTABLE VEGETATIVE COVER (AT LEAST 70%) HAS BEEN ATTAINED. AS SITE CONDITIONS WARRANT, THE CONTRACTOR MAY CHOOSE TO MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIED PRACTICES TO IMPROVE THEIR EFFECTIVENESS AS APPROVED BY THE ENGINEER, THE CONTRACTOR WILL MAINTAIN A LOG OF THE DATES OF MAJOR SOIL DISTURBANCE ACTIVITIES, AND ALSO THE DATES OF INSTALLATION OF EROSION CONTROL MEASURES.

SOIL TYPE: SANDY LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: 59.70 ACRES

ESTIMATED AREA TO BE DISTURBED: 25.22 ACRES

OFFSITE AREA TO BE DISTURBED: . (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 11.52 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 16.35 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.50

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36.290444° N, 99.841069° W

PROJECT WILL DISCHARGE TO:

UNNAMED TRIBUTARIES OF WOLF CREEK

NAME OF RECEIVING WATERS: & WILLOW CREEK

SENSITIVE WATERS OR WATERSHEDS: YES NO

303(d) IMPAIRED WATERS: YES NO

IF YES, LIST IMPAIRMENT: _____

LOCATED IN A TMDL: YES NO

LAKE THUNDERBIRD TMDL: YES NO

MS4 ENTITY: YES NO

IF YES, LOCATION: _____

NOTE:

THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- TEMPORARY SEEDING
- PERMANENT SODDING, SPRIGGING OR SEEDING
- VEGETATIVE MULCHING
- SOIL RETENTION BLANKET
- PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:

- STABILIZED CONSTRUCTION EXIT
- TEMPORARY SILT FENCE
- TEMPORARY SILT DIKES
- TEMPORARY FIBER LOG
- DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ROCK FILTER DAMS
- TEMPORARY SLOPE DRAIN
- PAVED DITCH W/ DITCH LINER PROTECTION
- TEMPORARY DIVERSION CHANNELS
- TEMPORARY SEDIMENT BASINS
- TEMPORARY SEDIMENT TRAPS
- TEMPORARY SEDIMENT FILTERS
- TEMPORARY SEDIMENT REMOVAL
- RIP RAP
- INLET SEDIMENT FILTER
- TEMPORARY BRUSH SEDIMENT BARRIERS
- SANDBAG BERMS
- TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- HAUL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

- _____
- _____
- _____
- _____

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2009 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

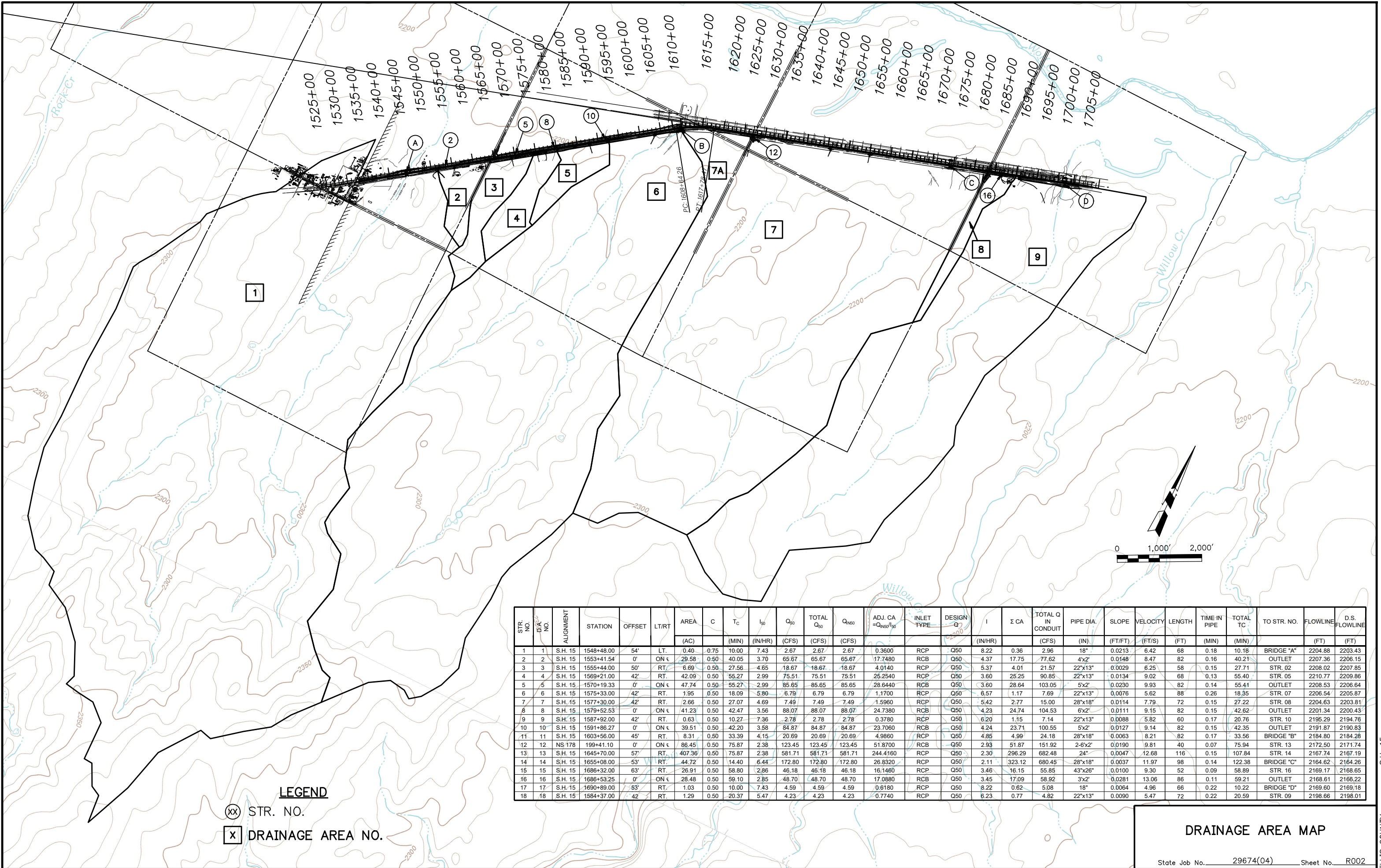
- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 106.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
- 220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
- 221 TEMPORARY SEDIMENT CONTROL

IN ADDITION:

"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

STORM WATER
MANAGEMENT PLAN

State Job No. 29674(04) Sheet No. R001



STR. NO.	DIA. NO.	ALIGNMENT	STATION	OFFSET	LT/RT	AREA	C	T _c	I ₅₀	Q ₅₀	TOTAL Q ₅₀	Q ₁₀₀	ADJ. CA = Q ₅₀ /I ₅₀	INLET TYPE	DESIGN Q	I	Σ CA	TOTAL Q IN CONDUIT	PIPE DIA.	SLOPE	VELOCITY	LENGTH	TIME IN PIPE	TOTAL TC	TO STR. NO.	FLOWLINE	D.S. FLOWLINE
						(AC)	(MIN)	(IN/HR)	(CFS)	(CFS)	(CFS)	(CFS)	(IN/HR)		(CFS)	(IN)	(FT/FT)	(FT/S)	(FT)	(MIN)	(MIN)	(FT)	(FT)				
1	1	S.H. 15	1548+48.00	54'	LT.	0.40	0.75	10.00	7.43	2.67	2.67	2.67	0.3600	RCP	Q50	8.22	0.36	2.96	18"	0.0213	6.42	68	0.18	10.16	BRIDGE "A"	2204.88	2203.43
2	2	S.H. 15	1553+41.54	0'	ON C	29.58	0.50	40.05	3.70	65.67	65.67	65.67	17.7480	RCB	Q50	4.37	17.75	77.62	4x2'	0.0148	8.47	82	0.16	40.21	OUTLET	2207.36	2206.15
3	3	S.H. 15	1555+44.00	50'	RT.	6.69	0.50	27.56	4.65	18.67	18.67	18.67	4.0140	RCP	Q50	5.37	4.01	21.57	22"x13"	0.0029	6.25	58	0.15	27.71	STR. 02	2208.02	2207.85
4	4	S.H. 15	1569+21.00	42'	RT.	42.09	0.50	55.27	2.99	75.51	75.51	75.51	25.2540	RCP	Q50	3.60	25.25	90.85	22"x13"	0.0134	9.02	68	0.13	55.40	STR. 05	2210.77	2209.86
5	5	S.H. 15	1570+19.33	0'	ON C	47.74	0.50	55.27	2.99	85.65	85.65	85.65	28.6440	RCP	Q50	3.60	28.64	103.05	5x2'	0.0230	9.93	82	0.14	55.41	OUTLET	2208.53	2206.64
6	6	S.H. 15	1575+33.00	42'	RT.	1.95	0.50	18.09	5.80	6.79	6.79	6.79	1.1700	RCP	Q50	6.57	1.17	7.69	22"x13"	0.0076	5.62	88	0.26	18.35	STR. 07	2206.54	2205.87
7	7	S.H. 15	1577+30.00	42'	RT.	2.66	0.50	27.07	4.69	7.49	7.49	7.49	1.5960	RCP	Q50	5.42	2.77	15.00	28"x18"	0.0114	7.79	72	0.15	27.22	STR. 08	2204.63	2203.81
8	8	S.H. 15	1579+52.53	0'	ON C	41.23	0.50	42.47	3.56	88.07	88.07	88.07	24.7380	RCB	Q50	4.23	24.74	104.53	6x2'	0.0111	9.15	82	0.15	42.62	OUTLET	2201.34	2200.43
9	9	S.H. 15	1587+92.00	42'	RT.	0.63	0.50	10.27	7.36	2.78	2.78	2.78	0.3780	RCP	Q50	6.20	1.15	7.14	22"x13"	0.0088	5.82	60	0.17	20.76	STR. 10	2195.29	2194.76
10	10	S.H. 15	1591+86.27	0'	ON C	39.51	0.50	42.20	3.58	84.87	84.87	84.87	23.7060	RCB	Q50	4.24	23.71	100.55	5x2'	0.0127	9.14	82	0.15	42.35	OUTLET	2191.87	2190.83
11	11	S.H. 15	1603+56.00	45'	RT.	8.31	0.50	33.39	4.15	20.69	20.69	20.69	4.9860	RCP	Q50	4.85	4.99	24.18	28"x18"	0.0063	8.21	82	0.17	33.56	BRIDGE "B"	2184.80	2184.28
12	12	NS 178	199+41.10	0'	ON C	86.45	0.50	75.87	2.38	123.45	123.45	123.45	51.8700	RCB	Q50	2.93	51.87	151.92	2-6"x2"	0.0190	9.81	40	0.07	75.94	STR. 13	2172.50	2171.74
13	13	S.H. 15	1645+70.00	57'	RT.	407.36	0.50	75.87	2.38	581.71	581.71	581.71	244.4160	RCP	Q50	2.30	296.29	682.48	24"	0.0047	12.68	116	0.15	107.84	STR. 14	2167.74	2167.19
14	14	S.H. 15	1655+08.00	53'	RT.	44.72	0.50	14.40	6.44	172.80	172.80	172.80	26.8320	RCP	Q50	2.11	323.12	680.45	28"x18"	0.0037	11.97	98	0.14	122.38	BRIDGE "C"	2164.62	2164.26
15	15	S.H. 15	1686+32.00	63'	RT.	26.91	0.50	58.80	2.86	46.18	46.18	46.18	16.1460	RCP	Q50	3.46	16.15	55.85	43"x26"	0.0100	9.30	52	0.09	58.89	STR. 16	2169.17	2168.65
16	16	S.H. 15	1686+53.25	0'	ON C	28.48	0.50	59.10	2.85	48.70	48.70	48.70	17.0880	RCB	Q50	3.45	17.09	58.92	3x2'	0.0281	13.06	86	0.11	59.21	OUTLET	2168.61	2166.22
17	17	S.H. 15	1690+89.00	53'	RT.	1.03	0.50	10.00	7.43	4.59	4.59	4.59	0.6180	RCP	Q50	8.22	0.62	5.08	18"	0.0064	4.96	66	0.22	10.22	BRIDGE "D"	2169.60	2169.18
18	18	S.H. 15	1584+37.00	42'	RT.	1.29	0.50	20.37	5.47	4.23	4.23	4.23	0.7740	RCP	Q50	6.23	0.77	4.82	22"x13"	0.0090	5.47	72	0.22	20.59	STR. 09	2198.66	2198.01

(XX) STR. NO.
 [X] DRAINAGE AREA NO.

DRAINAGE AREA MAP

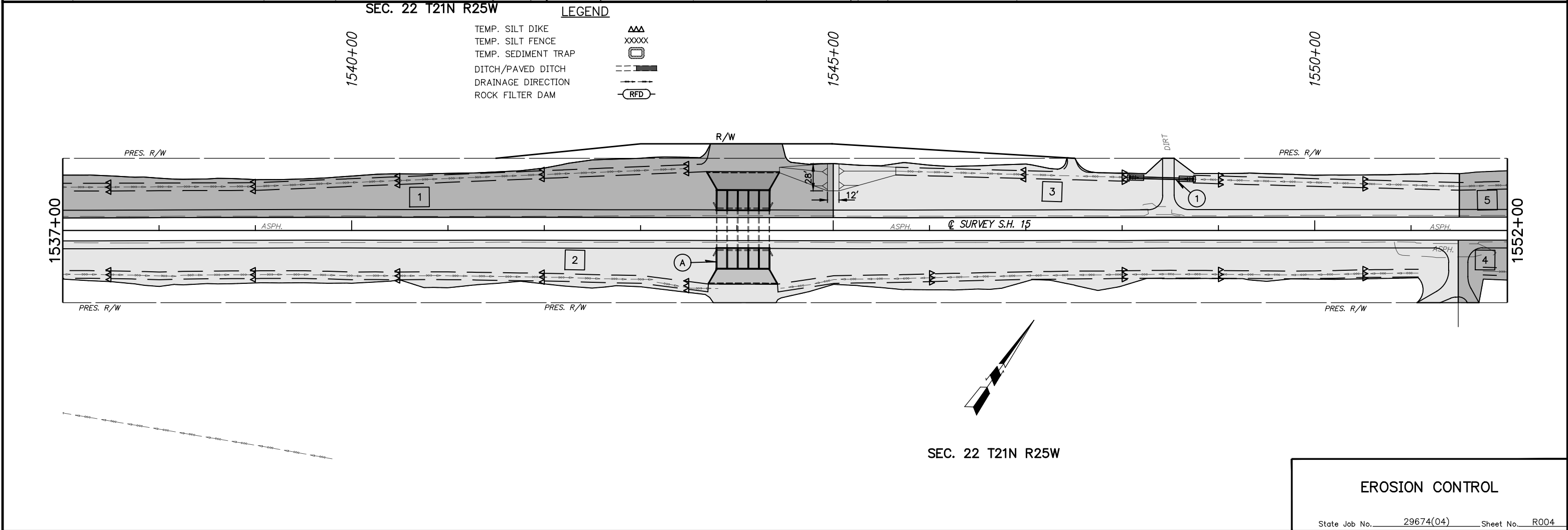
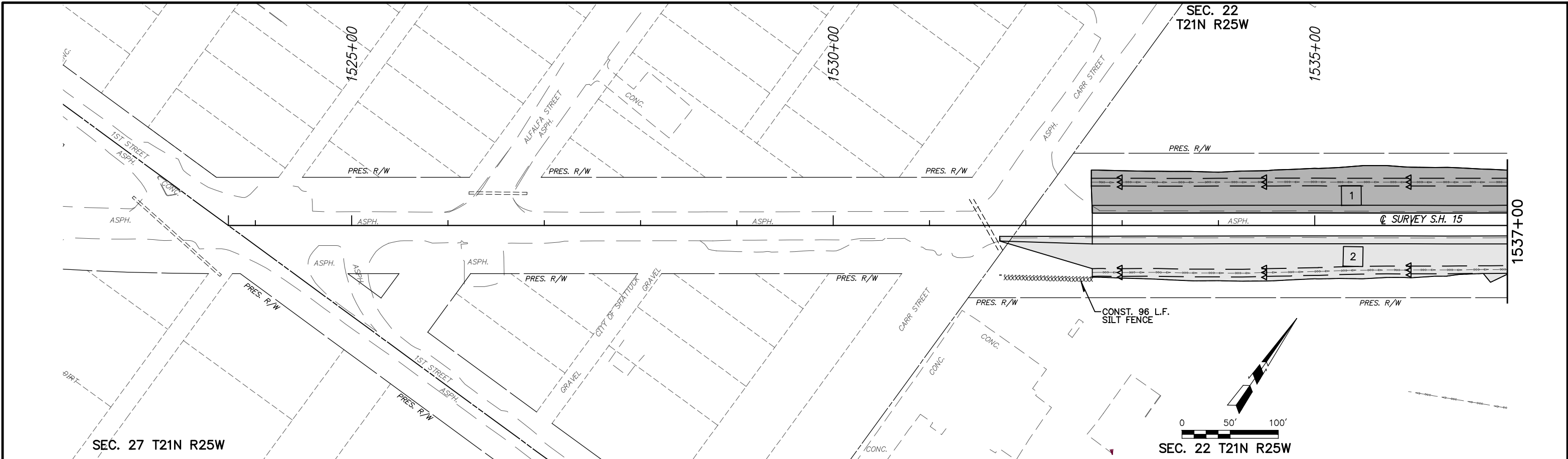
SUMMARY OF DISTURBED DRAINAGE AREAS

ALIGNMENT	DISTURBED AREA NO.	OUTFALL LOCATION (STATION)	DISTURBED AREA (STATION TO STATION)	DIRECTION TO OUTFALL	DESCRIPTION OF AREA	EROSION CONTROL MEASURES	DISTURBED AREA (AC.)
S.H. 15	1	STA. 1544+06	STA. 1532+69 TO STA. 1545+00	NE	EDGE OF ROADWAY TO TOP OF CUT LT.	SILT FENCE, SILT DIKE, AND SOLID SLAB SOD	3.44
S.H. 15	2	STA. 1544+06	STA. 1531+73 TO STA. 1551+49	SW & NE	EDGE OF ROADWAY TO TOP OF CUT RT.	SILT DIKE AND SOLID SLAB SOD	2.05
S.H. 15	3	STA. 1547+47	STA. 1545+00 TO STA. 1551+50	SW & NE	EDGE OF ROADWAY TO TOP OF CUT LT.	SILT DIKE AND SOLID SLAB SOD	0.74
S.H. 15	4	STA. 1553+41	STA. 1551+49 TO STA. 1562+33	SW	EDGE OF ROADWAY TO TOP OF CUT RT.	SILT DIKE AND SOLID SLAB SOD	1.07
S.H. 15	5	STA. 1554+35	STA. 1551+50 TO STA. 1563+91	SW	EDGE OF ROADWAY TO TOP OF CUT LT.	SILT DIKE AND SOLID SLAB SOD	2.30
S.H. 15	6	STA. 1570+19	STA. 1562+33 TO STA. 1570+80	NE	EDGE OF ROADWAY TO TOP OF CUT RT.	SILT DIKE AND SOLID SLAB SOD	0.85
S.H. 15	7	STA. 1565+72	STA. 1563+91 TO STA. 1565+92	N	EDGE OF ROADWAY TO TOP OF CUT LT.	SILT DIKE AND SOLID SLAB SOD	0.34
S.H. 15	8	STA. 1570+47	STA. 1565+24 TO STA. 1571+48	NE	EDGE OF ROADWAY TO TOP OF CUT LT.	SILT DIKE AND SOLID SLAB SOD	1.47
S.H. 15	9	STA. 1579+53	STA. 1570+80 TO STA. 1580+02	NE	EDGE OF ROADWAY TO TOP OF CUT RT.	SILT DIKE AND SOLID SLAB SOD	1.01
S.H. 15	10	STA. 1579+52	STA. 1571+48 TO STA. 1579+94	NE	EDGE OF ROADWAY TO TOP OF CUT LT.	SILT DIKE AND SOLID SLAB SOD	1.82
S.H. 15	11	STA. 1591+86	STA. 1580+02 TO STA. 1592+54	NE	EDGE OF ROADWAY TO TOP OF CUT RT.	SILT DIKE AND SOLID SLAB SOD	1.21
S.H. 15	12	STA. 1591+86	STA. 1579+94 TO STA. 1592+33	NE	EDGE OF ROADWAY TO TOP OF CUT LT.	SILT DIKE AND SOLID SLAB SOD	2.43
S.H. 15	13	STA. 1609+65	STA. 1592+54 TO STA. 1610+26	NE	EDGE OF ROADWAY TO TOP OF CUT RT.	SILT DIKE AND SOLID SLAB SOD	1.86
S.H. 15	14	STA. 1609+64	STA. 1592+33 TO STA. 1610+02	NE	EDGE OF ROADWAY TO TOP OF CUT/TOE OF FILL LT.	SILT FENCE, SILT DIKE, AND SOLID SLAB SOD	1.57
S.H. 15	15	STA. 1674+18	STA. 1610+26 TO STA. 1683+33	NE	EDGE OF ROADWAY TO TOP OF CUT/TOE OF FILL RT.	ROCK FILTER DAM, TEMPORARY SEDIMENT TRAPS, SILT FENCE, SILT DIKE, AND SOLID SLAB SOD	8.19
S.H. 15	16	STA. 1617+51	STA. 1610+02 TO STA. 1617+51	NE	EDGE OF ROADWAY TO TOP OF CUT/TOE OF FILL LT.	SILT FENCE AND SOLID SLAB SOD	0.62
S.H. 15	17	STA. 1674+18	STA. 1628+50 TO STA. 1683+47	NE	EDGE OF ROADWAY TO TOE OF FILL LT.	ROCK FILTER DAM, TEMPORARY SEDIMENT TRAPS, SILT FENCE AND SOLID SLAB SOD	12.28
S.H. 15	18	STA. 1686+67	STA. 1683+33 TO STA. 1689+86	SW & NE	EDGE OF ROADWAY TO TOP OF CUT RT.	SILT DIKE AND SOLID SLAB SOD	0.98
S.H. 15	19	STA. 1686+53	STA. 1683+47 TO STA. 1694+23	SW	EDGE OF ROADWAY TO TOE OF FILL LT.	SILT FENCE AND SOLID SLAB SOD	1.30
S.H. 15	20	STA. 1701+63	STA. 1689+86 TO STA. 1705+06	NE	EDGE OF ROADWAY TO TOP OF CUT RT.	SILT DIKE AND SOLID SLAB SOD	2.05
S.H. 15	21	STA. 1701+58	STA. 1694+23 TO STA. 1705+06	NE	EDGE OF ROADWAY TO TOE OF FILL LT.	SILT FENCE AND SOLID SLAB SOD	2.53

NOTES:

1) PLACE SOLID SLAB SOD IMMEDIATELY UPON COMPLETION OF EACH PHASE TO REDUCE THE AMOUNT OF AREA DISTURBED AT ONE TIME. SEE SUGGESTED SEQUENCE OF CONSTRUCTION SHEETS FOR PHASING .

SUMMARY OF DISTURBED DRAINAGE AREA



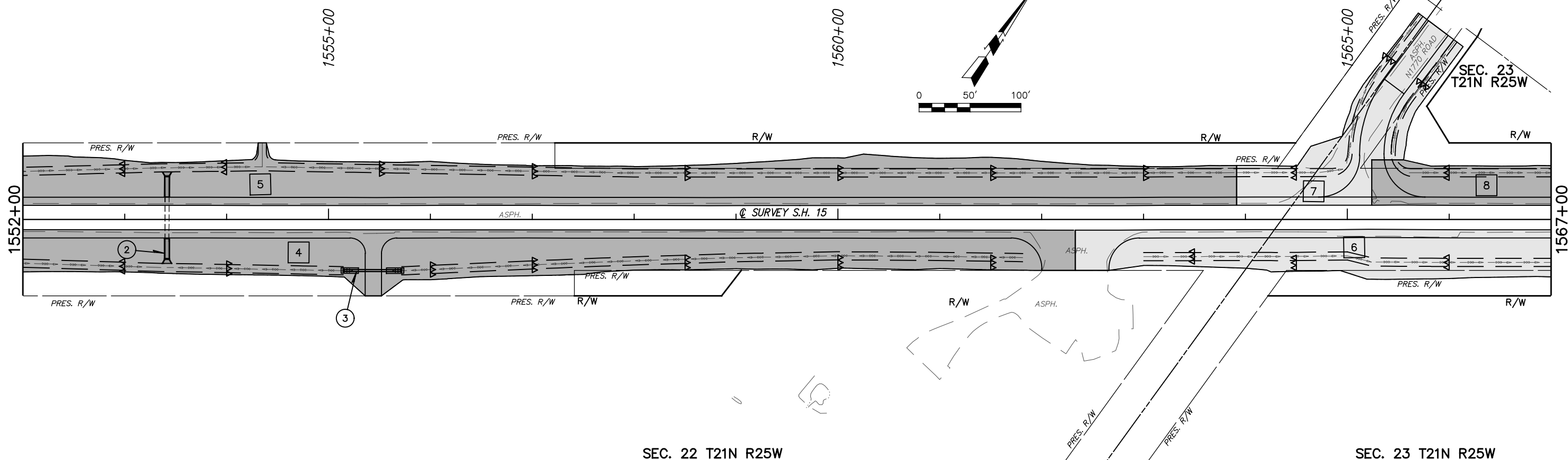
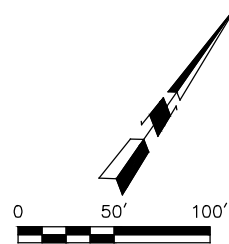
LEGEND

- TEMP. SILT DIKE
- TEMP. SILT FENCE
- TEMP. SEDIMENT TRAP
- DITCH/PAVED DITCH
- DRAINAGE DIRECTION
- ROCK FILTER DAM

EROSION CONTROL

State Job No. 29674(04) Sheet No. R004

SEC. 22 T21N R25W

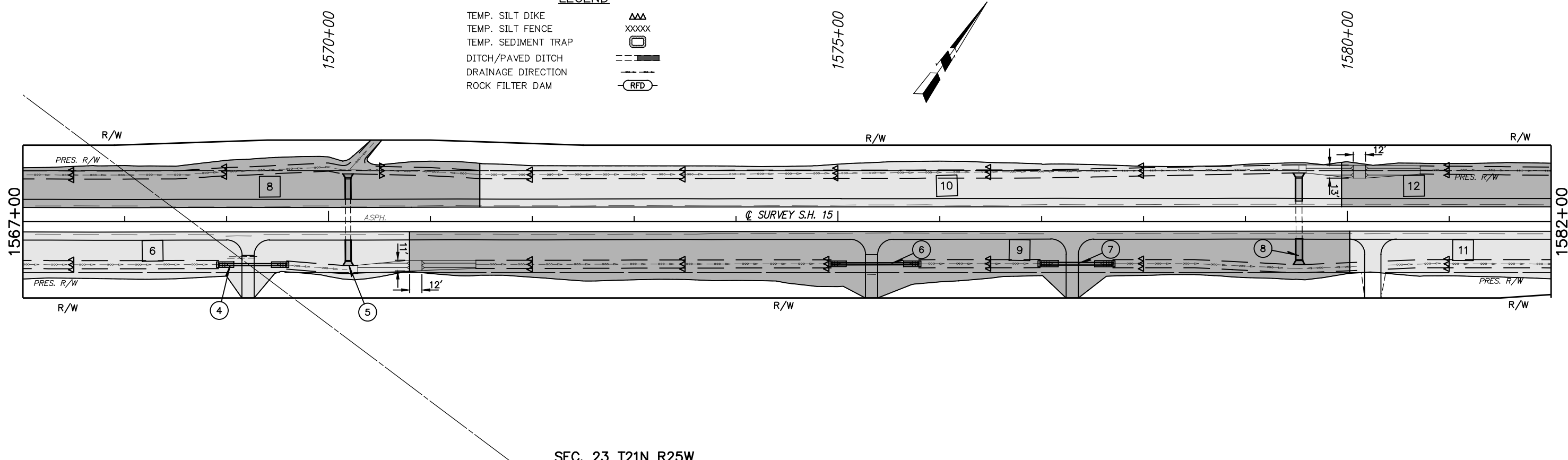
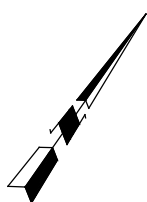


SEC. 22 T21N R25W
SEC. 23 T21N R25W

SEC. 23 T21N R25W

LEGEND

- TEMP. SILT DIKE
- TEMP. SILT FENCE
- TEMP. SEDIMENT TRAP
- DITCH/PAVED DITCH
- DRAINAGE DIRECTION
- ROCK FILTER DAM



SEC. 23 T21N R25W

EROSION CONTROL

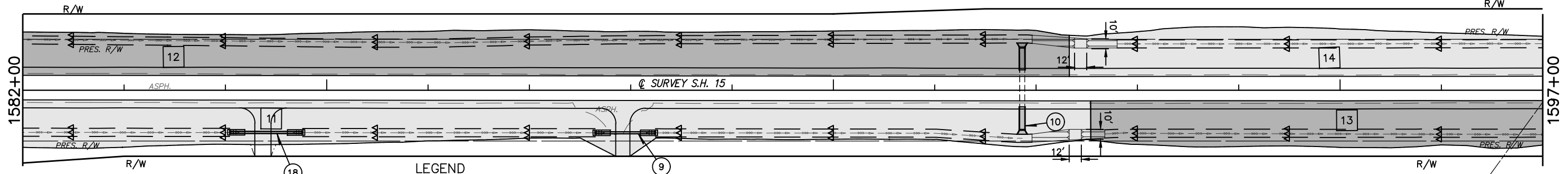
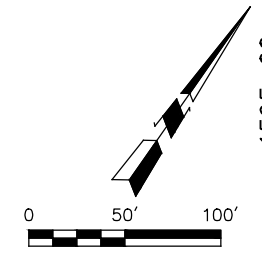
State Job No. 29674(04) Sheet No. R005

SEC. 23 T21N R25W

1585+00

1590+00

1595+00



LEGEND

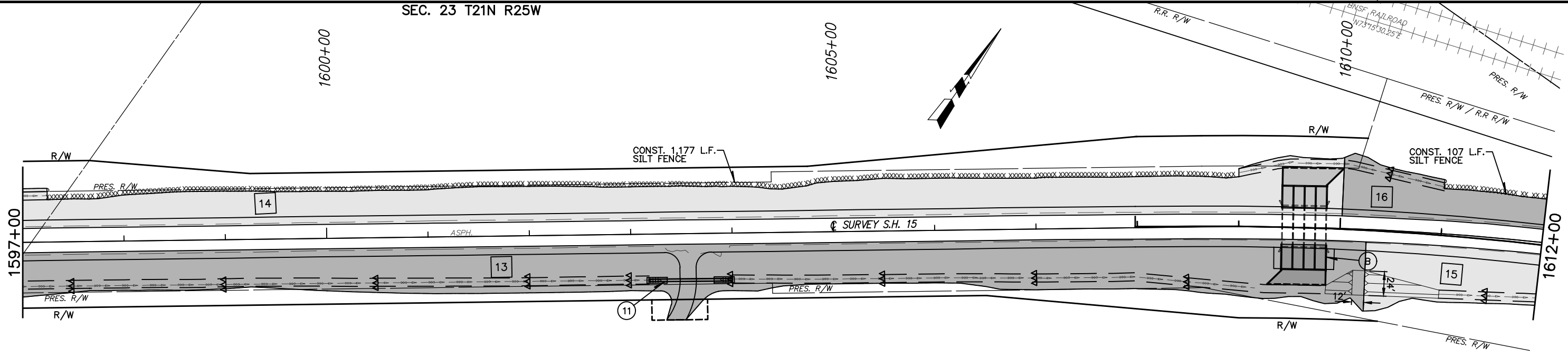
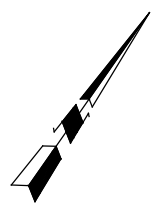
- TEMP. SILT DIKE
- TEMP. SILT FENCE
- TEMP. SEDIMENT TRAP
- DITCH/PAVED DITCH
- DRAINAGE DIRECTION
- ROCK FILTER DAM

SEC. 23 T21N R25W

1600+00

1605+00

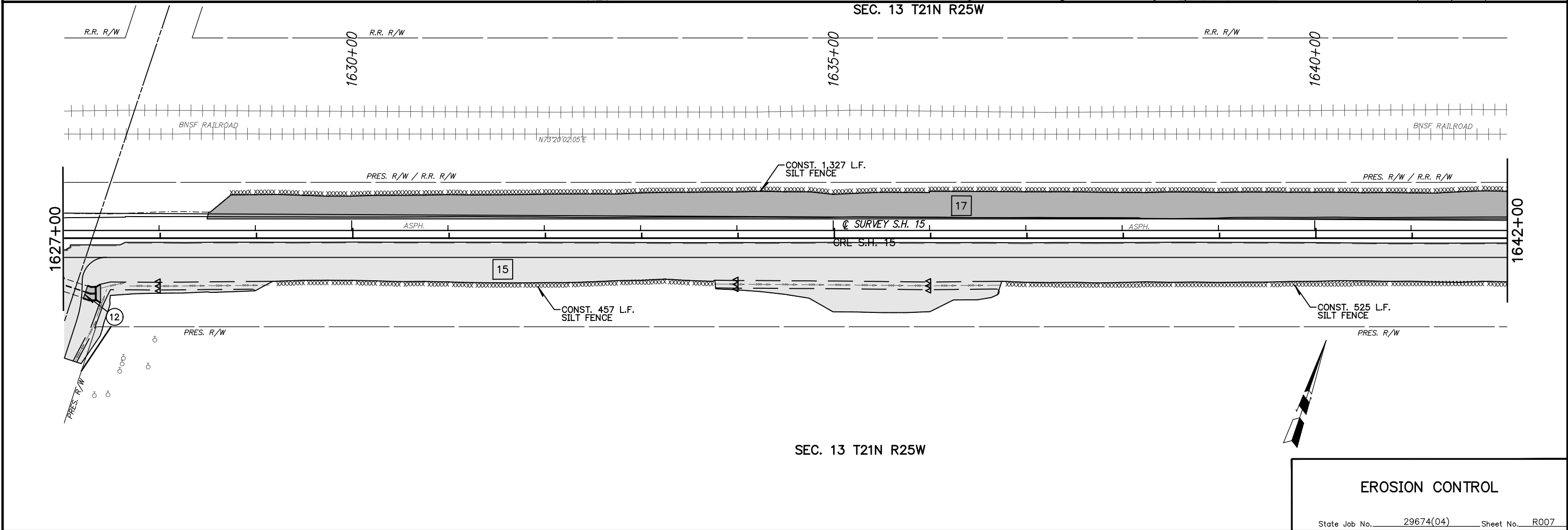
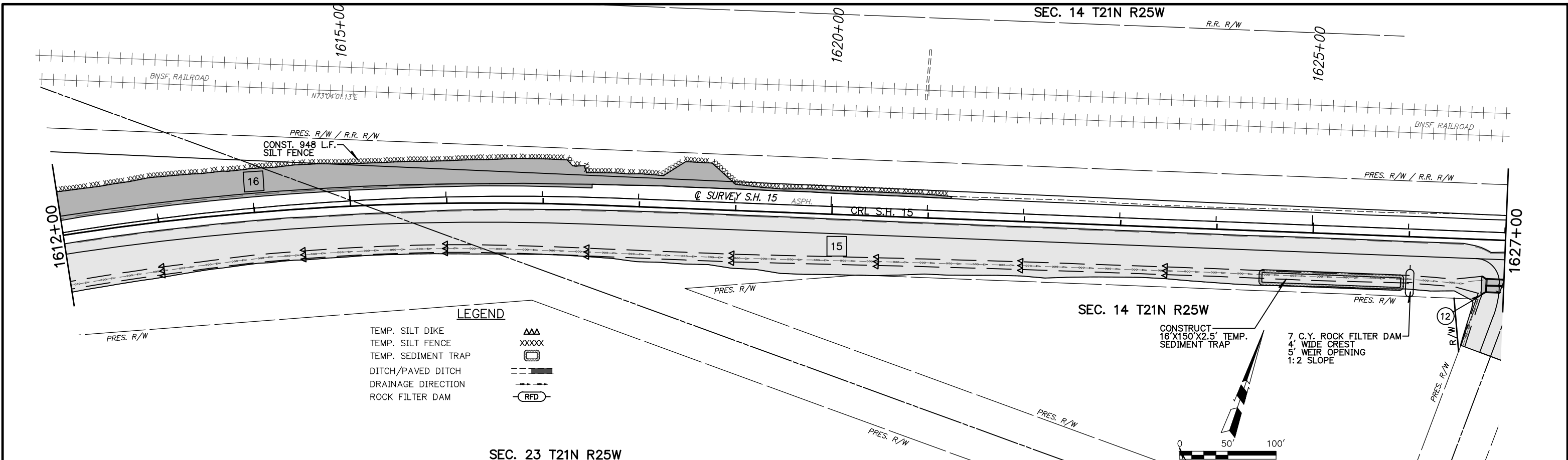
1610+00



SEC. 23 T21N R25W

EROSION CONTROL

State Job No. 29674(04) Sheet No. R006

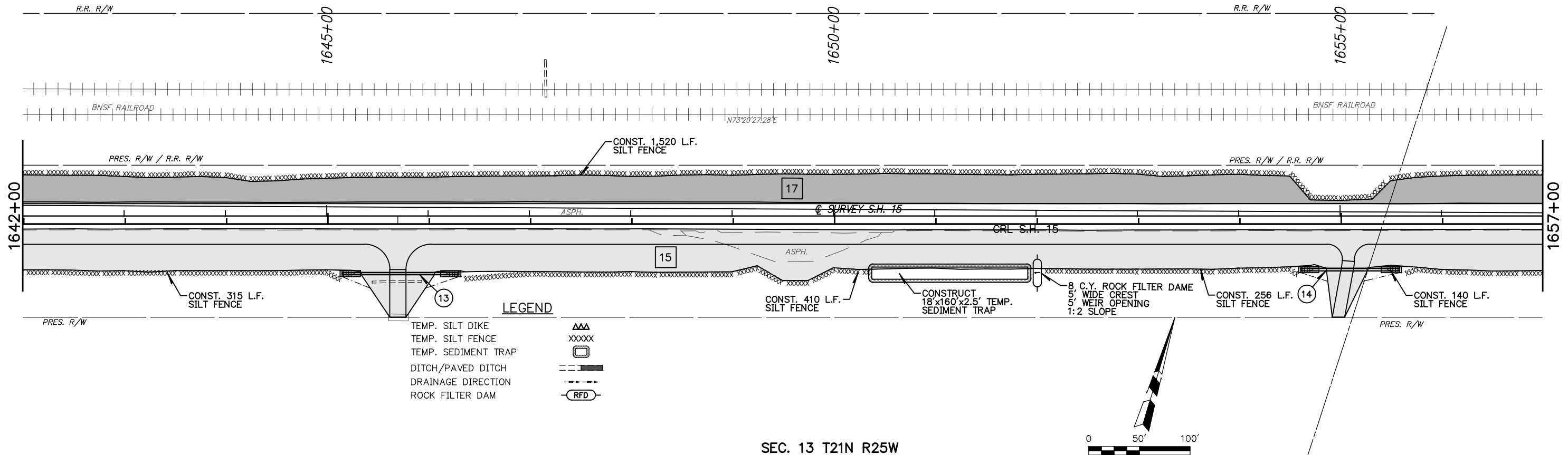


EROSION CONTROL

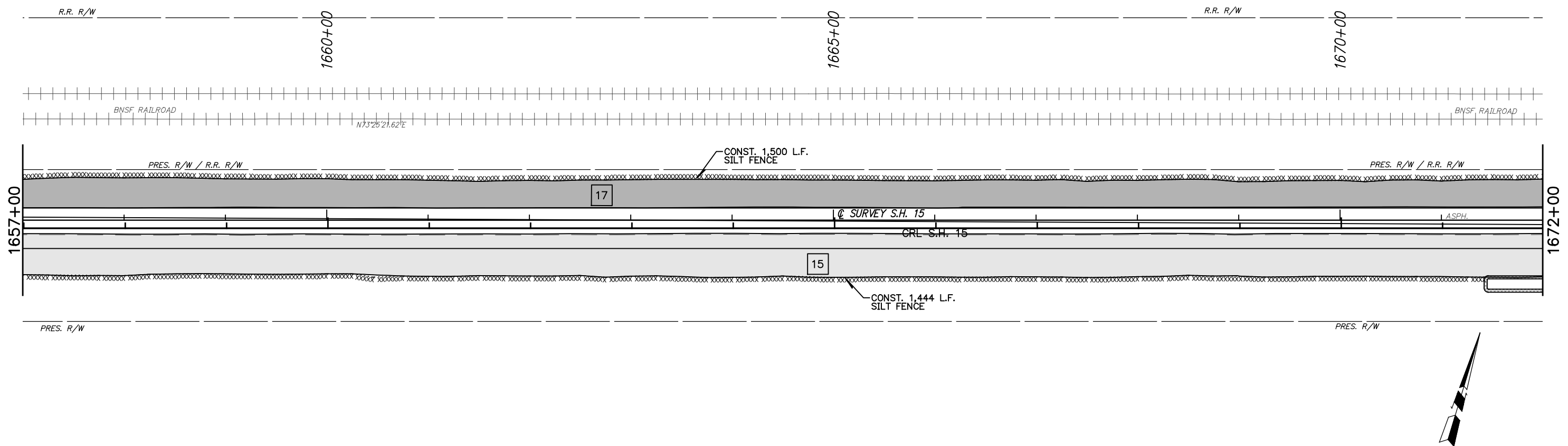
State Job No. 29674(04) Sheet No. R007

S.H. 15
ELLIS COUNTY

SEC. 13 T21N R25W



SEC. 13 T21N R25W
SEC. 13 T21N R25W



SEC. 13 T21N R25W

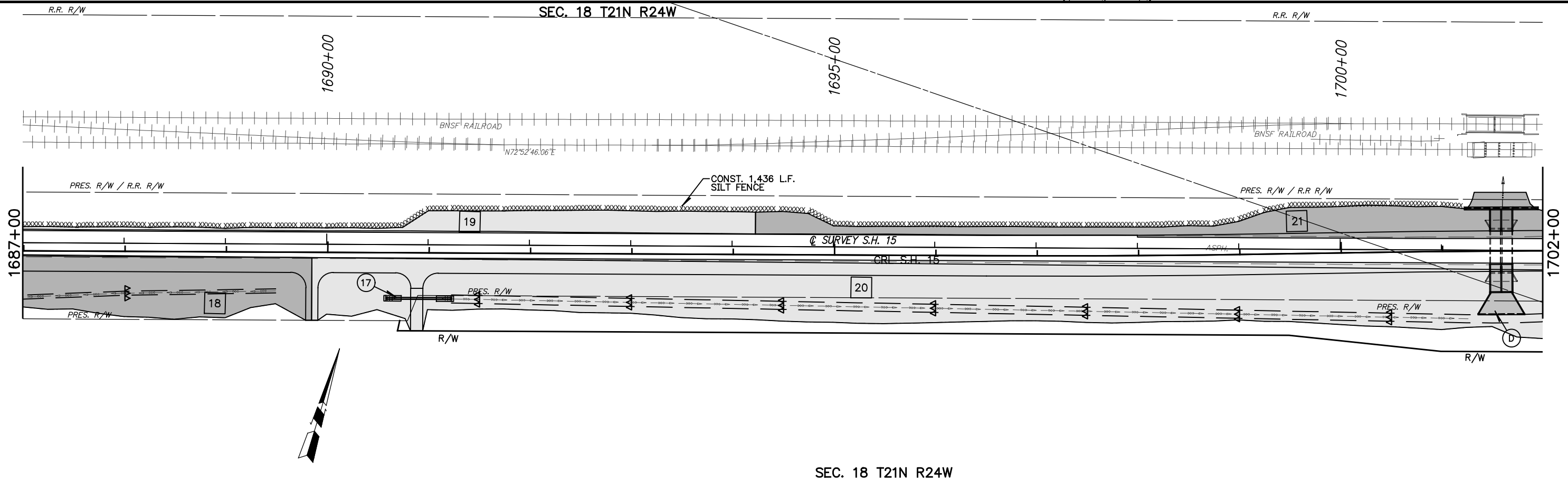
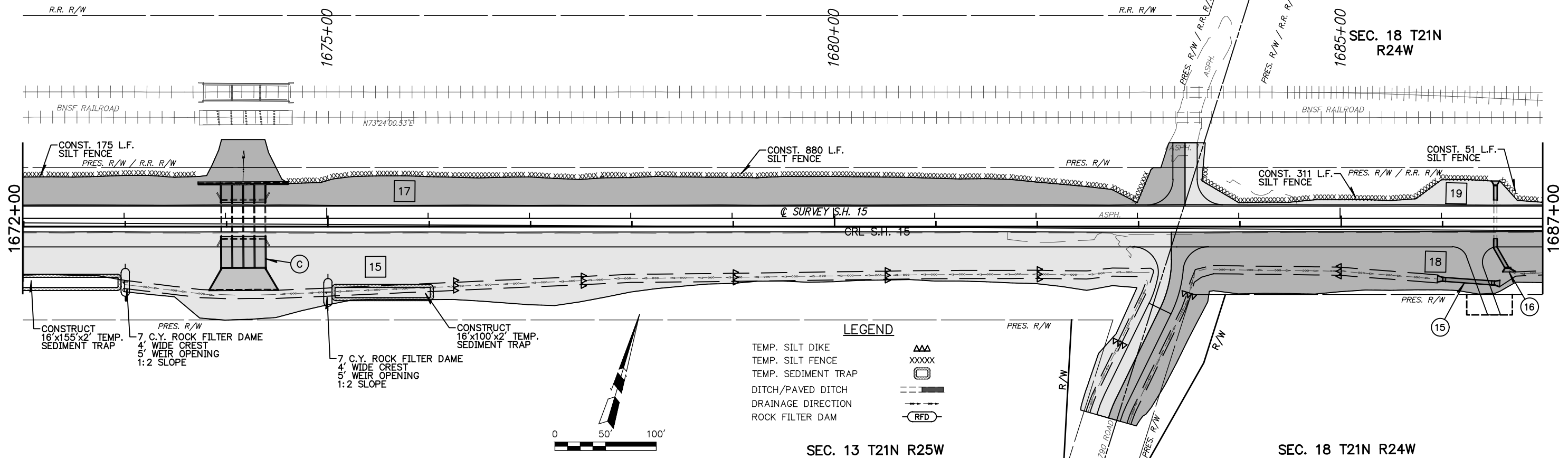
EROSION CONTROL

State Job No. 29674(04) Sheet No. R008

S.H. 15
ELLIS COUNTY

SEC. 13 T21N R25W

SEC. 18 T21N R24W

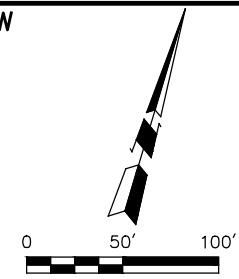


EROSION CONTROL

State Job No. 29674(04) Sheet No. R009

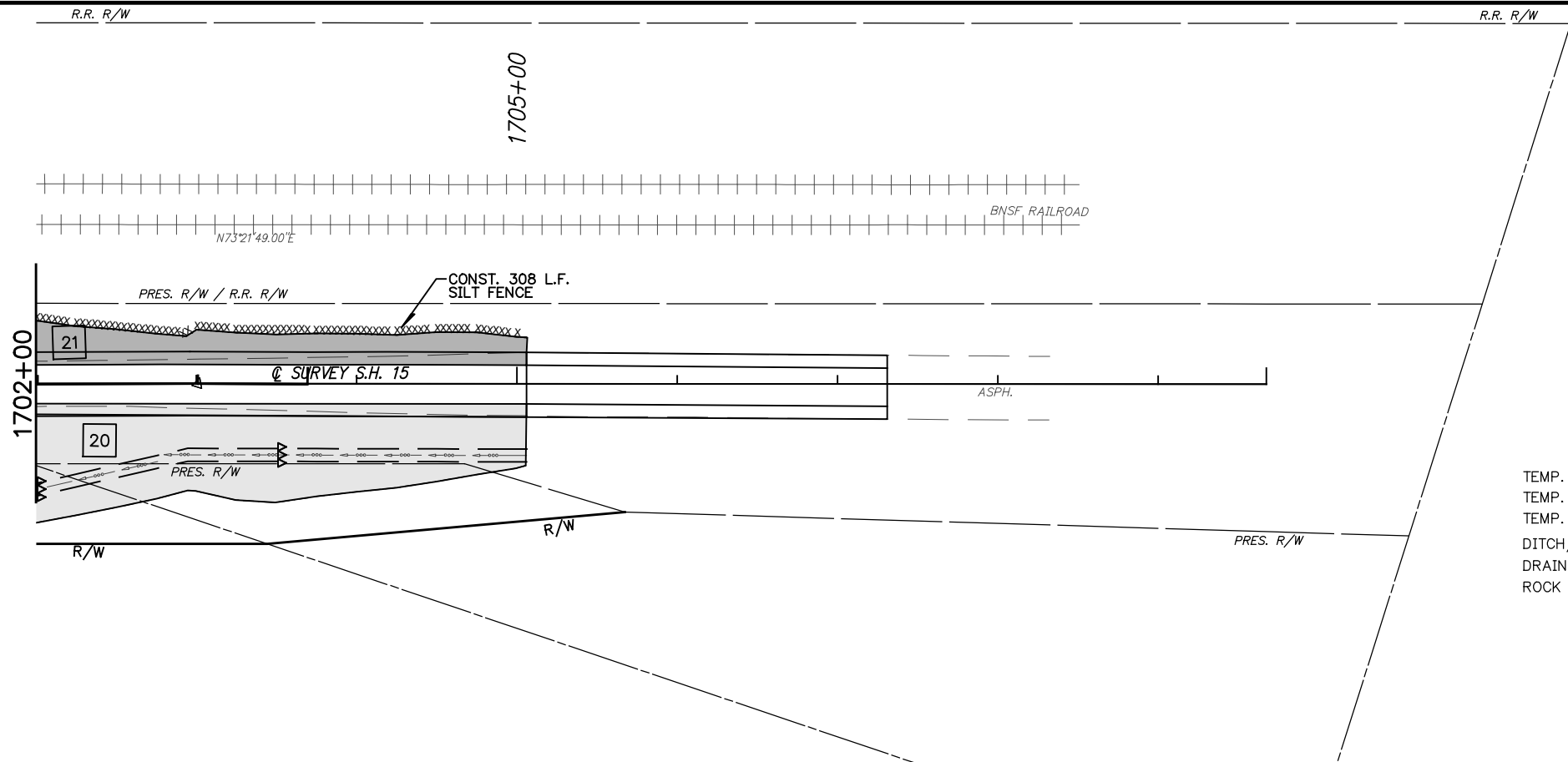
S.H. 15
ELLIS COUNTY

SEC.18 T21N R24W



LEGEND

- TEMP. SILT DIKE
- TEMP. SILT FENCE
- TEMP. SEDIMENT TRAP
- DITCH/PAVED DITCH
- DRAINAGE DIRECTION
- ROCK FILTER DAM



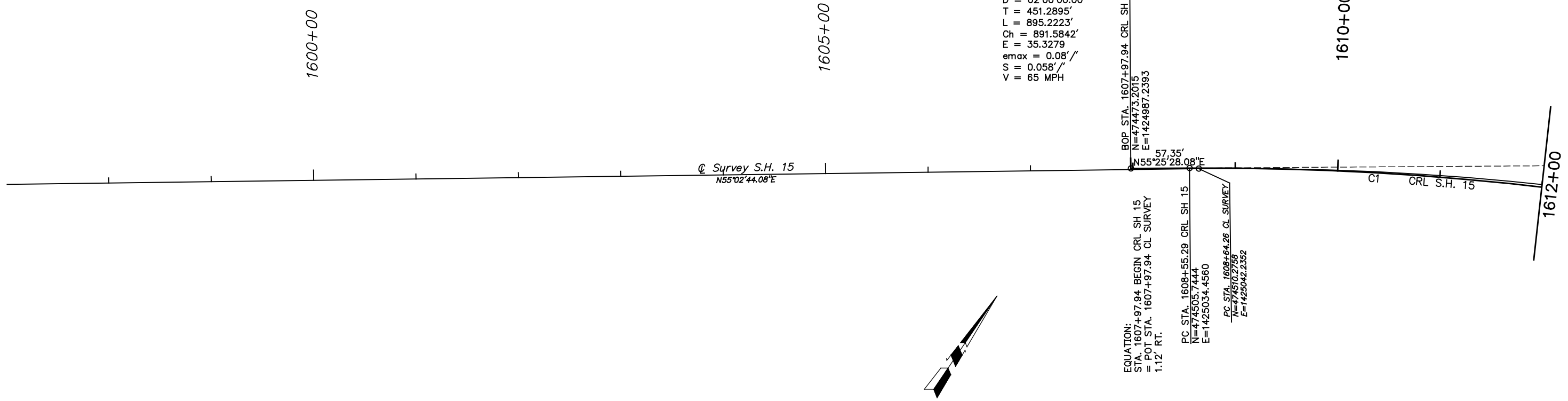
SEC.18 T21N R24W

EROSION CONTROL

State Job No. 29674(04) Sheet No. R010

S.H. 15
ELLIS COUNTY

CURVE DATA
 CURVE NO. C1
 CRL SH 15
 PI STA. 1613+06.57
 $\Delta = 17^{\circ}54'16.00''$
 R = 2864.7890'
 D = 02^{\circ}00'00.00''
 T = 451.2895'
 L = 895.2223'
 Ch = 891.5842'
 E = 35.3279
 $e_{max} = 0.08'/'$
 S = 0.058'/'
 V = 65 MPH



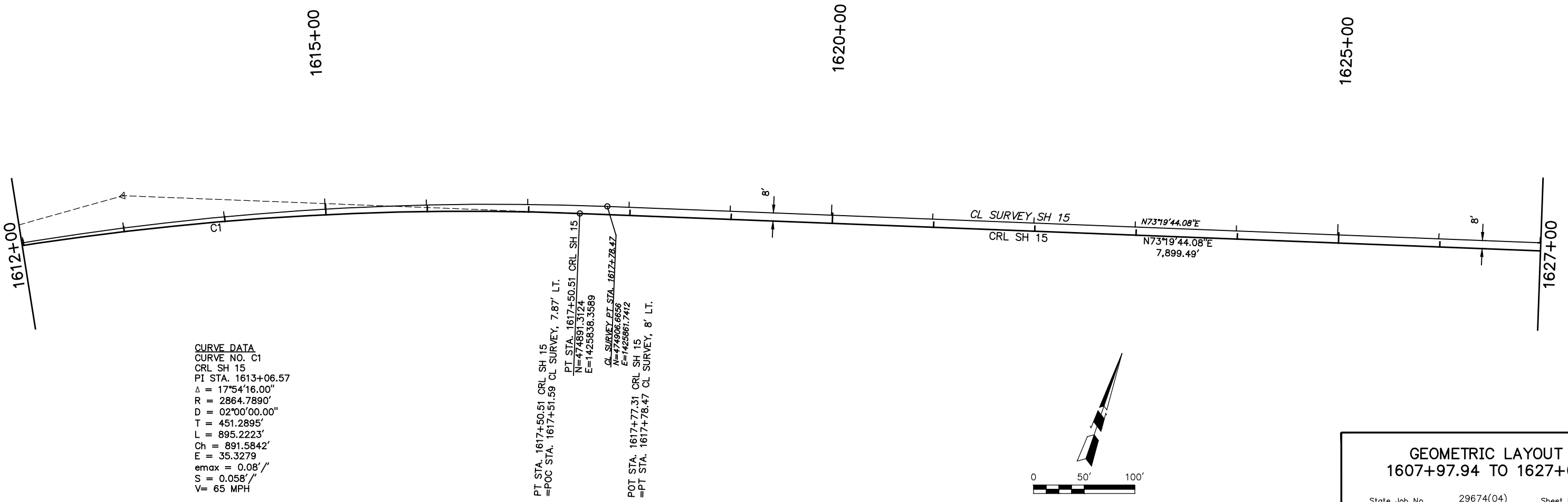
BOP STA. 1607+97.94 CRL SH 15
 N=474473.2015
 E=1424987.2393

EQUATION:
 STA. 1607+97.94 BEGIN CRL SH 15
 = POT STA. 1607+97.94 CL SURVEY
 1.12' RT.

PC STA. 1608+55.29 CRL SH 15
 N=474505.7444
 E=1425034.4560

FC STA. 1609+64.26 CL SURVEY
 N=474510.2758
 E=1425042.2352

NOTE: FOR CENTERLINE OF SURVEY CURVE
 INFORMATION SEE SURVEY DATA
 SHEETS.

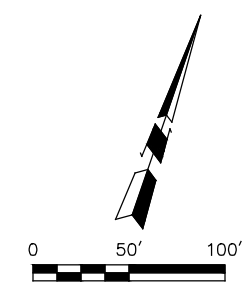


CURVE DATA
 CURVE NO. C1
 CRL SH 15
 PI STA. 1613+06.57
 $\Delta = 17^{\circ}54'16.00''$
 R = 2864.7890'
 D = 02^{\circ}00'00.00''
 T = 451.2895'
 L = 895.2223'
 Ch = 891.5842'
 E = 35.3279
 $e_{max} = 0.08'/'$
 S = 0.058'/'
 V = 65 MPH

PT STA. 1617+50.51 CRL SH 15
 =POC STA. 1617+51.59 CL SURVEY, 7.87' LT.
 N=474891.3124
 E=1425838.3589

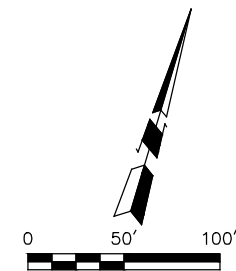
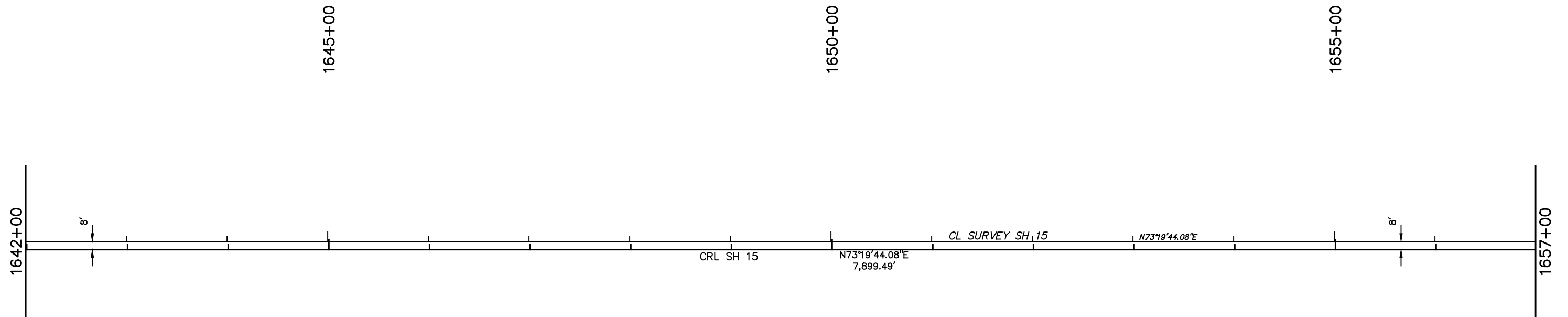
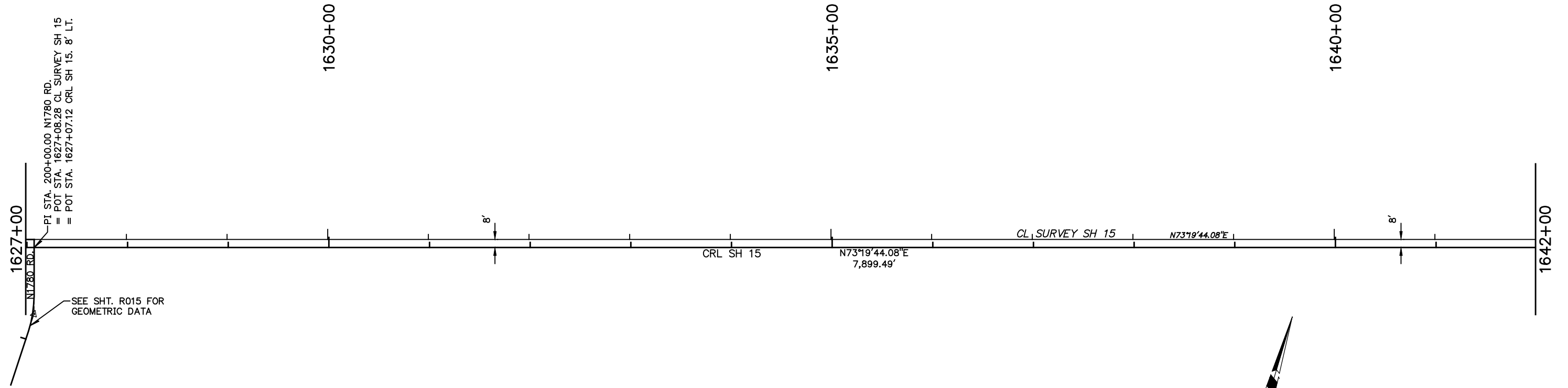
CL SURVEY PT STA. 1617+78.47
 N=474906.6856
 E=1425861.7412

POT STA. 1617+77.31 CRL SH 15
 =PT STA. 1617+78.47 CL SURVEY, 8' LT.



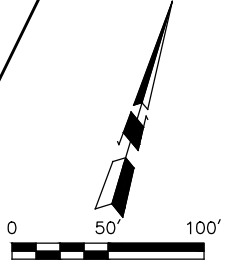
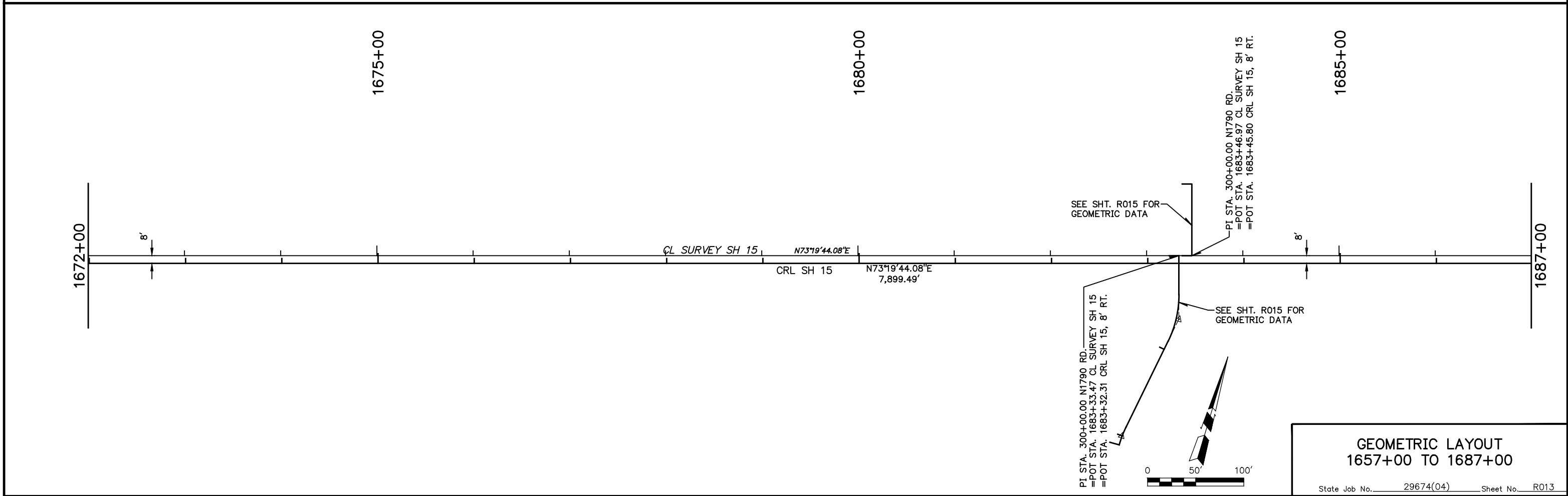
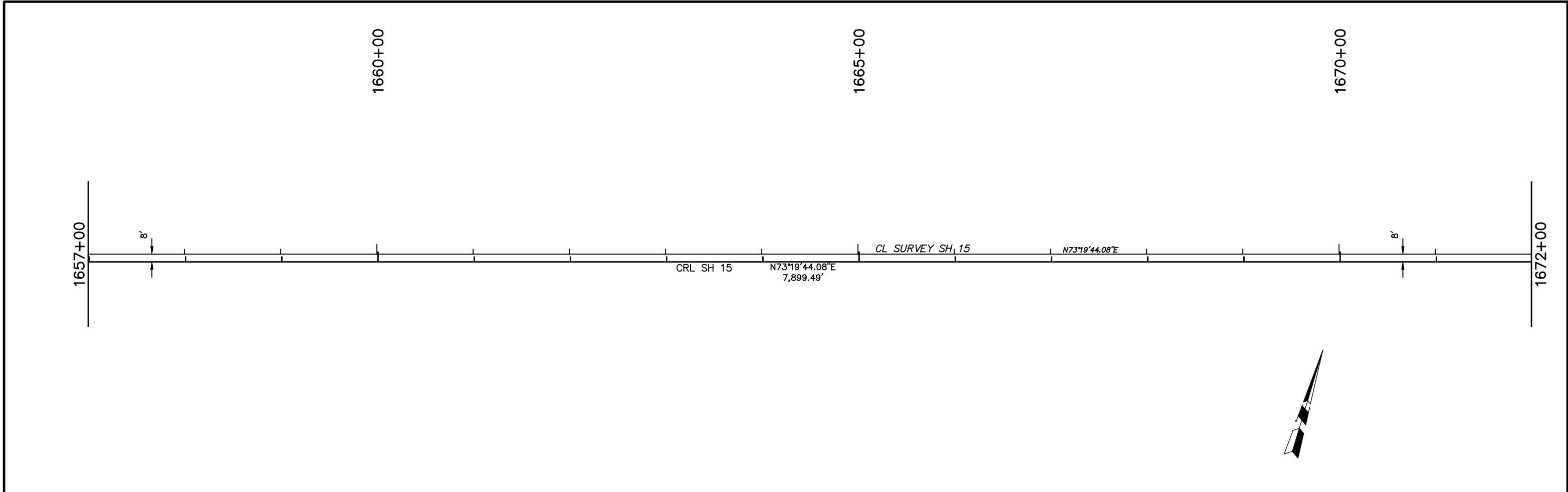
GEOMETRIC LAYOUT
 1607+97.94 TO 1627+00

State Job No. 29674(04) Sheet No. R011



**GEOMETRIC LAYOUT
1627+00 TO 1657+00**

State Job No. 29674(04) Sheet No. R012



**GEOMETRIC LAYOUT
1657+00 TO 1687+00**

State Job No. 29674(04) Sheet No. R013

SEE SHT. R015 FOR
GEOMETRIC DATA

PI STA. 300+00.00 N1790 RD.
=POT STA. 1683+46.97 CL SURVEY SH 15
=POT STA. 1683+45.80 CRL SH 15, 8' RT.

SEE SHT. R015 FOR
GEOMETRIC DATA

PI STA. 300+00.00 N1790 RD.
=POT STA. 1683+33.47 CL SURVEY SH 15
=POT STA. 1683+32.31 CRL SH 15, 8' RT.

1687+00

1690+00

1695+00

1700+00

1702+00

8'

CRL SH 15

N73°19'44.08"E
7,899.49'

N73°19'44.08"E

CL SURVEY SH 15

PC STA. 1696+50.00 CRL SH 15
N=477157.4965
E=1433405.8151

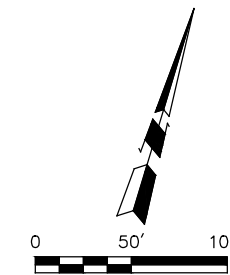
PC STA. 1696+50.00 CRL SH 15
= POT STA. 1696+51.16 CL SURVEY,
8' LT.

PRC STA. 1699+72.50 CRL SH 15
N=477253.8363
E=1433713.5790

PRC STA. 1699+72.50 CRL SH 15
= POC STA. 1699+73.63 CL SURVEY,
4' LT.

CURVE DATA
CURVE NO. C2
CRL SH 15
PI STA. 1698+11.26
Δ = 01°25'16.93"
R = 13000.0000'
D = 00°26'26.65"
T = 161.2576'
L = 322.4986'
Ch = 322.4903'
E = 1.0001
emax = 0.08'/'
S = NC
V = 65 MPH

CURVE DATA
CURVE NO. C3
CRL SH 15
PI STA. 1701+33.76
Δ = 01°25'16.93"
R = 13000.0000'
D = 00°26'26.65"
T = 161.2576'
L = 322.4986'
Ch = 322.4903'
E = 1.0001
emax = 0.08'/'
S = NC
V = 65 MPH



1702+00

1705+00

CURVE DATA
CURVE NO. C3
CRL SH 15
PI STA. 1701+33.76
Δ = 01°25'16.93"
R = 13000.0000'
D = 00°26'26.65"
T = 161.2576'
L = 322.4986'
Ch = 322.4903'
E = 1.0001
emax = 0.08'/'
S = NC
V = 65 MPH

PT STA. 1702+95.00 CRL SH 15
N=477350.1762
E=1434021.3429
PI STA. 1703+00.00 CRL SH 15
N=477351.6114
E=1434026.1356
EOP STA. 1703+68.34 CRL SH 15
N=477370.8720
E=1434091.7005

PT STA. 1702+95.00 CRL SH 15
=POT STA. 1702+96.09 CL SURVEY

N73°19'44.08"E
5.00'

N 73°37'45.07"E
68.34'

CL SURVEY S.H. 15
N73°19'44.08"E

GEOMETRIC LAYOUT
1687+00 TO 1709+67.55

PI STA. 100+00.00 N1770 RD.
= POT STA. 1565+24 CL SURVEY SH 15

CL SURVEY SH 15
N55°02'44.08"E
100+00

PI STA. 100+00.00
N=472023.6339
E=1421484.9232

1565+00

64.21'
N34°58'01.07"W

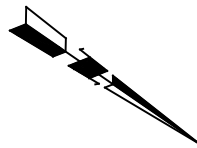
CURVE DATA
CVE No. C20
N1770 RD.
PI STA. 101+00.97
 $\Delta = 36^{\circ}57'43.30''$
R = 110.0000'
D = 52°05'13.46"
T = 36.7649'
L = 70.9620'
Ch = 69.7378'
E = 5.9813'
emax = 0.08'/'
S = NC

PC STA. 100+64.21
N=472076.2494
E=1421448.1266

PI STA. 101+35.17
N=472143.1203
E=1421428.3364

109.83'
N01°59'42.14"E

PI STA. 102+45.00
N=472232.8860
E=1421432.1600



CURVE DATA
CVE No. C21
N 1780 RD.
PI STA. 199+26.04
 $\Delta = 18^{\circ}09'53.04''$
R = 110.0000'
D = 52°05'13.46"
T = 17.5844'
L = 34.8738'
Ch = 34.7279'
E = 1.3966'
emax = 0.08'/'
S = NC

PI STA. 198+52.00
N=473028.2592
E=1426771.8126

PC STA. 199+08.61
N=473084.8471
E=1426773.2807

PT STA. 199+43.48
N=475119.2703
E=1426768.6899

CRL SH 15

CL SURVEY SH 15

8'

PI STA. 200+00.00 N1780 RD.
= POT STA. 1627+07.12 CRL SH 15, 8' RT.
= POT STA. 1627+08.28 CL SURVEY SH 15

PI STA. 200+00.00
N=475173.4072
E=1426752.4701

N73°19'44.08"E

N73°19'44.08"E



CURVE DATA
CVE No. C22
N1790 RD.
PI STA. 297+99.94
 $\Delta = 10^{\circ}10'45.01''$
R = 110.0000'
D = 52°05'13.46"
T = 9.7971'
L = 19.5426'
Ch = 19.5169'
E = 0.4354'
emax = 0.08'/'
S = NC

CURVE DATA
CVE No. C23
N1790 RD.
P.I. STA. 299+34.51
 $\Delta = 16^{\circ}03'31.99''$
R = 110.0000'
D = 52°05'13.46"
T = 15.5171'
L = 30.8308'
Ch = 30.7300'
E = 1.0891'
emax = 0.08'/'
S = NC

PC STA. 297+90.16
N=476580.9622
E=1432138.2388

PT STA. 298+09.71
N=476600.4242
E=1432139.7016

99.79'
N09°23'16.07"E

N1790 RD.

PC STA. 299+09.50
N=476698.8825
E=1432155.9797

PT STA. 299+59.53
N=476746.3803
E=1432152.8291

40.47'
N16°40'15.92"W

PI STA. 300+00.00
N=476787.1463
E=1432141.2201

PI STA. 300+00.00
= POT STA. 1683+33.47 CL SURVEY SH 15
= POT STA. 1683+32.31 CRL SH 15, 8' LT.

PI STA. 300+00.00 N1790 RD.
= POT STA. 1683+46.97 CL SURVEY SH 15
= POT STA. 1683+45.80 CRL SH 15, 8' RT.

74.50'
N16°40'15.92"W

PI STA. 300+74.50
N=476862.3865
E=1432132.7710

PI STA. 300+00.00
N=476791.0164
E=1432154.1437

CL SURVEY SH 15

CRL SH 15

N73°19'44.08"E

N73°19'44.08"E

N73°19'44.08"E

N73°19'44.08"E

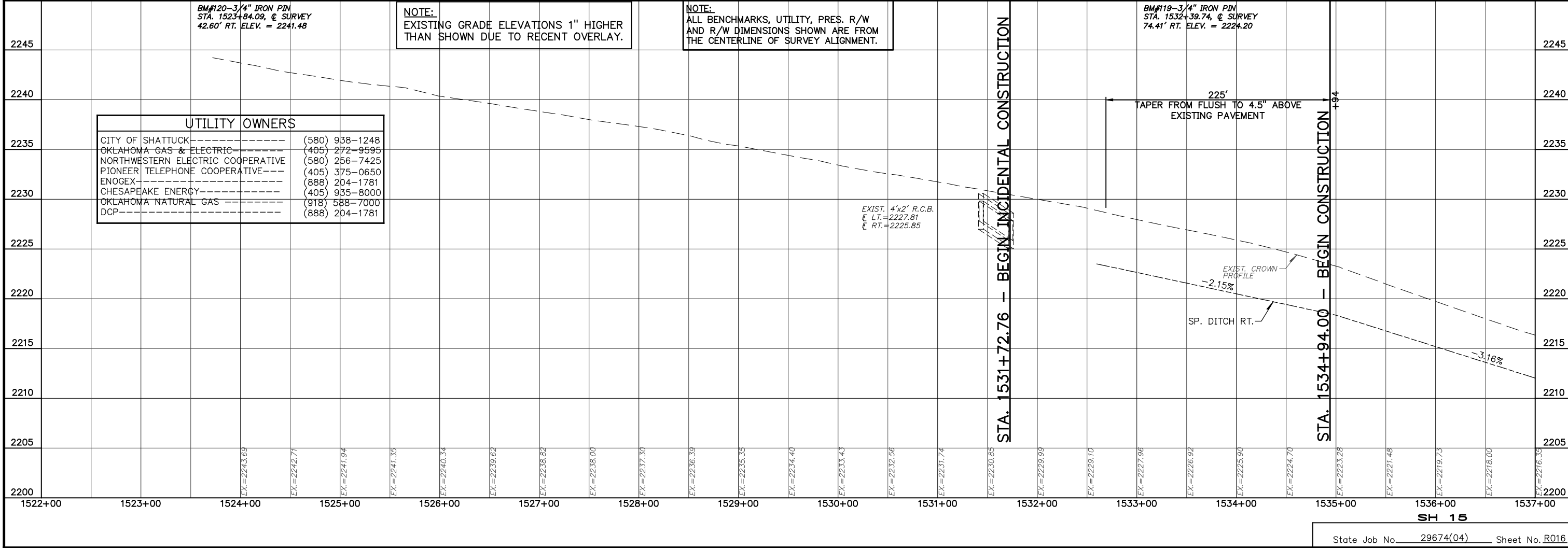
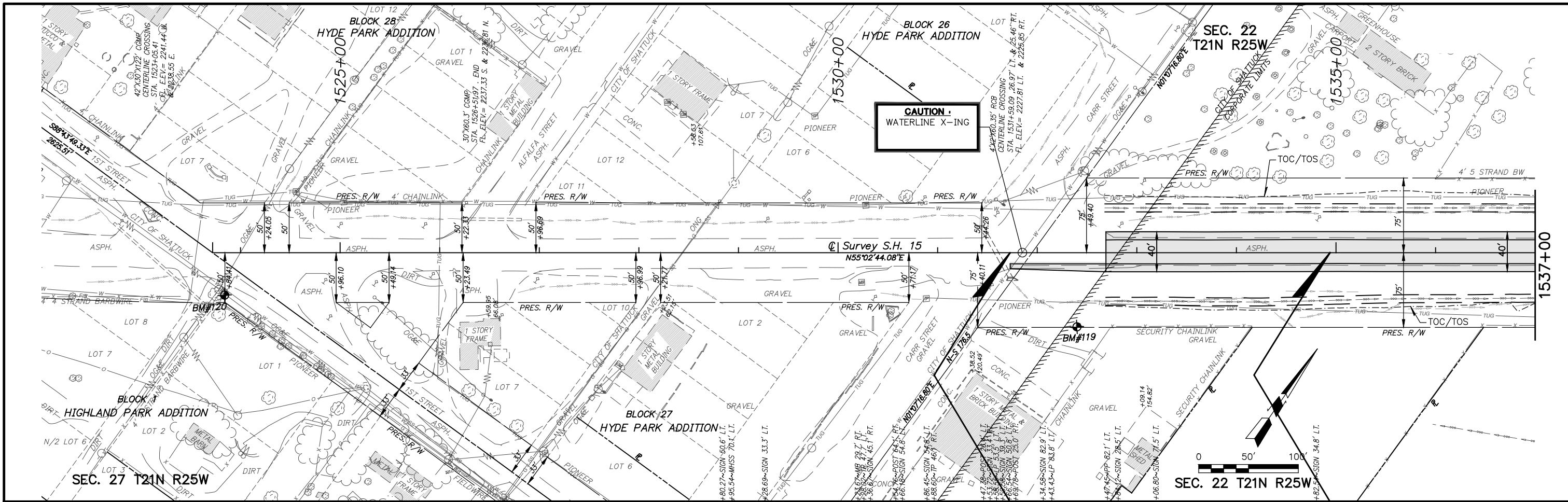


0 30' 60'

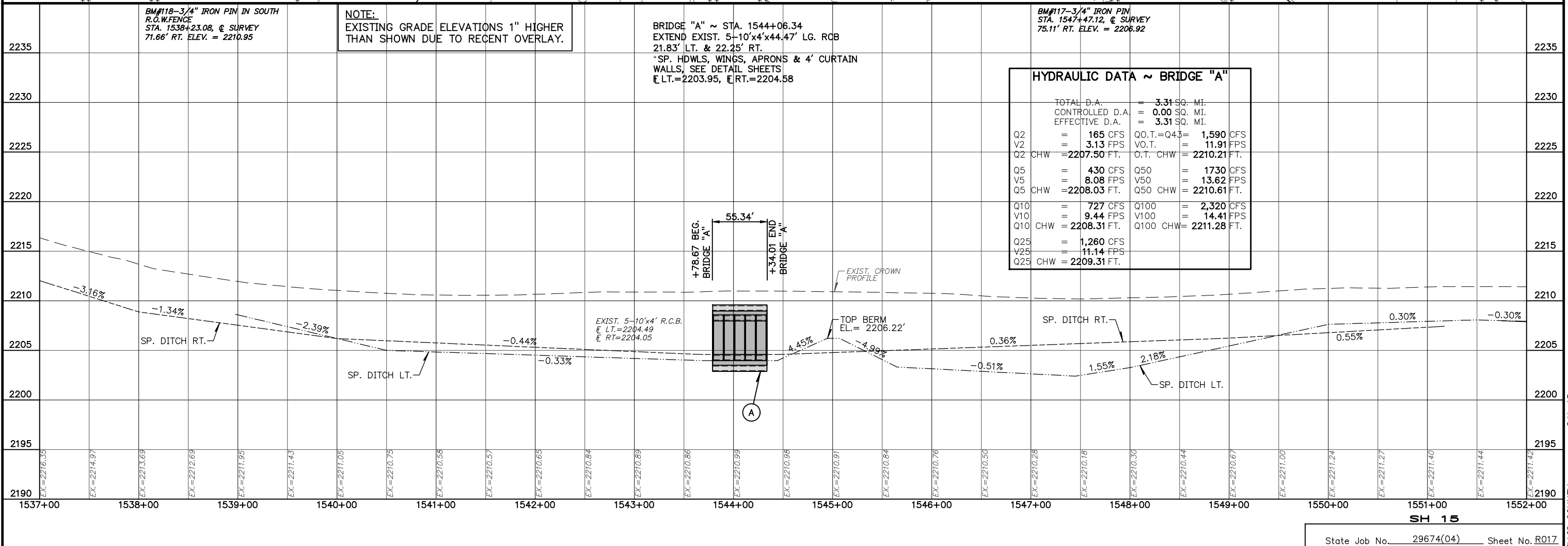
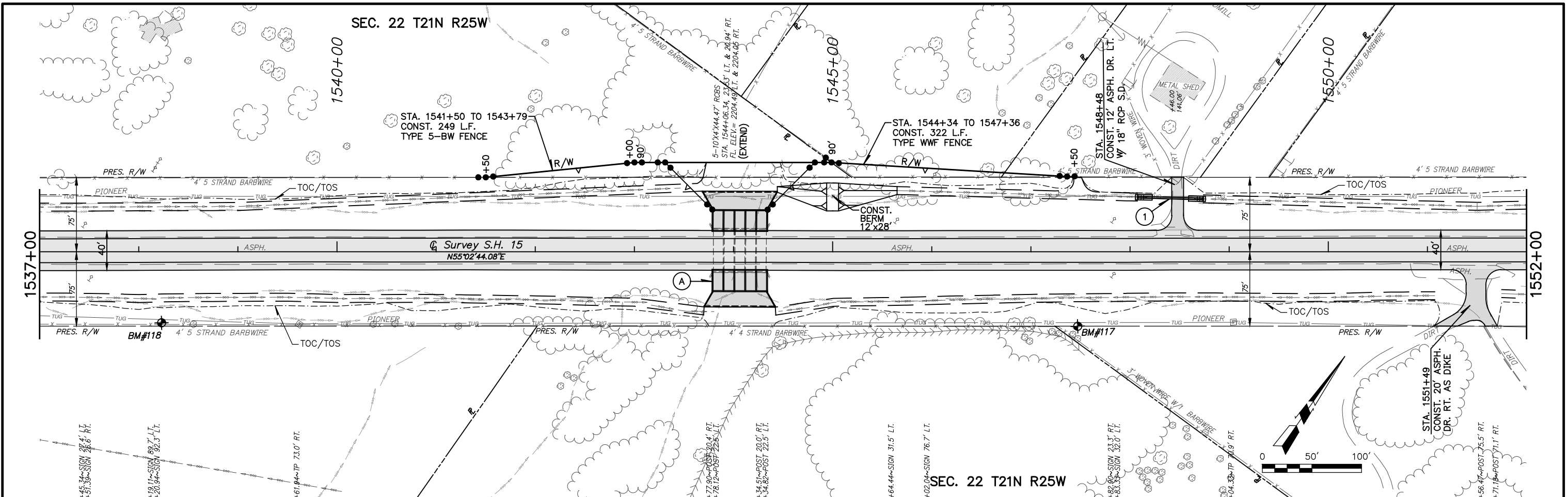
**GEOMETRIC LAYOUT
SECTION LINE ROADS**

State Job No. 29674(04) Sheet No. R015

1685+00



S.H. 15
ELLIS COUNTY



HYDRAULIC DATA ~ BRIDGE "A"

TOTAL D.A.	= 3.31 SQ. MI.	
CONTROLLED D.A.	= 0.00 SQ. MI.	
EFFECTIVE D.A.	= 3.31 SQ. MI.	
Q2	= 165 CFS	Q0.T.=Q43 = 1,590 CFS
V2	= 3.13 FPS	VO.T. = 11.91 FPS
Q2 CHW	= 2207.50 FT.	O.T. CHW = 2210.21 FT.
Q5	= 430 CFS	Q50 = 1730 CFS
V5	= 8.08 FPS	V50 = 13.62 FPS
Q5 CHW	= 2208.03 FT.	Q50 CHW = 2210.61 FT.
Q10	= 727 CFS	Q100 = 2,320 CFS
V10	= 9.44 FPS	V100 = 14.41 FPS
Q10 CHW	= 2208.31 FT.	Q100 CHW = 2211.28 FT.
Q25	= 1,260 CFS	
V25	= 11.14 FPS	
Q25 CHW	= 2209.31 FT.	

BM#118 - 3/4" IRON PIN IN SOUTH R.O.W. FENCE STA. 1538+23.08, @ SURVEY 71.66' RT. ELEV. = 2210.95

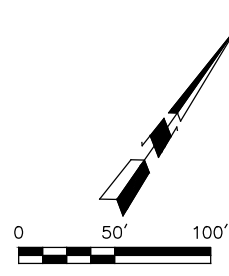
NOTE: EXISTING GRADE ELEVATIONS 1" HIGHER THAN SHOWN DUE TO RECENT OVERLAY.

BRIDGE "A" ~ STA. 1544+06.34
 EXTEND EXIST. 5-10'x4'x44.47' LG. RCB
 21.83' LT. & 22.25' RT.
 *SP. HDWLS, WINGS, APRONS & 4' CURTAIN WALLS, SEE DETAIL SHEETS
 EL. LT.=2203.95, EL. RT.=2204.58

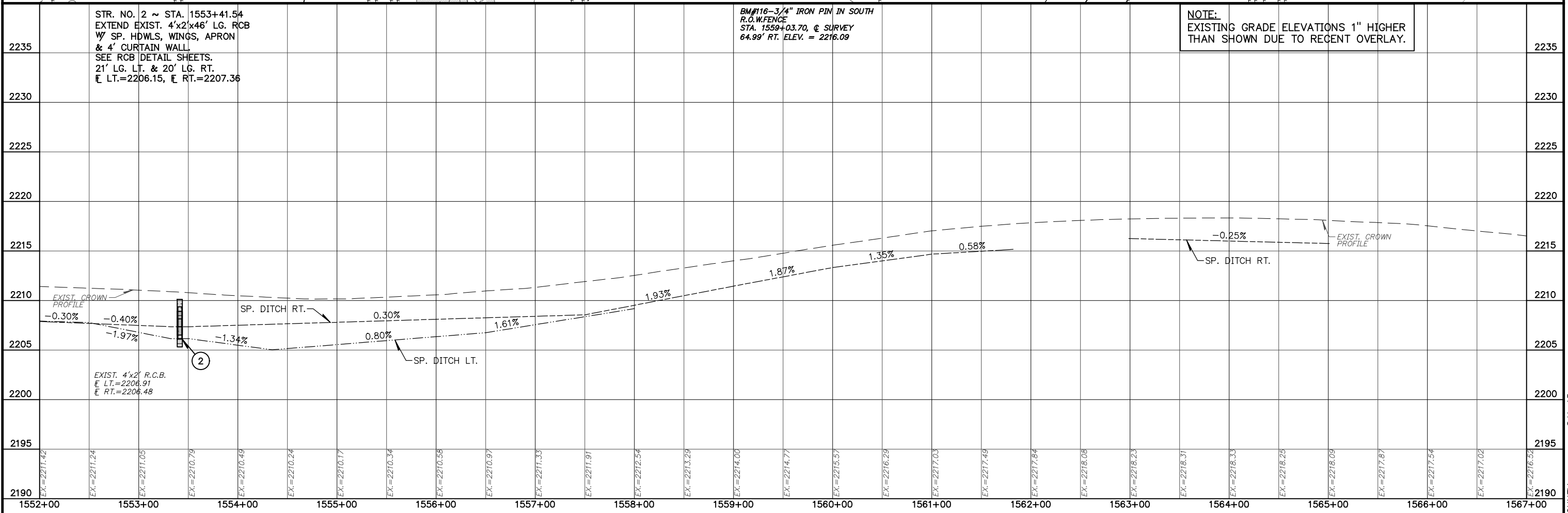
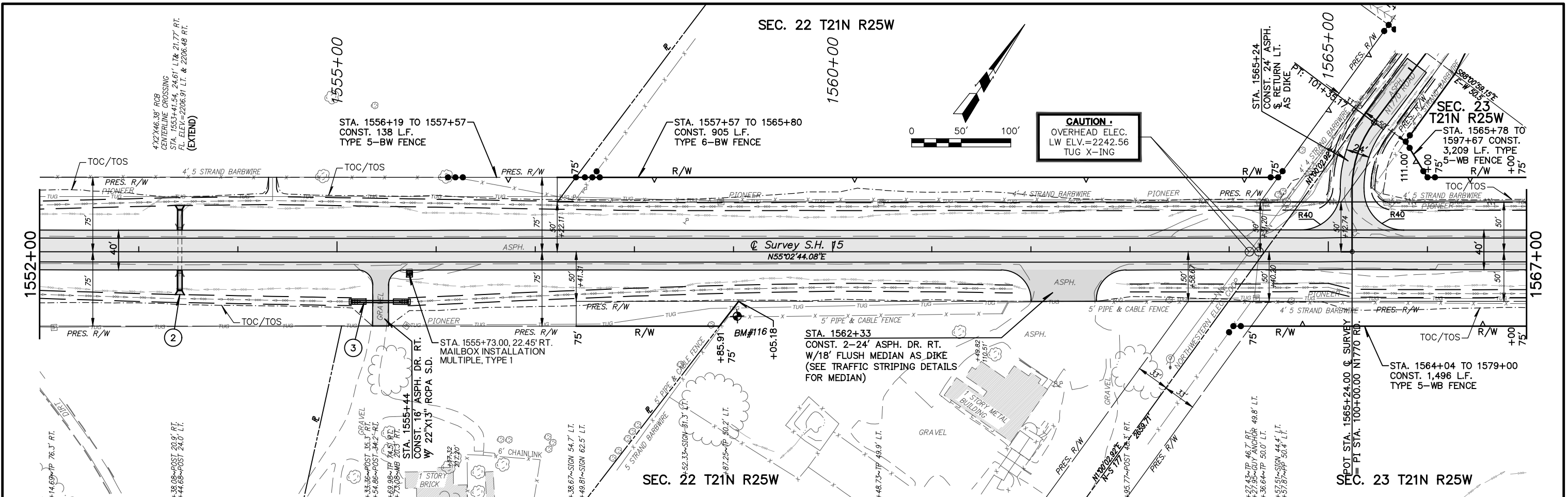
BM#117 - 3/4" IRON PIN STA. 1547+47.12, @ SURVEY 75.11' RT. ELEV. = 2206.92

SEC. 22 T21N R25W

1560+00



CAUTION:
OVERHEAD ELEC.
LW ELEV.=2242.56
TUG X-ING

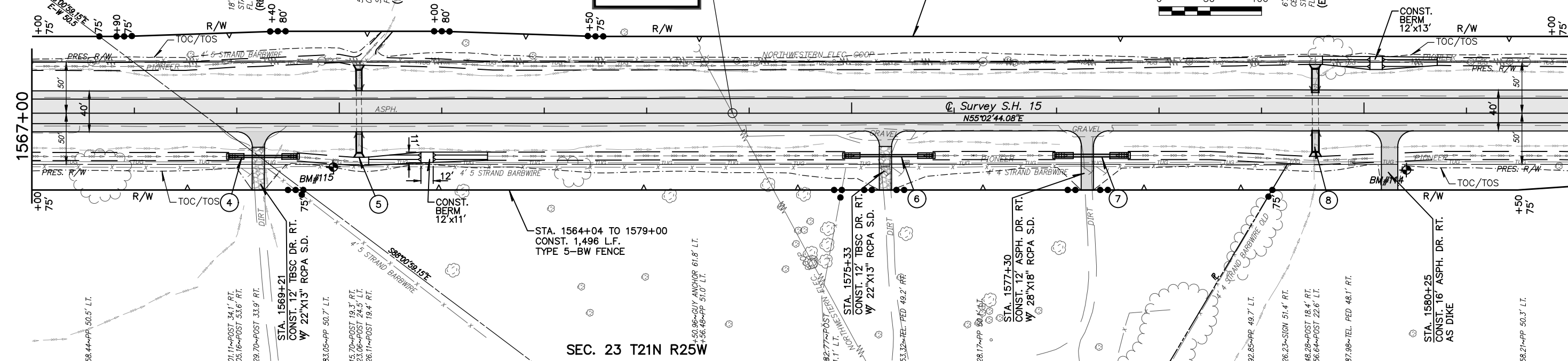


SEC. 23 T21N R25W

1575+00

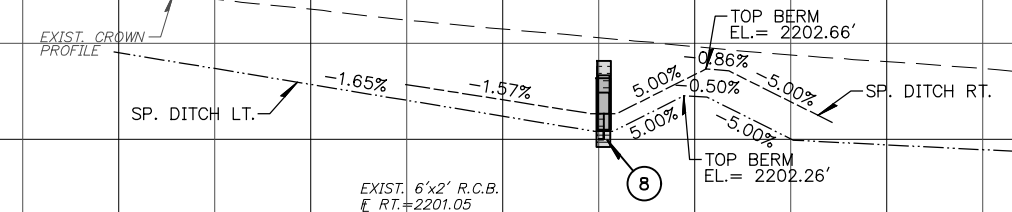
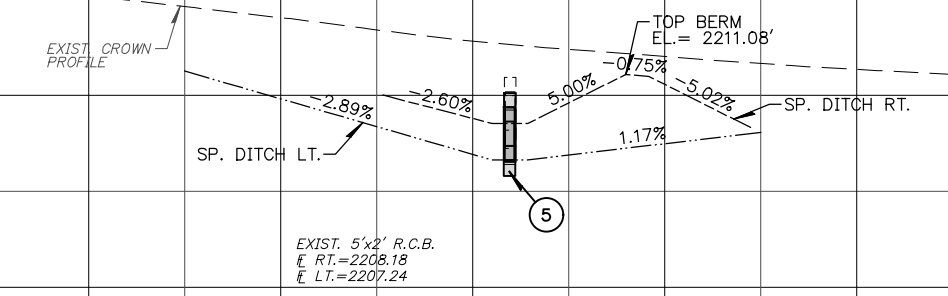
1580+00

1570+00



SEC. 23 T21N R25W

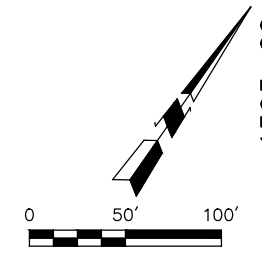
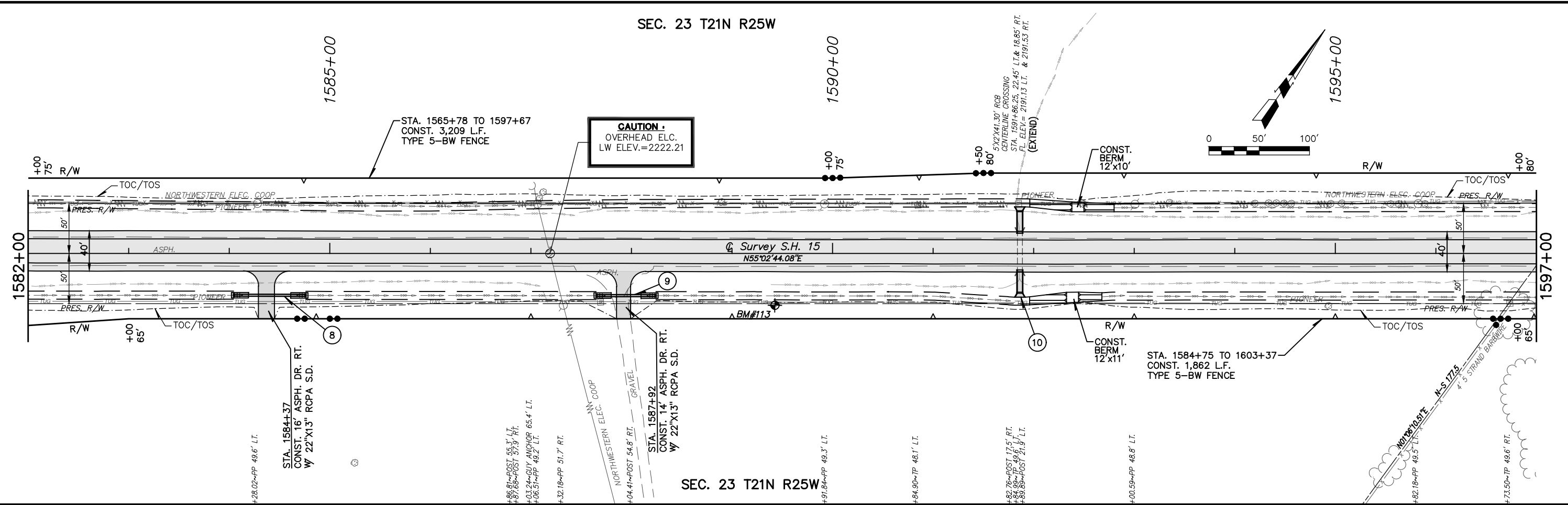
2230	BM#115-3/4" IRON PIN IN SOUTH R.O.W. FENCE STA. 1569+94.23, @ SURVEY 52.62' RT. ELEV. = 2210.60	STR. NO. 5 ~ STA. 1570+19.33 EXTEND EXIST. 5'x2'x45' LG. RCB W/ SP. HDWLS, WINGS, APRON & 4' CURTAIN WALL SEE RCB DETAIL SHEETS 21' LG. LT. & 21' LG. RT. E LT.=2206.64, E RT.=2208.53	NOTE: EXISTING GRADE ELEVATIONS 1" HIGHER THAN SHOWN DUE TO RECENT OVERLAY.	STR. NO. 8 ~ STA. 1579+52.53 EXTEND EXIST. 6'x2'x42' LG. RCB W/ SP. HDWLS, WINGS, APRON & 4' CURTAIN WALL SEE RCB DETAIL SHEETS 24' LG. LT. & 22' LG. RT. E LT.=2200.43, E RT.=2201.34	2230
2225					2225
2220					2220
2215					2215
2210					2210
2205					2205
2200					2200
2195					2195
2190					2190
2185					2185



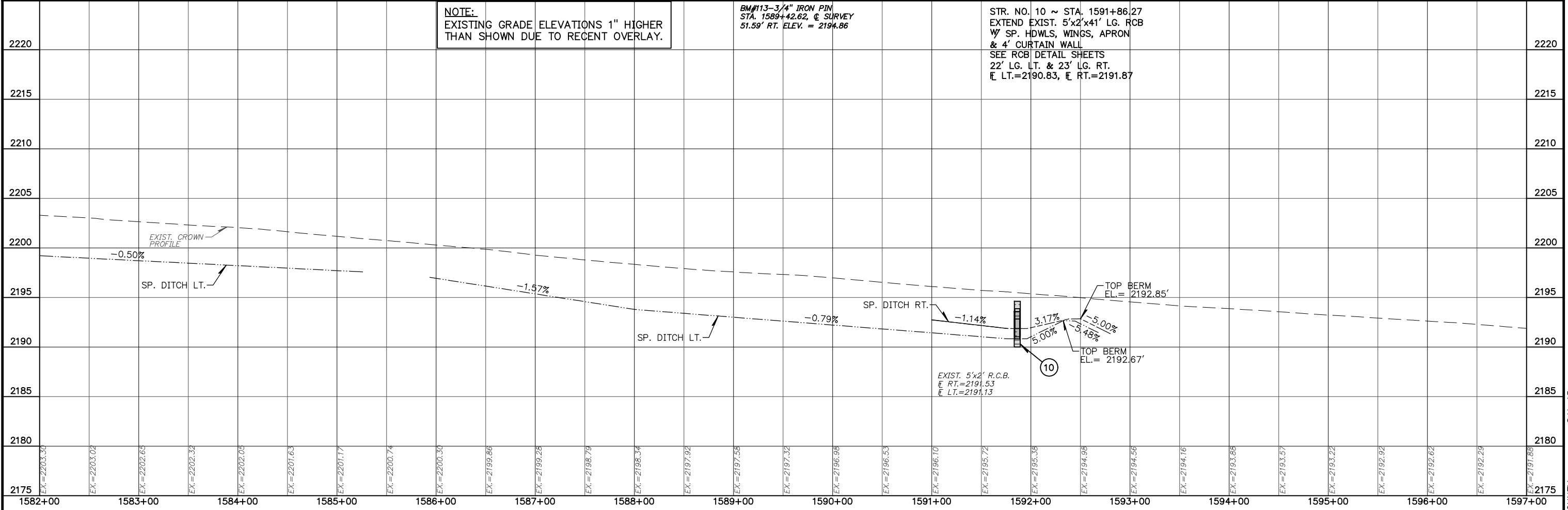
SH 15

ELLIS COUNTY

SEC. 23 T21N R25W



SEC. 23 T21N R25W



NOTE:
EXISTING GRADE ELEVATIONS 1" HIGHER THAN SHOWN DUE TO RECENT OVERLAY.

BM#113-3/4" IRON PIN
STA. 1589+42.62, @ SURVEY
51.59' RT. ELEV. = 2194.86

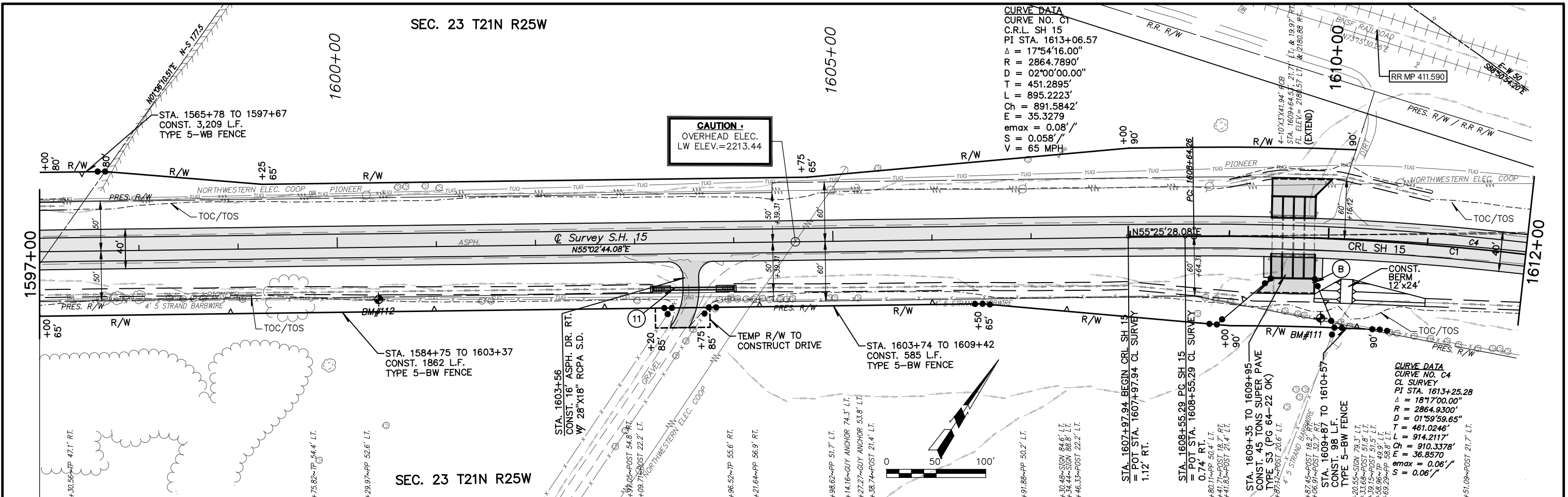
STR. NO. 10 ~ STA. 1591+86.27
EXTEND EXIST. 5'x2'x41' LG. RCB
W/ SP. HDWLS, WINGS, APRON
& 4' CURTAIN WALL
SEE RCB DETAIL SHEETS
22' LG. LT. & 23' LG. RT.
E LT.=2190.83, E RT.=2191.87

EXIST. 5'x2' R.C.B.
E RT.=2191.53
E LT.=2191.13

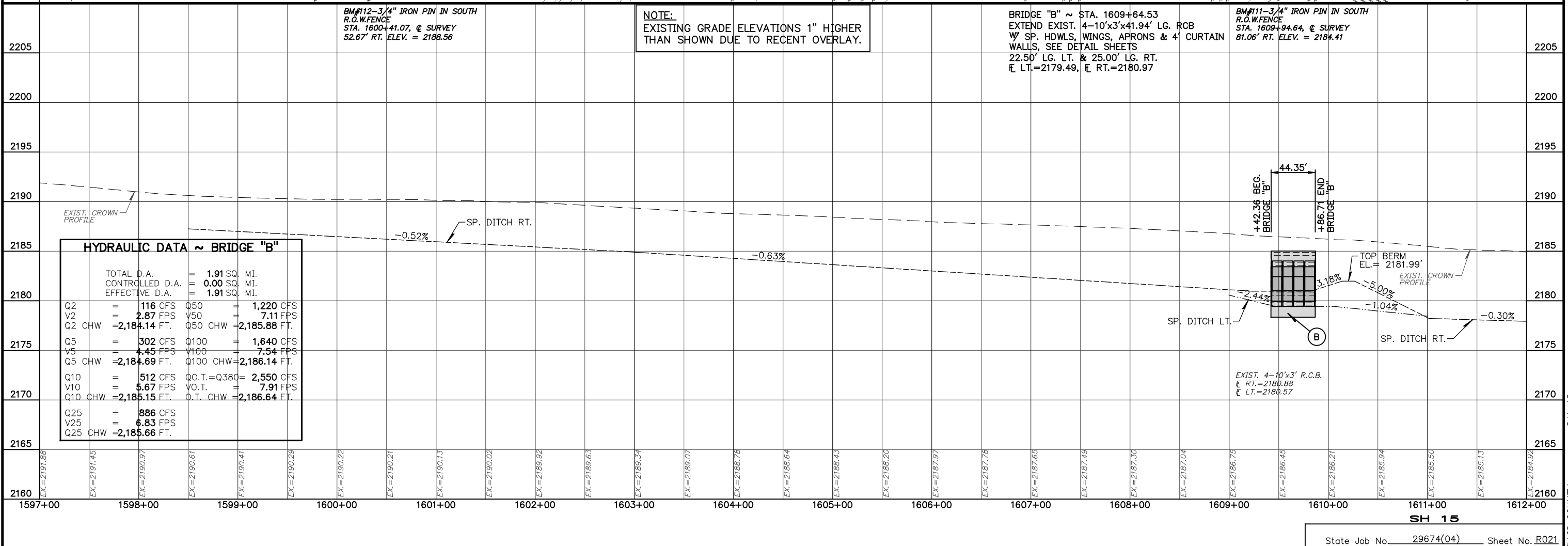
SEC. 23 T21N R25W

CURVE DATA
 CURVE NO. C1
 C.R.L. SH 15
 PI STA. 1613+06.57
 $\Delta = 17^{\circ}54'16.00''$
 $R = 2864.7890'$
 $D = 02^{\circ}00'00.00''$
 $T = 451.2895'$
 $L = 895.2223'$
 $Ch = 891.5842'$
 $E = 35.3279$
 $emax = 0.08''$
 $S = 0.058''$
 $V = 65$ MPH

CAUTION -
 OVERHEAD ELEC.
 LW ELEV.=2213.44



SEC. 23 T21N R25W

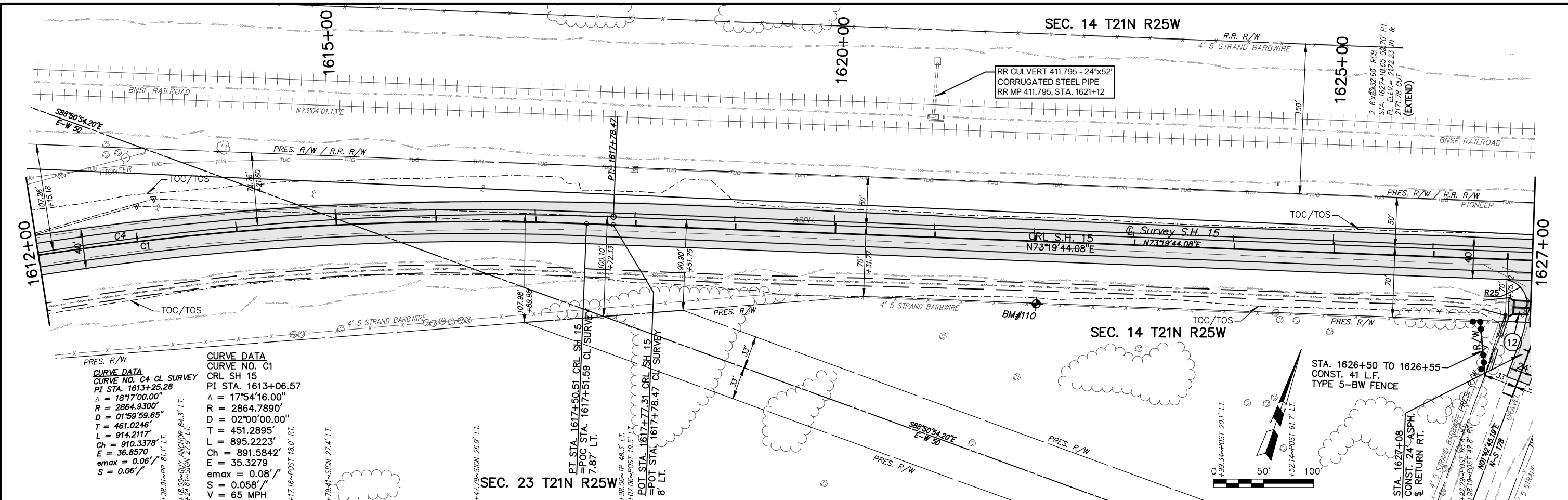


NOTE:
 EXISTING GRADE ELEVATIONS 1" HIGHER
 THAN SHOWN DUE TO RECENT OVERLAY.

BRIDGE "B" ~ STA. 1609+64.53
 EXTEND EXIST. 4-10'x3'x41.94' LG. RCB
 W/ SP. HDWLS, WINGS, APRONS & 4' CURTAIN
 WALLS, SEE DETAIL SHEETS
 22.50' LG. LT. & 25.00' LG. RT.
 E LT.=2179.49, E RT.=2180.97

BM#111-3/4" IRON PIN IN SOUTH
 R.O.W.FENCE
 STA. 1609+94.64, @ SURVEY
 81.06' RT. ELEV. = 2184.41

BM#112-3/4" IRON PIN IN SOUTH
 R.O.W.FENCE
 STA. 1600+41.07, @ SURVEY
 52.67' RT. ELEV. = 2188.56



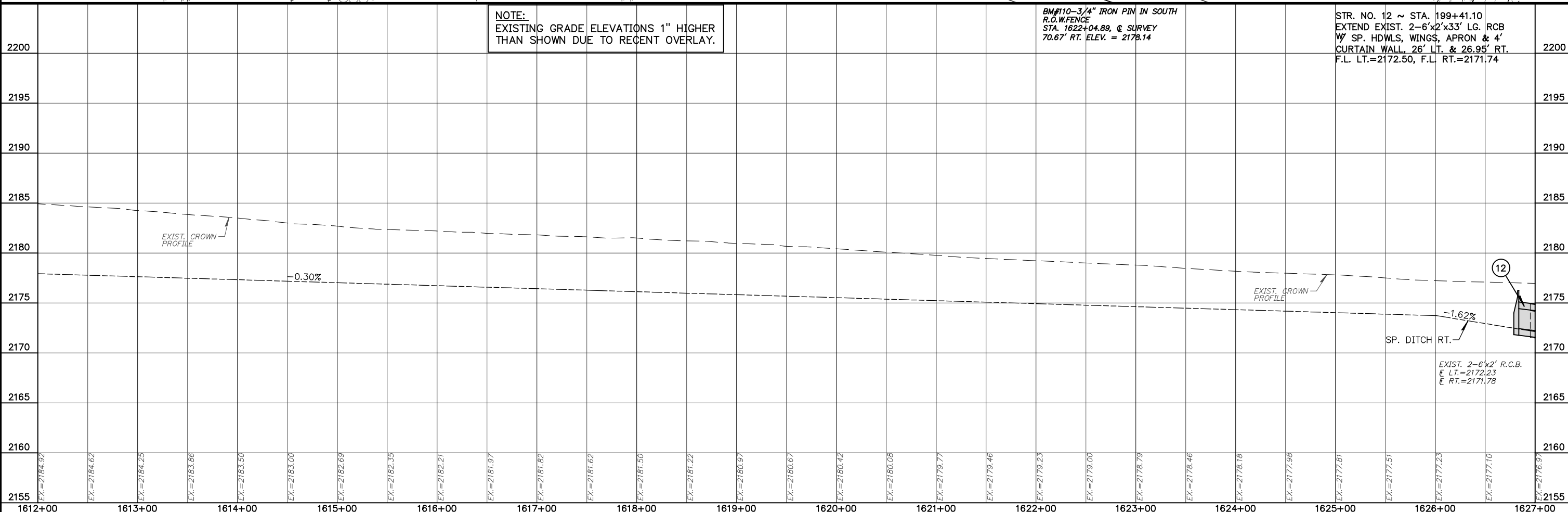
CURVE DATA	
CURVE NO. C4	CL SURVEY
PI STA. 1613+25.28	
Δ = 18°17'00.00"	
R = 2864.9300'	
D = 01°59'59.65"	
T = 461.0246'	
L = 914.2117'	
Ch = 910.3378'	
E = 36.8570'	
emax = 0.06'/'	
S = 0.06'/'	

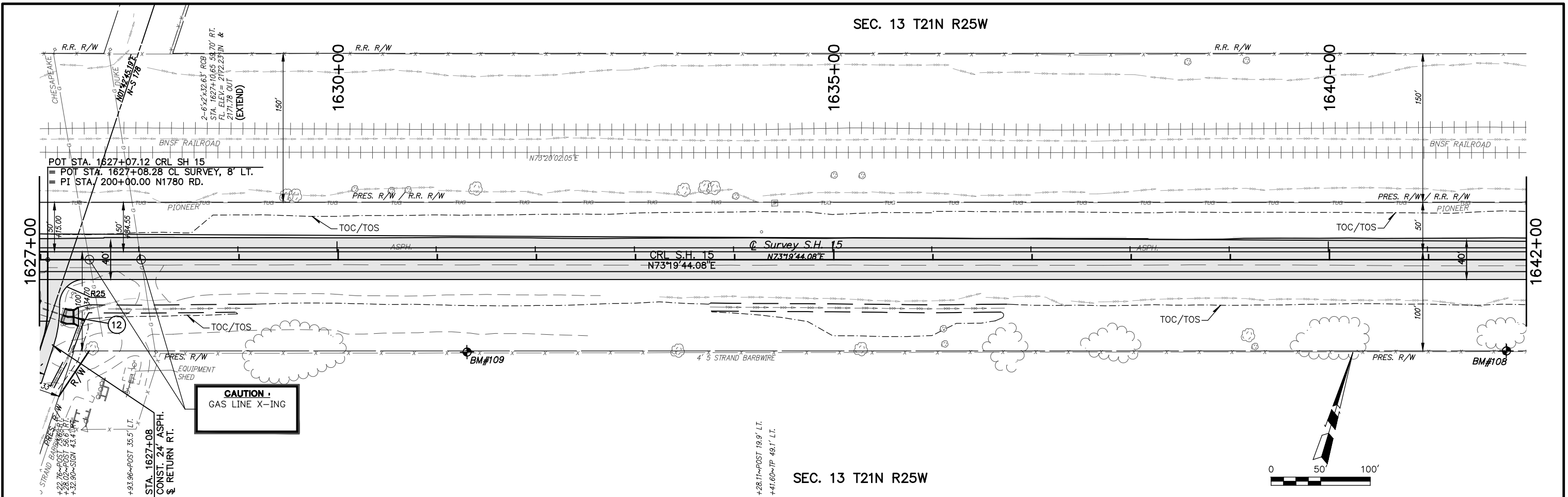
CURVE DATA	
CURVE NO. C1	CRL SH 15
PI STA. 1613+06.57	
Δ = 17°54'16.00"	
R = 2864.7890'	
D = 02°00'00.00"	
T = 451.2895'	
L = 895.2223'	
Ch = 891.5842'	
E = 35.3279'	
emax = 0.08'/'	
S = 0.058'/'	
V = 65 MPH	

NOTE:
EXISTING GRADE ELEVATIONS 1" HIGHER THAN SHOWN DUE TO RECENT OVERLAY.

BM#110 - 3/4" IRON PIN IN SOUTH R.O.W. FENCE
STA. 1622+04.89, @ SURVEY
70.67' RT. ELEV. = 2178.14

STR. NO. 12 ~ STA. 199+41.10
EXTEND EXIST. 2-6'x2'x33' LG. RCB W/ SP. HDWLS, WINGS, APRON & 4' CURTAIN WALL, 26' LT. & 26.95' RT.
F.L. LT.=2172.50, F.L. RT.=2171.74

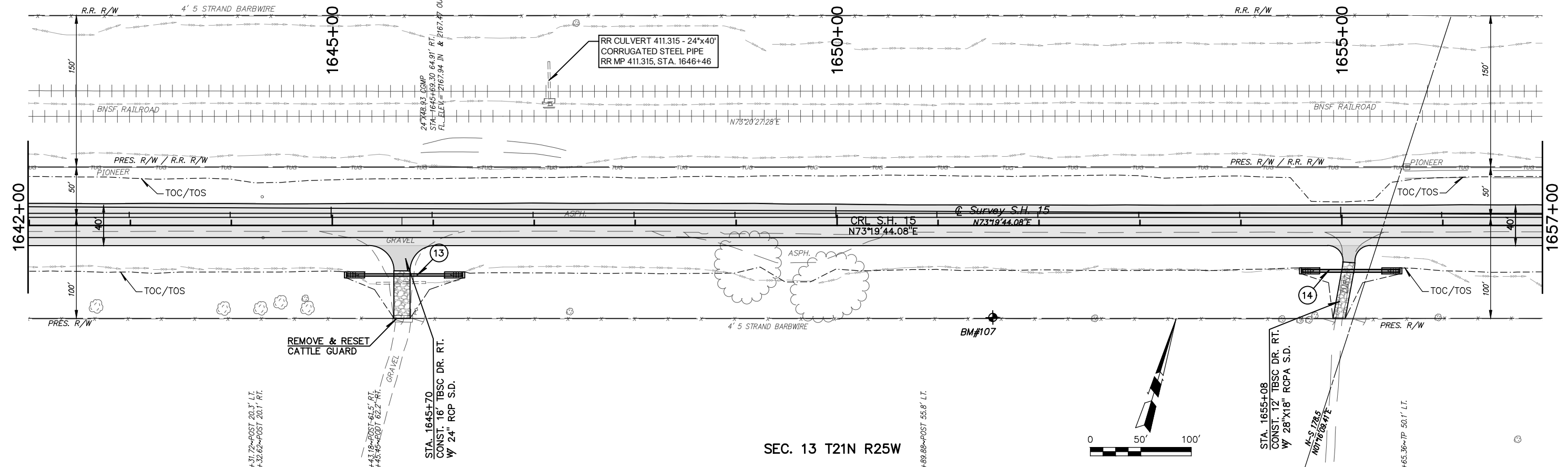




2195	STR. NO. 12 ~ STA. 199+41.10 EXTEND EXIST. 2-6'x2'x33' LG. RCB W/ SP. HDWLS, WINGS, APRON & 4' CURTAIN WALL, 26' LT. & 26.95' RT. F.L. LT.=2172.50, F.L. RT.=2171.74	BM#109-3/4" IRON PIN IN SOUTH R.O.W.FENCE STA. 1631+31.14, @ SURVEY 101.09' RT. ELEV. = 2174.02	NOTE: EXISTING GRADE ELEVATIONS 1" HIGHER THAN SHOWN DUE TO RECENT OVERLAY.	BM#108-3/4" IRON PIN IN SOUTH R.O.W.FENCE STA. 1641+79.62, @ SURVEY 99.97' RT. ELEV. = 2173.33	2195																									
2190					2190																									
2185					2185																									
2180					2180																									
2175					2175																									
2170	EXIST. 2-6'x2' R.C.B. E LT.=2172.23 E RT.=2171.78				2170																									
2165					2165																									
2160					2160																									
2155					2155																									
2150					2150																									
1627+00	1628+00	1629+00	1630+00	1631+00	1632+00	1633+00	1634+00	1635+00	1636+00	1637+00	1638+00	1639+00	1640+00	1641+00	1642+00															
EX.=2176.97	EX.=2176.83	EX.=2176.56	EX.=2176.39	EX.=2176.23	EX.=2175.97	EX.=2175.75	EX.=2175.58	EX.=2175.41	EX.=2175.28	EX.=2175.23	EX.=2175.11	EX.=2174.99	EX.=2174.93	EX.=2175.03	EX.=2175.04	EX.=2175.02	EX.=2175.06	EX.=2175.04	EX.=2174.83	EX.=2174.57	EX.=2174.31	EX.=2173.93	EX.=2173.82	EX.=2173.69	EX.=2173.57	EX.=2173.45	EX.=2173.35	EX.=2173.31	EX.=2173.44	EX.=2173.41

ELLIS COUNTY S.H. 15

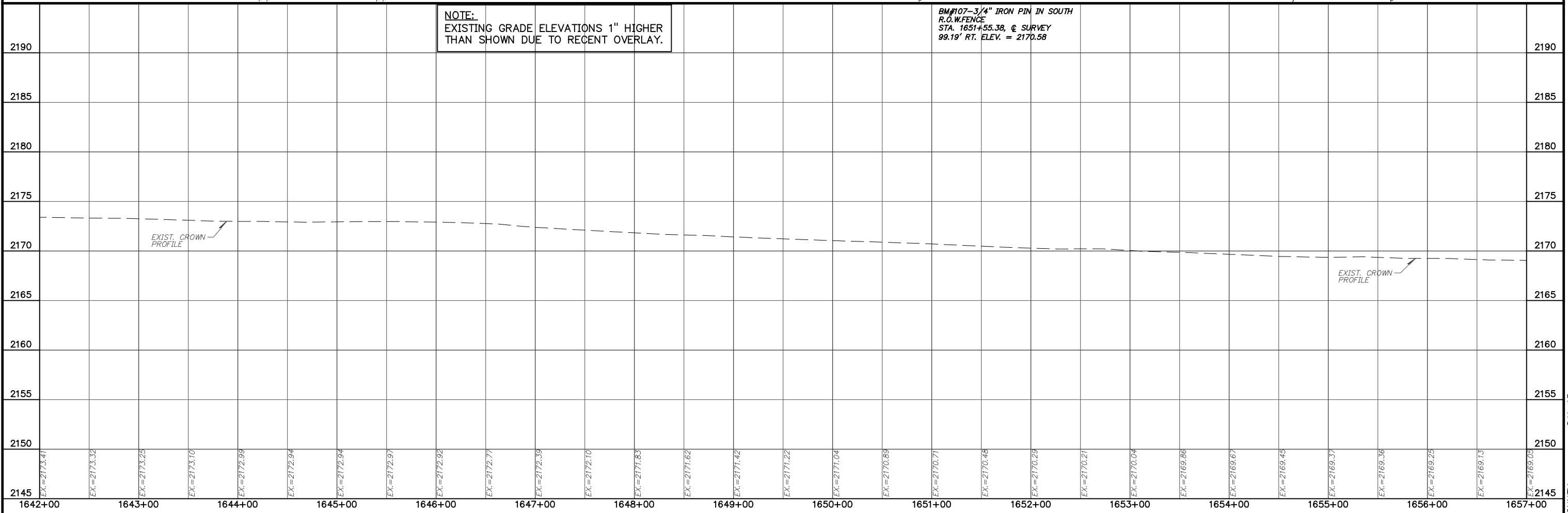
SEC. 13 T21N R25W



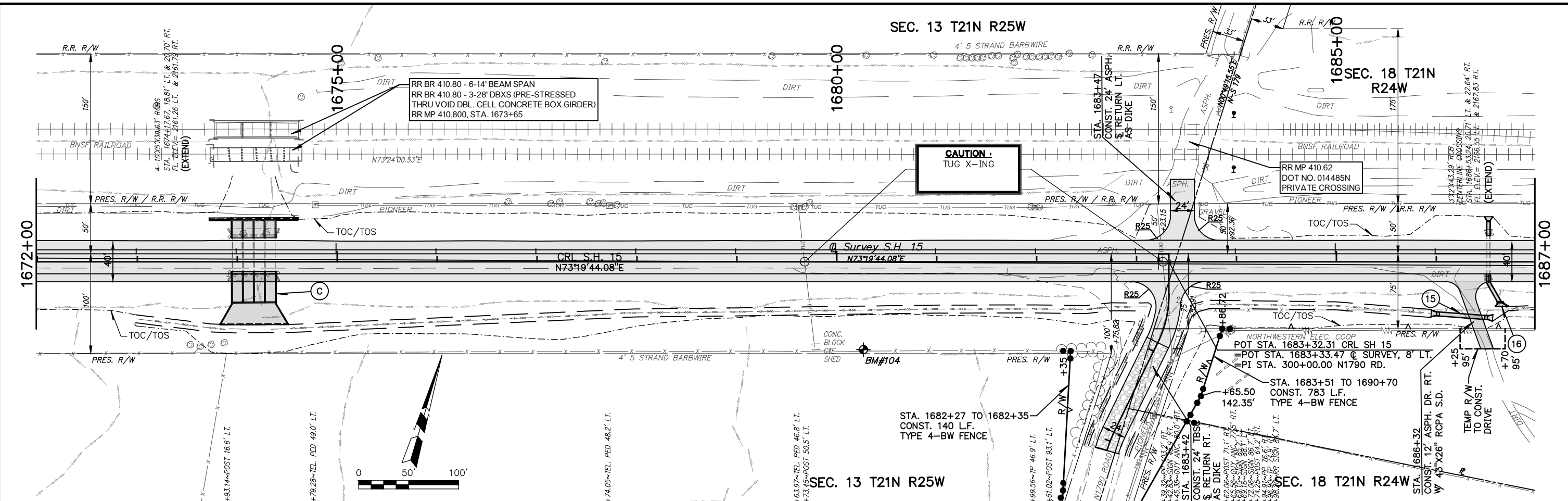
SEC. 13 T21N R25W

NOTE:
EXISTING GRADE ELEVATIONS 1" HIGHER THAN SHOWN DUE TO RECENT OVERLAY.

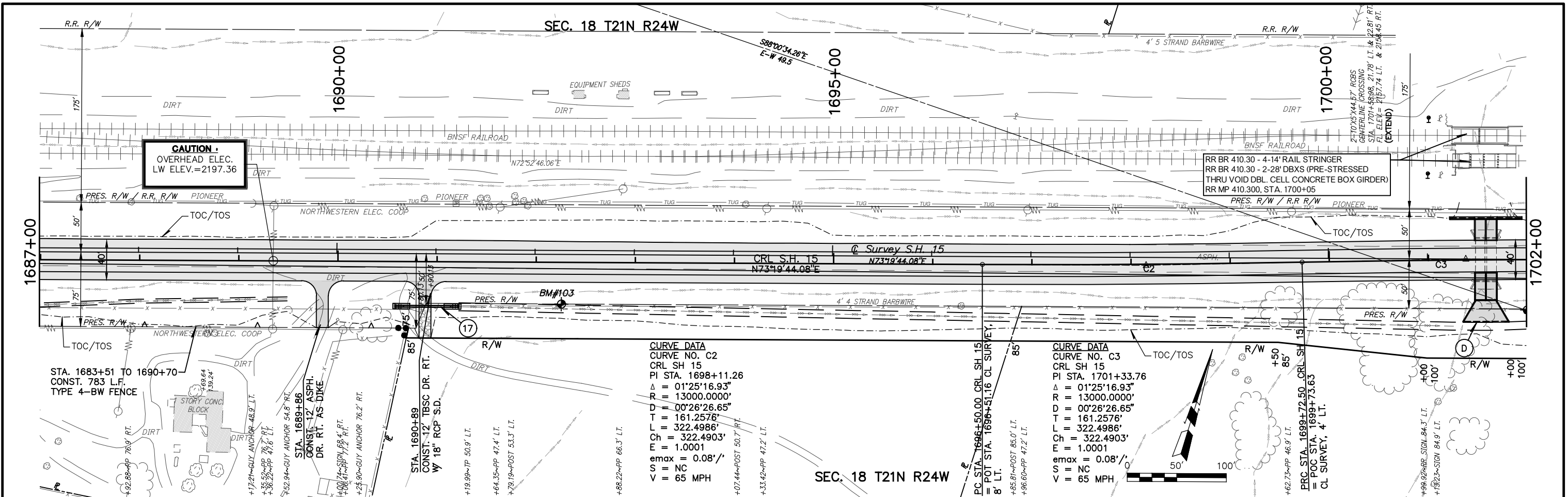
BM#107-3/4" IRON PIN IN SOUTH R.O.W. FENCE STA. 1651+55.38, @ SURVEY 99.19' RT. ELEV. = 2170.58



SH 15

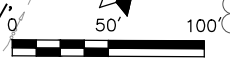


2190	BRIDGE "C" ~ STA. 1674+17.67 EXTEND EXIST. 4-10'x5'x39.63' LG. RCB W/ SP. HDWLS, WINGS, APRONS & 4' CURTAIN WALLS, SEE DETAIL SHEETS 18.33' LT. & 33.42' RT. E LT.=2161.19, E RT.=2161.73	<table border="1"> <tr> <th colspan="4">HYDRAULIC DATA ~ BRIDGE "C"</th> </tr> <tr> <td>TOTAL D.A.</td> <td>=</td> <td>0.90</td> <td>SQ. MI.</td> </tr> <tr> <td>CONTROLLED D.A.</td> <td>=</td> <td>0.00</td> <td>SQ. MI.</td> </tr> <tr> <td>EFFECTIVE D.A.</td> <td>=</td> <td>0.90</td> <td>SQ. MI.</td> </tr> <tr> <td>Q2</td> <td>=</td> <td>64.7 CFS</td> <td>Q50 = 713 CFS</td> </tr> <tr> <td>V2</td> <td>=</td> <td>1.06 FPS</td> <td>V50 = 5.16 FPS</td> </tr> <tr> <td>Q2 CHW</td> <td>=</td> <td>2,167.40 FT.</td> <td>Q50 CHW = 2,167.96 FT.</td> </tr> <tr> <td>Q5</td> <td>=</td> <td>173 CFS</td> <td>Q100 = 974 CFS</td> </tr> <tr> <td>V5</td> <td>=</td> <td>2.19 FPS</td> <td>V100 = 6.01 FPS</td> </tr> <tr> <td>Q5 CHW</td> <td>=</td> <td>2,167.57 FT.</td> <td>Q100 CHW = 2,168.07 FT.</td> </tr> <tr> <td>Q10</td> <td>=</td> <td>295 CFS</td> <td>QO.T.=Q490 = 1,760 CFS</td> </tr> <tr> <td>V10</td> <td>=</td> <td>3.16 FPS</td> <td>VO.T. = 8.80 FPS</td> </tr> <tr> <td>Q10 CHW</td> <td>=</td> <td>2,167.70 FT.</td> <td>O.T. CHW = 2,169.00 FT.</td> </tr> <tr> <td>Q25</td> <td>=</td> <td>515 CFS</td> <td></td> </tr> <tr> <td>V25</td> <td>=</td> <td>4.38 FPS</td> <td></td> </tr> <tr> <td>Q25 CHW</td> <td>=</td> <td>2,167.84 FT.</td> <td></td> </tr> </table>	HYDRAULIC DATA ~ BRIDGE "C"				TOTAL D.A.	=	0.90	SQ. MI.	CONTROLLED D.A.	=	0.00	SQ. MI.	EFFECTIVE D.A.	=	0.90	SQ. MI.	Q2	=	64.7 CFS	Q50 = 713 CFS	V2	=	1.06 FPS	V50 = 5.16 FPS	Q2 CHW	=	2,167.40 FT.	Q50 CHW = 2,167.96 FT.	Q5	=	173 CFS	Q100 = 974 CFS	V5	=	2.19 FPS	V100 = 6.01 FPS	Q5 CHW	=	2,167.57 FT.	Q100 CHW = 2,168.07 FT.	Q10	=	295 CFS	QO.T.=Q490 = 1,760 CFS	V10	=	3.16 FPS	VO.T. = 8.80 FPS	Q10 CHW	=	2,167.70 FT.	O.T. CHW = 2,169.00 FT.	Q25	=	515 CFS		V25	=	4.38 FPS		Q25 CHW	=	2,167.84 FT.		NOTE: EXISTING GRADE ELEVATIONS 1" HIGHER THAN SHOWN DUE TO RECENT OVERLAY.	BM#104 - 3/4" IRON PIN IN SOUTH R.O.W. FENCE STA. 1680+27.75, @ SURVEY 95.86' RT. ELEV. = 2170.31	STR. NO. 16 ~ STA. 1686+53.25 EXTEND EXIST. 3'x2'x43' LG. RCB W/ SP. HWLS., WINGS, APRON & 4' CURTAIN WALL SEE DETAIL SHEET 15' LG. LT. & 32' LG. RT. E LT.=2166.22, E RT.=2168.61	2190
HYDRAULIC DATA ~ BRIDGE "C"																																																																						
TOTAL D.A.	=		0.90	SQ. MI.																																																																		
CONTROLLED D.A.	=		0.00	SQ. MI.																																																																		
EFFECTIVE D.A.	=		0.90	SQ. MI.																																																																		
Q2	=		64.7 CFS	Q50 = 713 CFS																																																																		
V2	=	1.06 FPS	V50 = 5.16 FPS																																																																			
Q2 CHW	=	2,167.40 FT.	Q50 CHW = 2,167.96 FT.																																																																			
Q5	=	173 CFS	Q100 = 974 CFS																																																																			
V5	=	2.19 FPS	V100 = 6.01 FPS																																																																			
Q5 CHW	=	2,167.57 FT.	Q100 CHW = 2,168.07 FT.																																																																			
Q10	=	295 CFS	QO.T.=Q490 = 1,760 CFS																																																																			
V10	=	3.16 FPS	VO.T. = 8.80 FPS																																																																			
Q10 CHW	=	2,167.70 FT.	O.T. CHW = 2,169.00 FT.																																																																			
Q25	=	515 CFS																																																																				
V25	=	4.38 FPS																																																																				
Q25 CHW	=	2,167.84 FT.																																																																				
2185					2185																																																																	
2180					2180																																																																	
2175					2175																																																																	
2170					2170																																																																	
2165					2165																																																																	
2160					2160																																																																	
2155					2155																																																																	
2150					2150																																																																	
2145					2145																																																																	



CURVE DATA
 CURVE NO. C2
 CRL SH 15
 PI STA. 1698+11.26
 $\Delta = 01^{\circ}25'16.93''$
 $R = 13000.0000'$
 $D = 00^{\circ}26'26.65''$
 $T = 161.2576'$
 $L = 322.4986'$
 $Ch = 322.4903'$
 $E = 1.0001$
 $emax = 0.08'/0$
 $S = NC$
 $V = 65$ MPH

CURVE DATA
 CURVE NO. C3
 CRL SH 15
 PI STA. 1701+33.76
 $\Delta = 01^{\circ}25'16.93''$
 $R = 13000.0000'$
 $D = 00^{\circ}26'26.65''$
 $T = 161.2576'$
 $L = 322.4986'$
 $Ch = 322.4903'$
 $E = 1.0001$
 $emax = 0.08'/0$
 $S = NC$
 $V = 65$ MPH

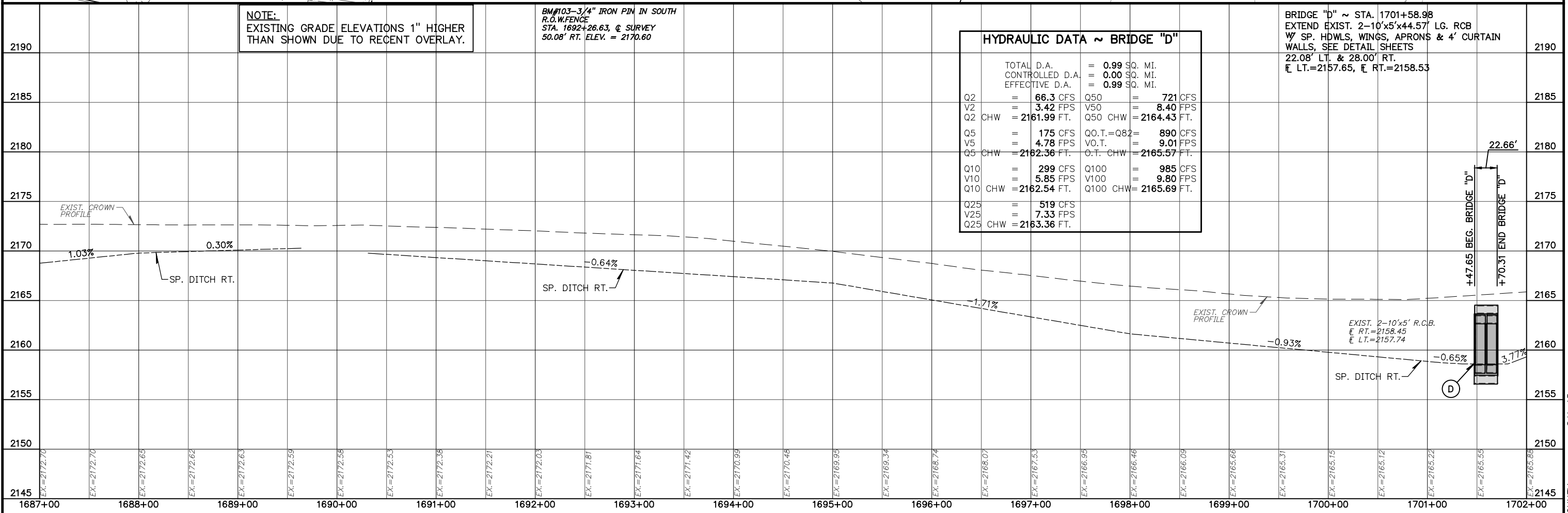


NOTE:
 EXISTING GRADE ELEVATIONS 1" HIGHER THAN SHOWN DUE TO RECENT OVERLAY.

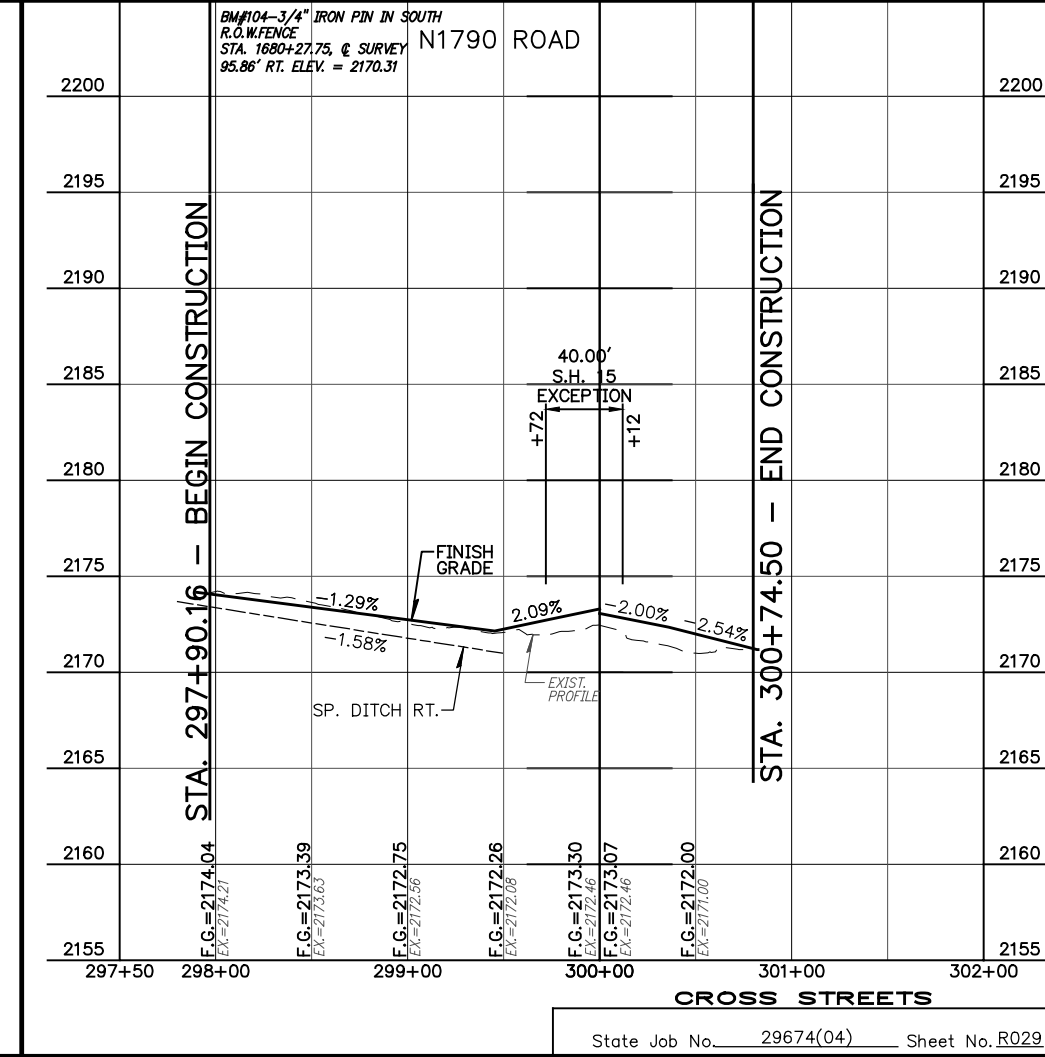
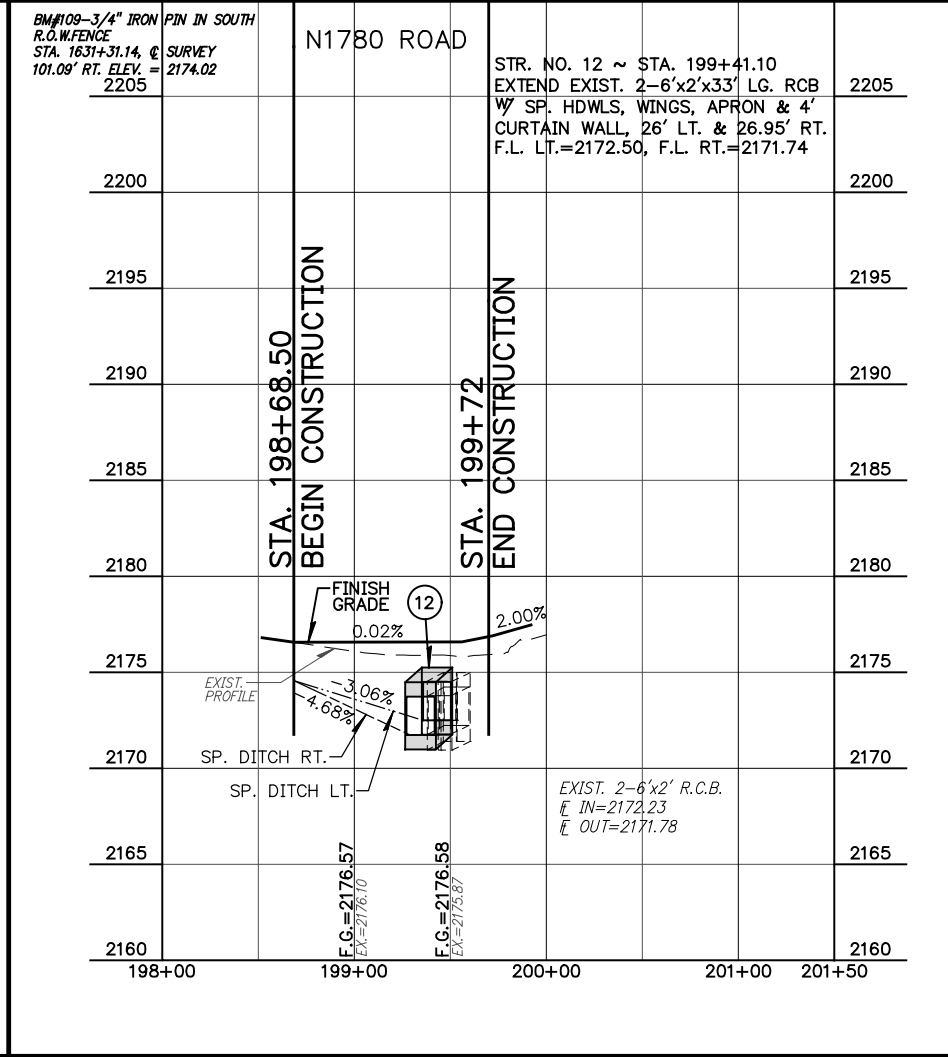
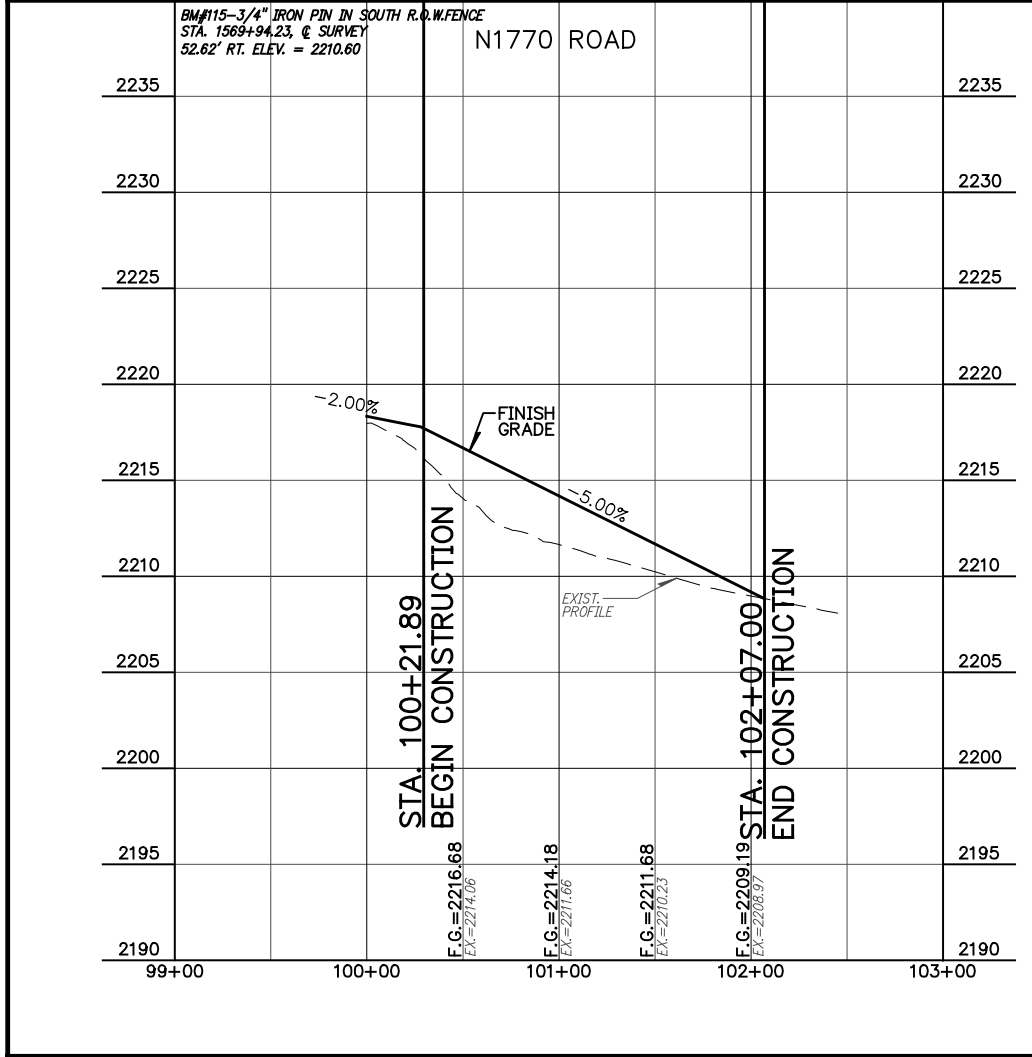
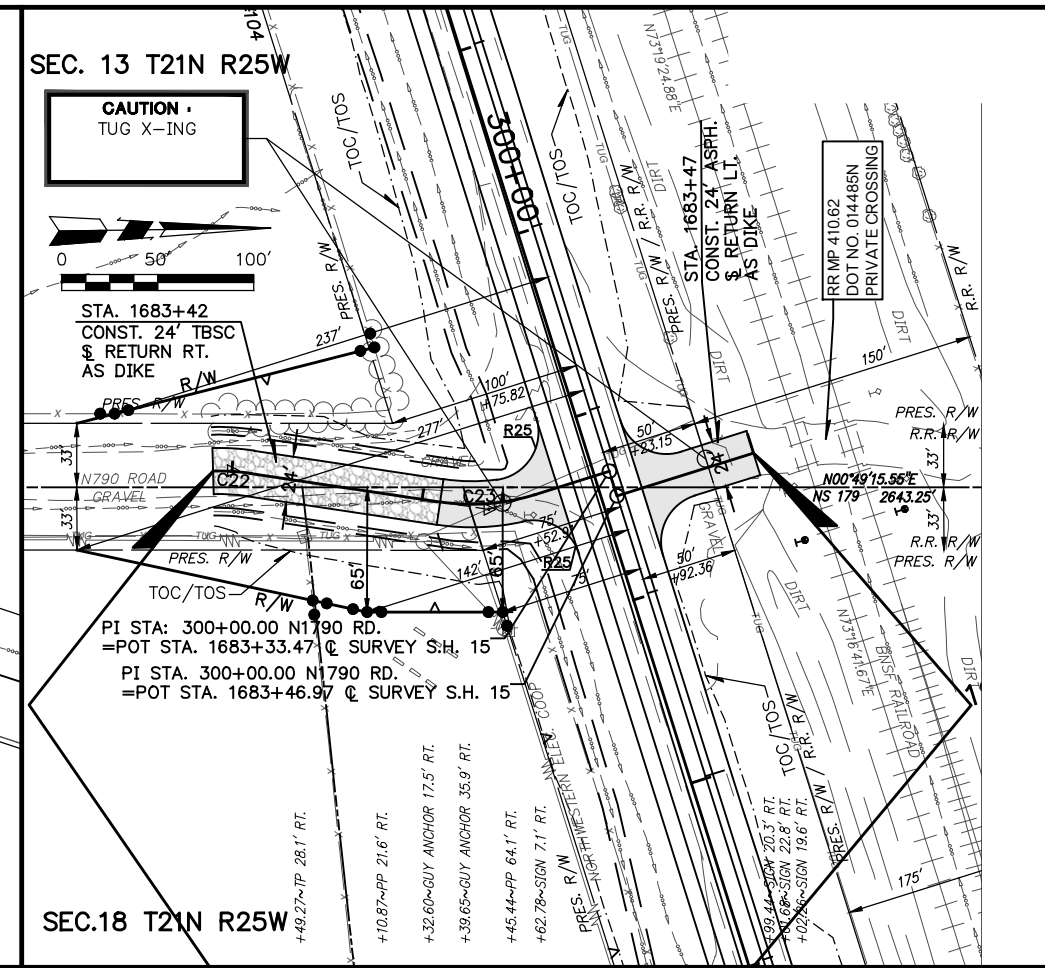
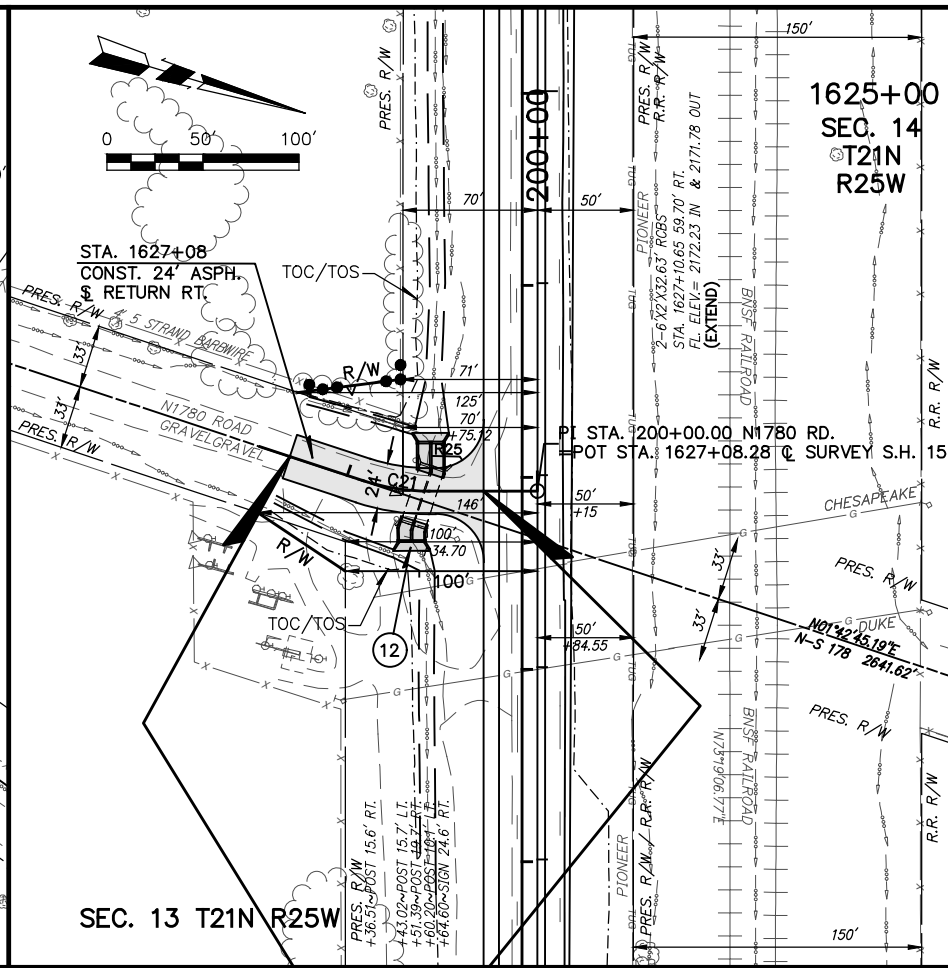
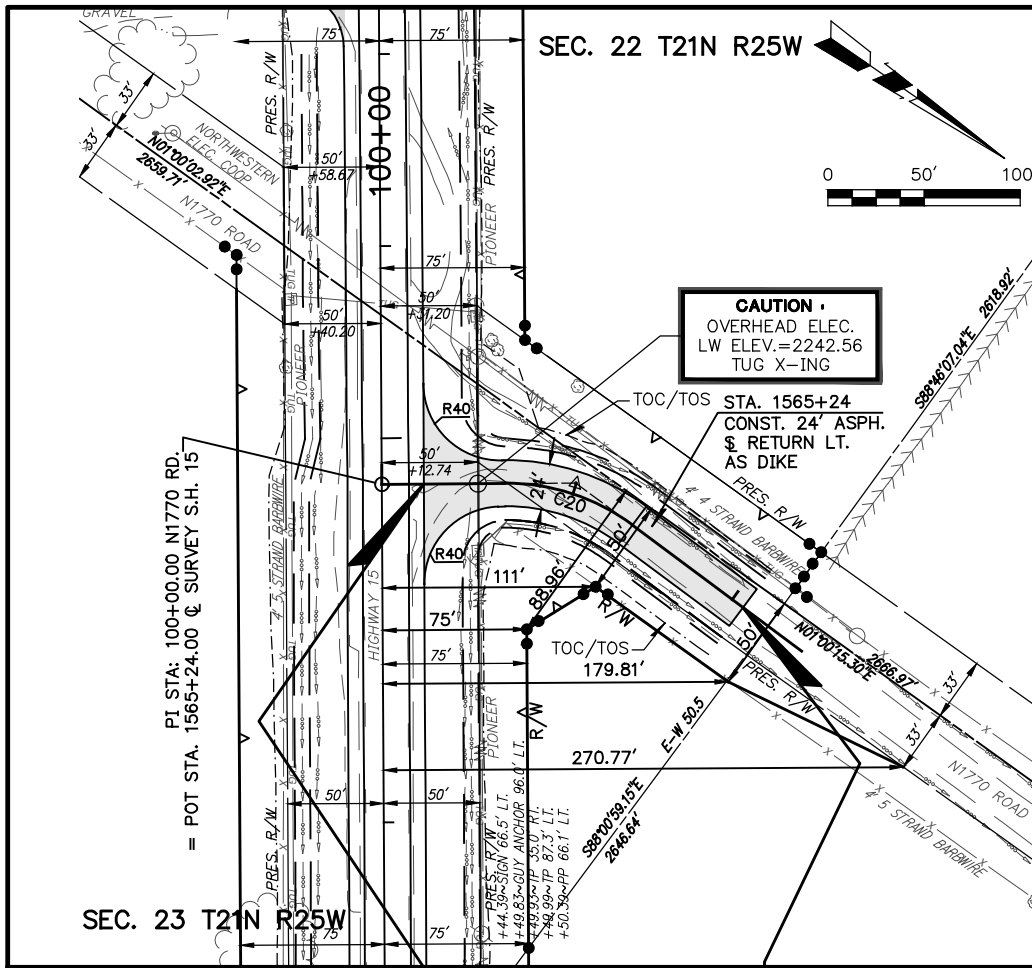
BM#103 - 3/4" IRON PIN IN SOUTH R.O.W. FENCE
 STA. 1692+26.63, @ SURVEY 50.08' RT. ELEV. = 2170.60

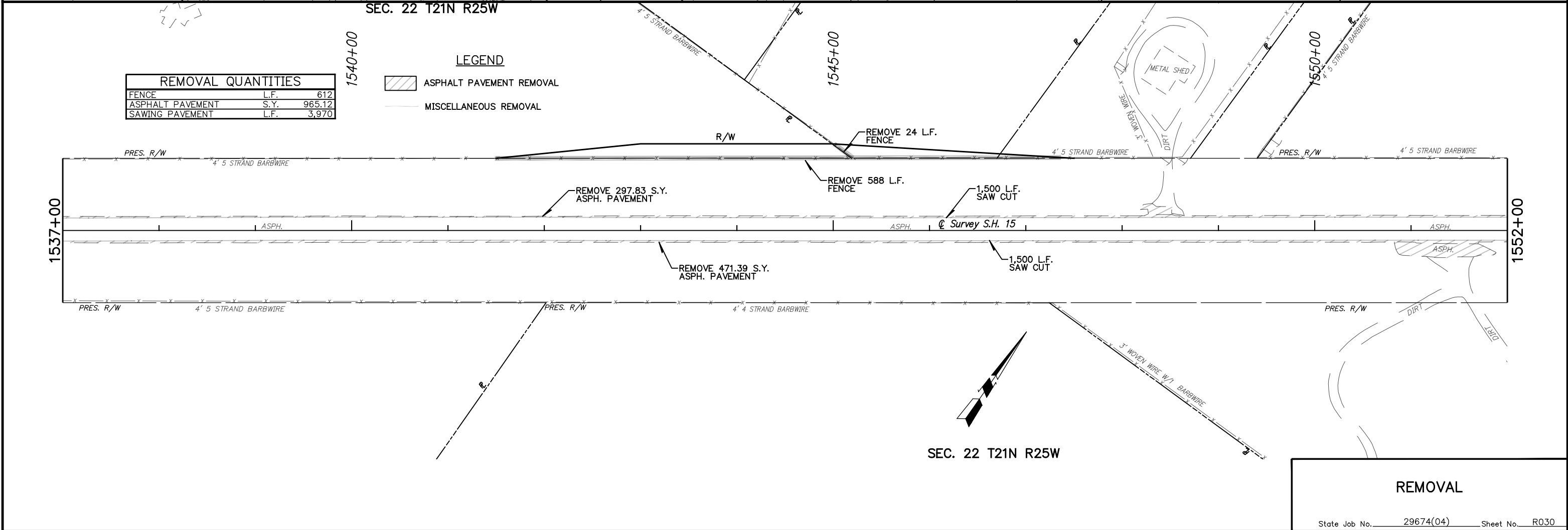
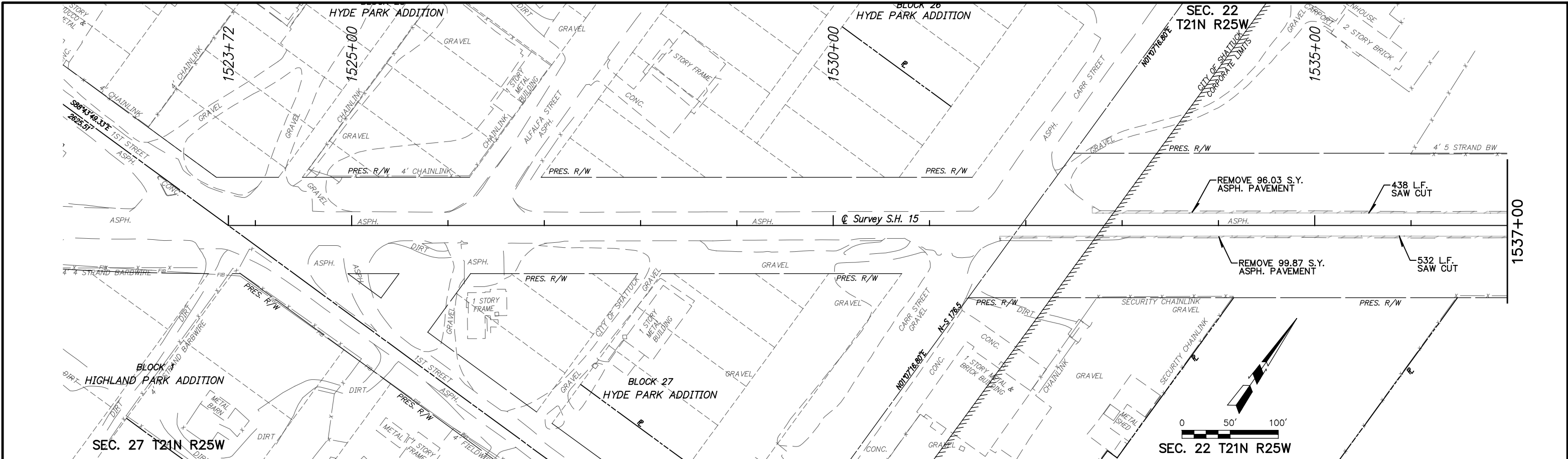
TOTAL D.A.	= 0.99 SQ. MI.		
CONTROLLED D.A.	= 0.00 SQ. MI.		
EFFECTIVE D.A.	= 0.99 SQ. MI.		
Q2	= 66.3 CFS	Q50	= 721 CFS
V2	= 3.42 FPS	V50	= 8.40 FPS
Q2 CHW	= 2161.99 FT.	Q50 CHW	= 2164.43 FT.
Q5	= 175 CFS	Q0.T.=Q82	= 890 CFS
V5	= 4.78 FPS	VO.T.	= 9.01 FPS
Q5 CHW	= 2162.36 FT.	O.T. CHW	= 2165.57 FT.
Q10	= 299 CFS	Q100	= 985 CFS
V10	= 5.85 FPS	V100	= 9.80 FPS
Q10 CHW	= 2162.54 FT.	Q100 CHW	= 2165.69 FT.
Q25	= 519 CFS		
V25	= 7.33 FPS		
Q25 CHW	= 2163.36 FT.		

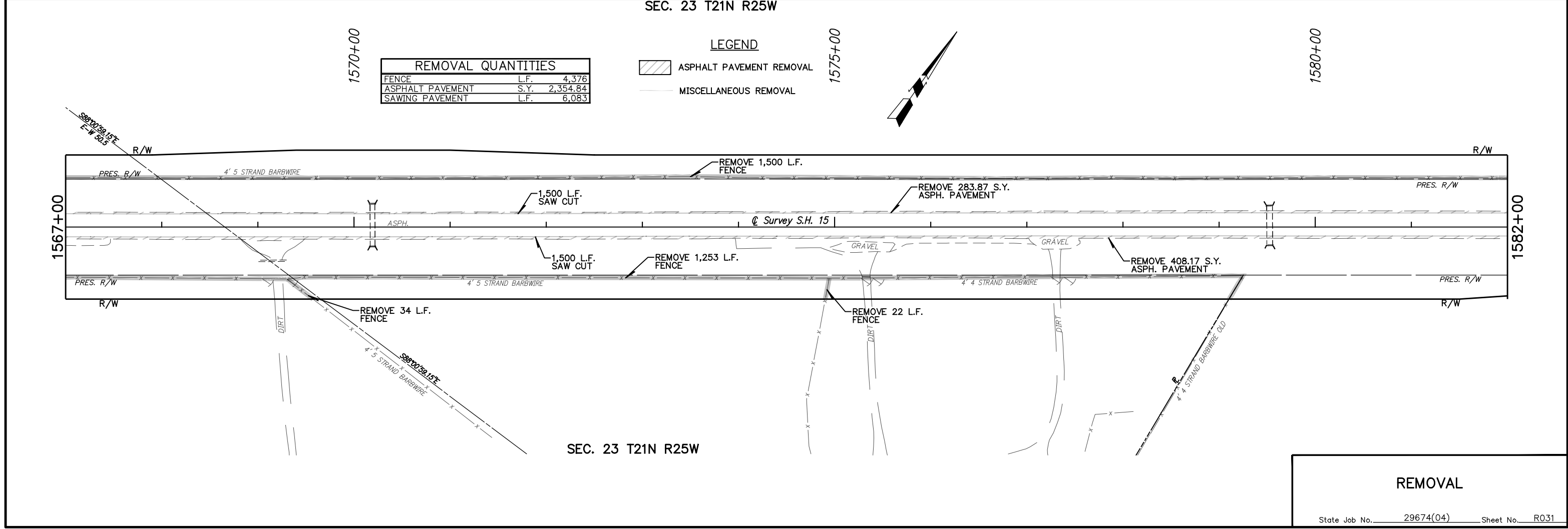
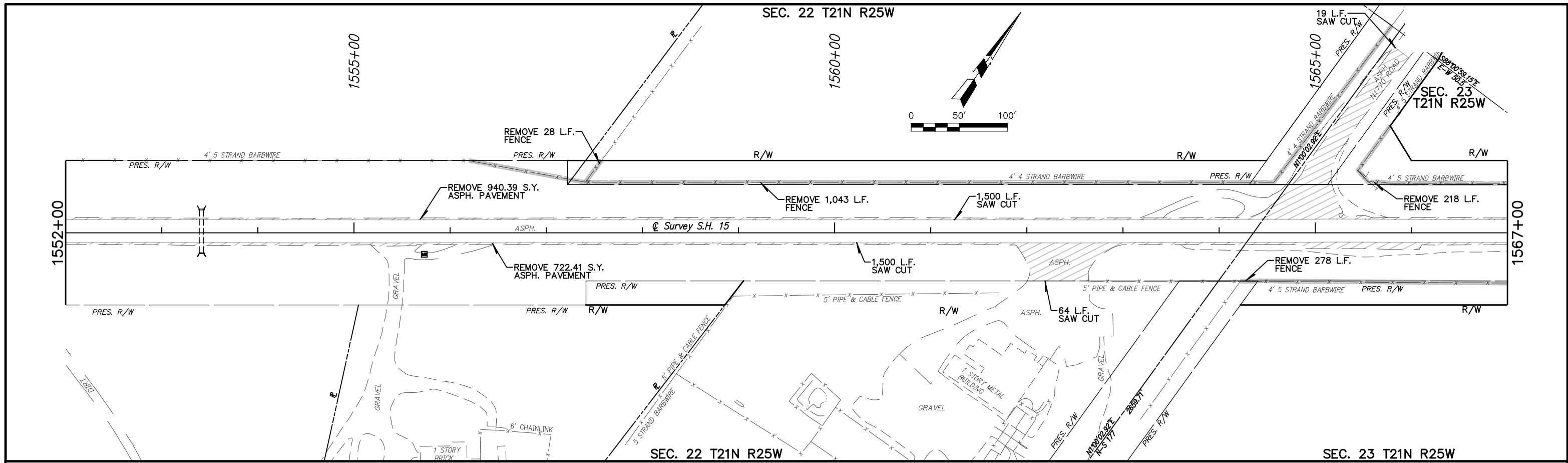
BRIDGE "D" ~ STA. 1701+58.98
 EXTEND EXIST. 2-10'x5'x44.57' LG. RCB W/ SP. HDWLS, WINGS, APRONS & 4' CURTAIN WALLS, SEE DETAIL SHEETS 22.08' LT. & 28.00' RT.
 \bar{E} LT.=2157.65, \bar{E} RT.=2158.53



SH 15







REMOVAL

State Job No. 29674(04) Sheet No. R031

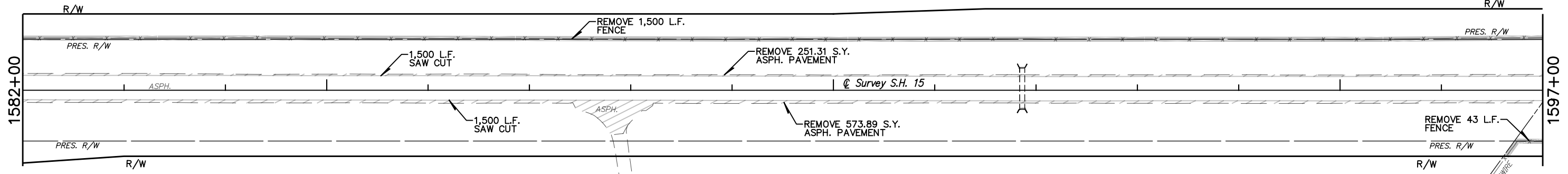
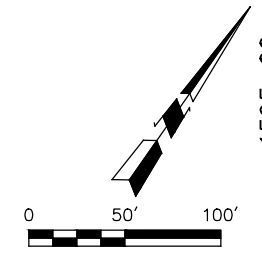
ELLIS COUNTY

SEC. 23 T21N R25W

1585+00

1590+00

1595+00



SEC. 23 T21N R25W

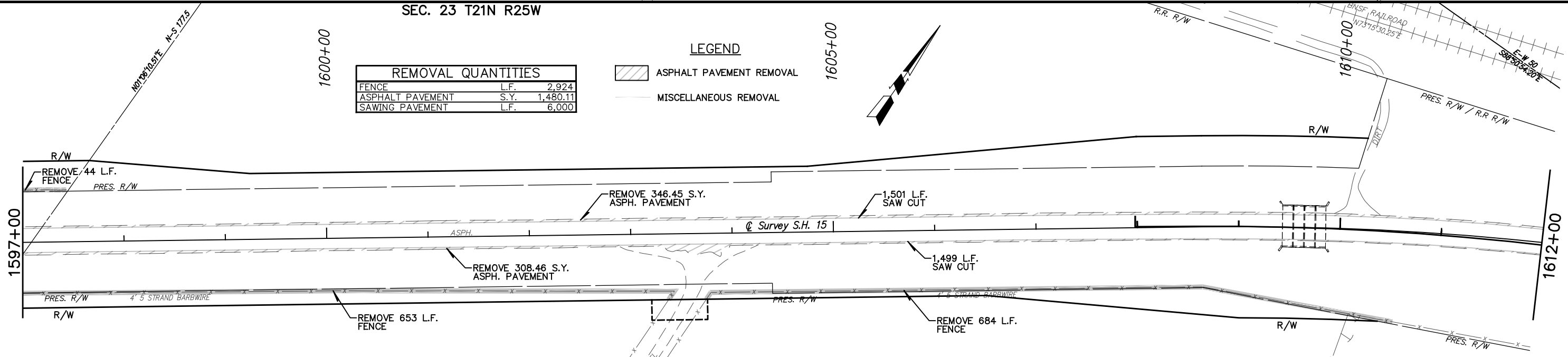
SEC. 23 T21N R25W

1600+00

1605+00

REMOVAL QUANTITIES	
FENCE	L.F. 2,924
ASPHALT PAVEMENT	S.Y. 1,480.11
SAWING PAVEMENT	L.F. 6,000

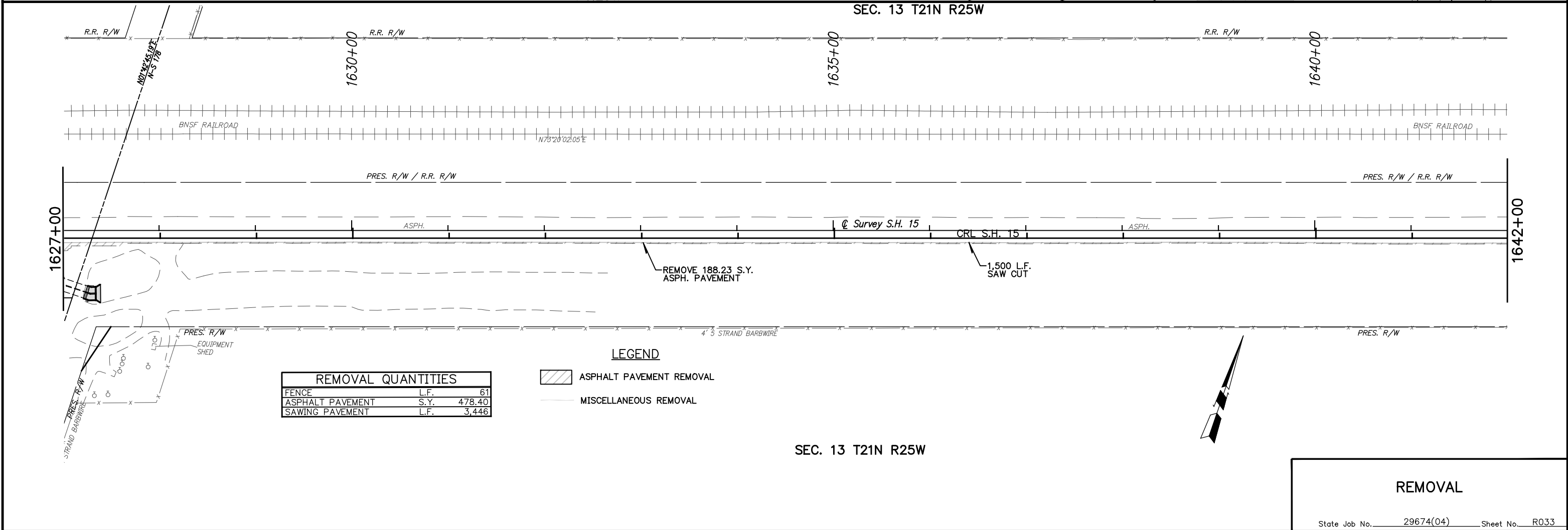
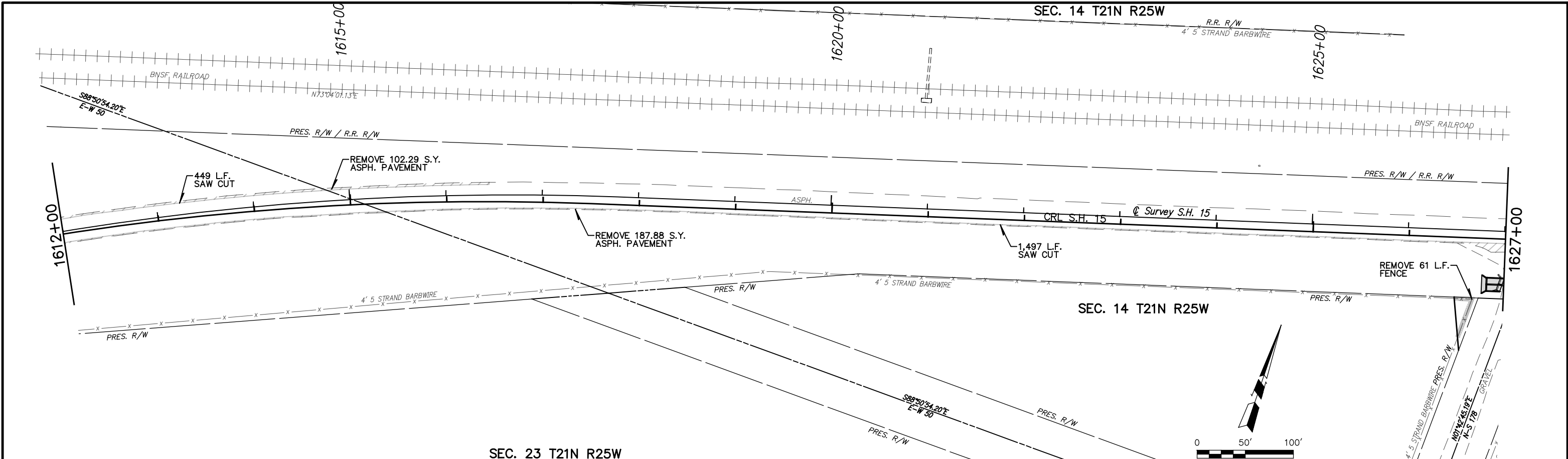
- LEGEND**
- ASPHALT PAVEMENT REMOVAL
 - MISCELLANEOUS REMOVAL



SEC. 23 T21N R25W

REMOVAL

State Job No. 29674(04) Sheet No. R032



REMOVAL QUANTITIES		
FENCE	L.F.	61
ASPHALT PAVEMENT	S.Y.	478.40
SAWING PAVEMENT	L.F.	3,446

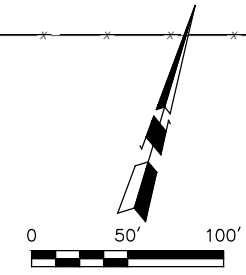
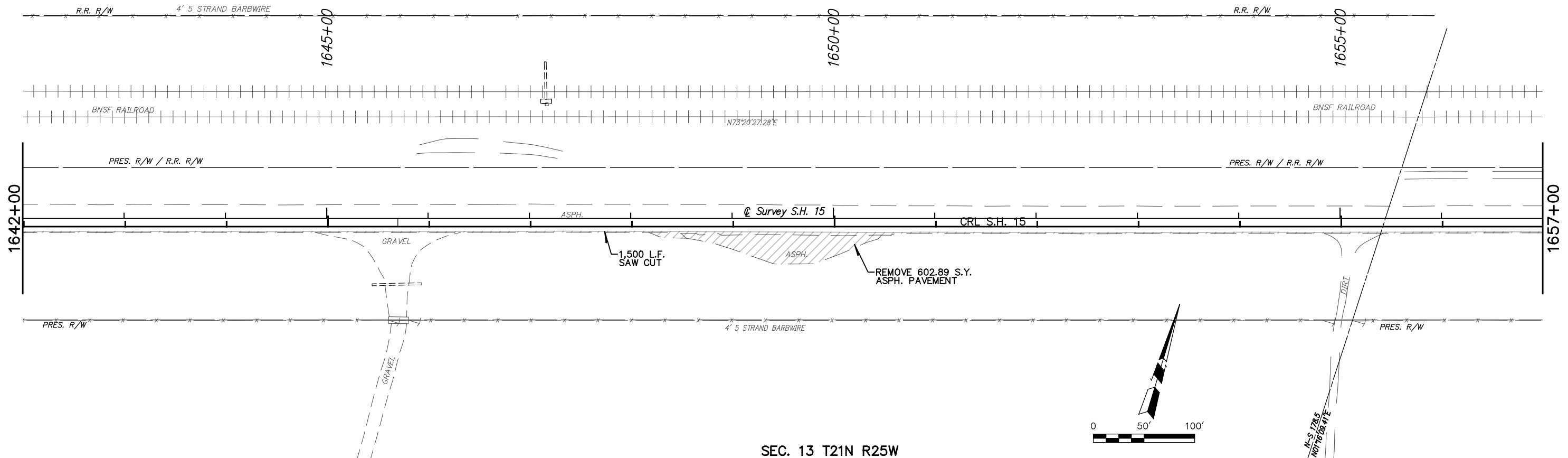
- LEGEND**
- ASPHALT PAVEMENT REMOVAL
 - MISCELLANEOUS REMOVAL

REMOVAL

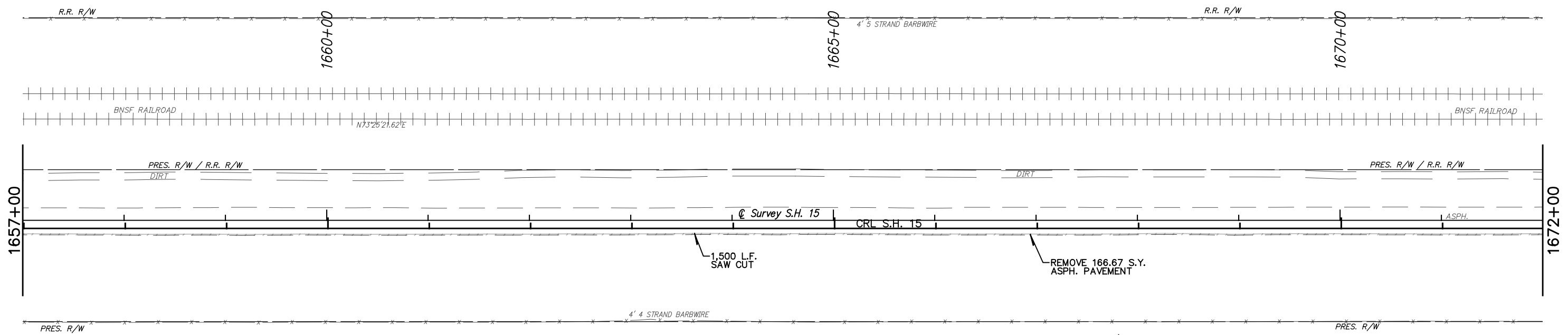
State Job No. 29674(04) Sheet No. R033

ELLIS COUNTY S.H. 15

SEC. 13 T21N R25W



SEC. 13 T21N R25W
SEC. 13 T21N R25W



REMOVAL QUANTITIES		
ASPHALT PAVEMENT	S.Y.	769.56
SAWING PAVEMENT	L.F.	3,000

- LEGEND**
- ASPHALT PAVEMENT REMOVAL
 - MISCELLANEOUS REMOVAL

SEC. 13 T21N R25W

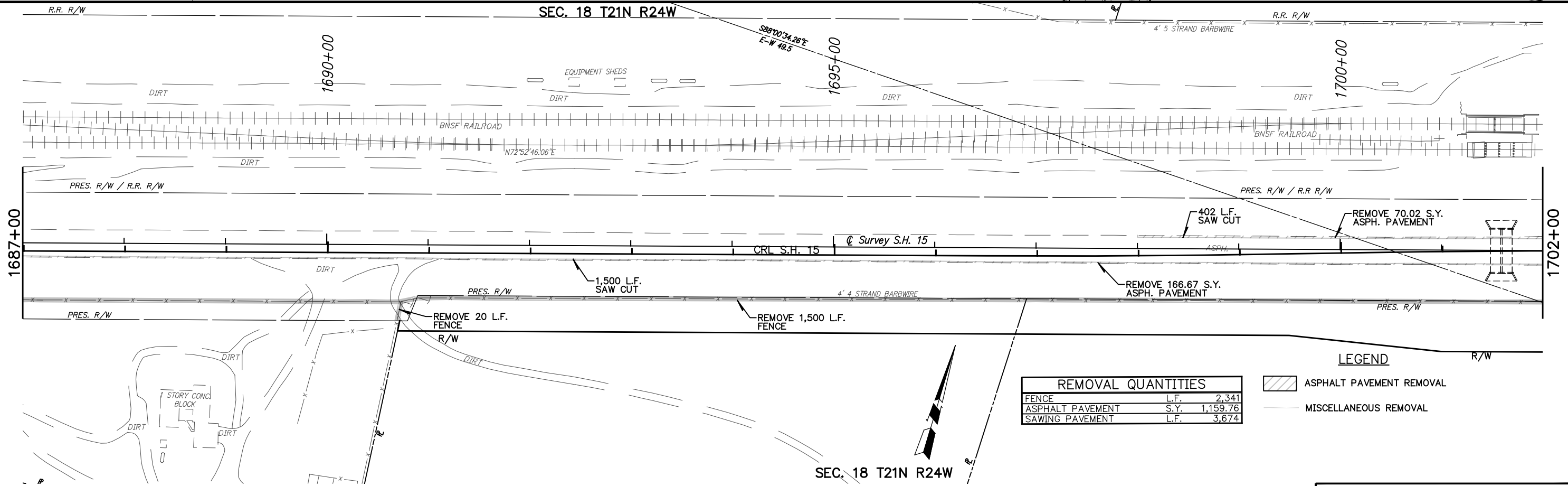
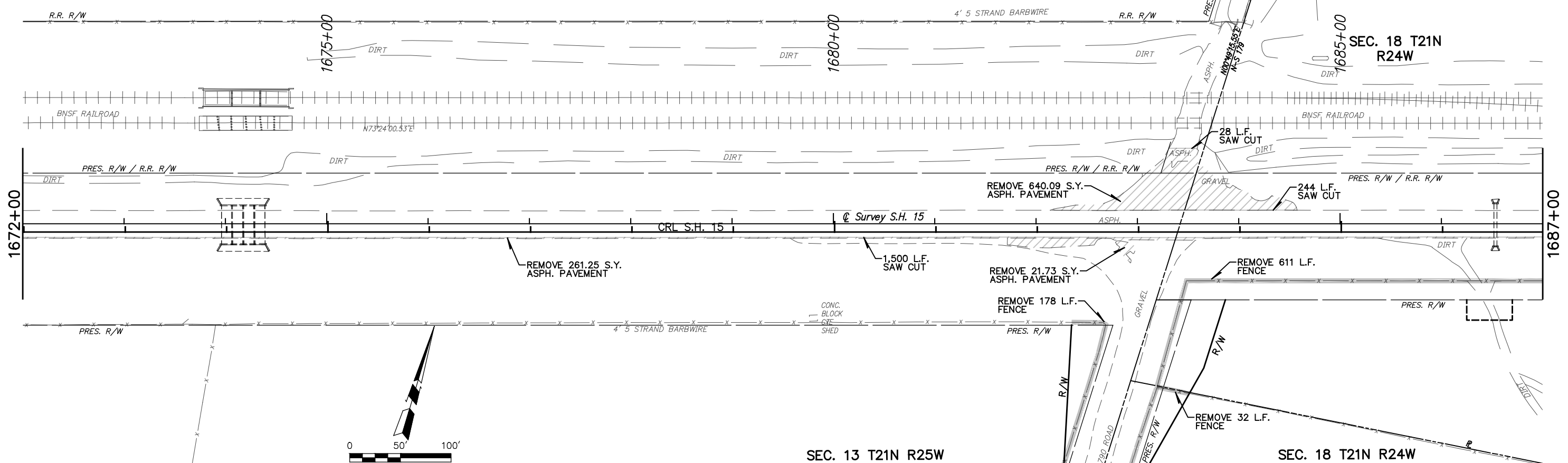
REMOVAL

State Job No. 29674(04) Sheet No. R034

ELLIS COUNTY S.H. 15

SEC. 13 T21N R25W

SEC. 18 T21N R24W



REMOVAL QUANTITIES		
FENCE	L.F.	2,341
ASPHALT PAVEMENT	S.Y.	1,159.76
SAWING PAVEMENT	L.F.	3,674

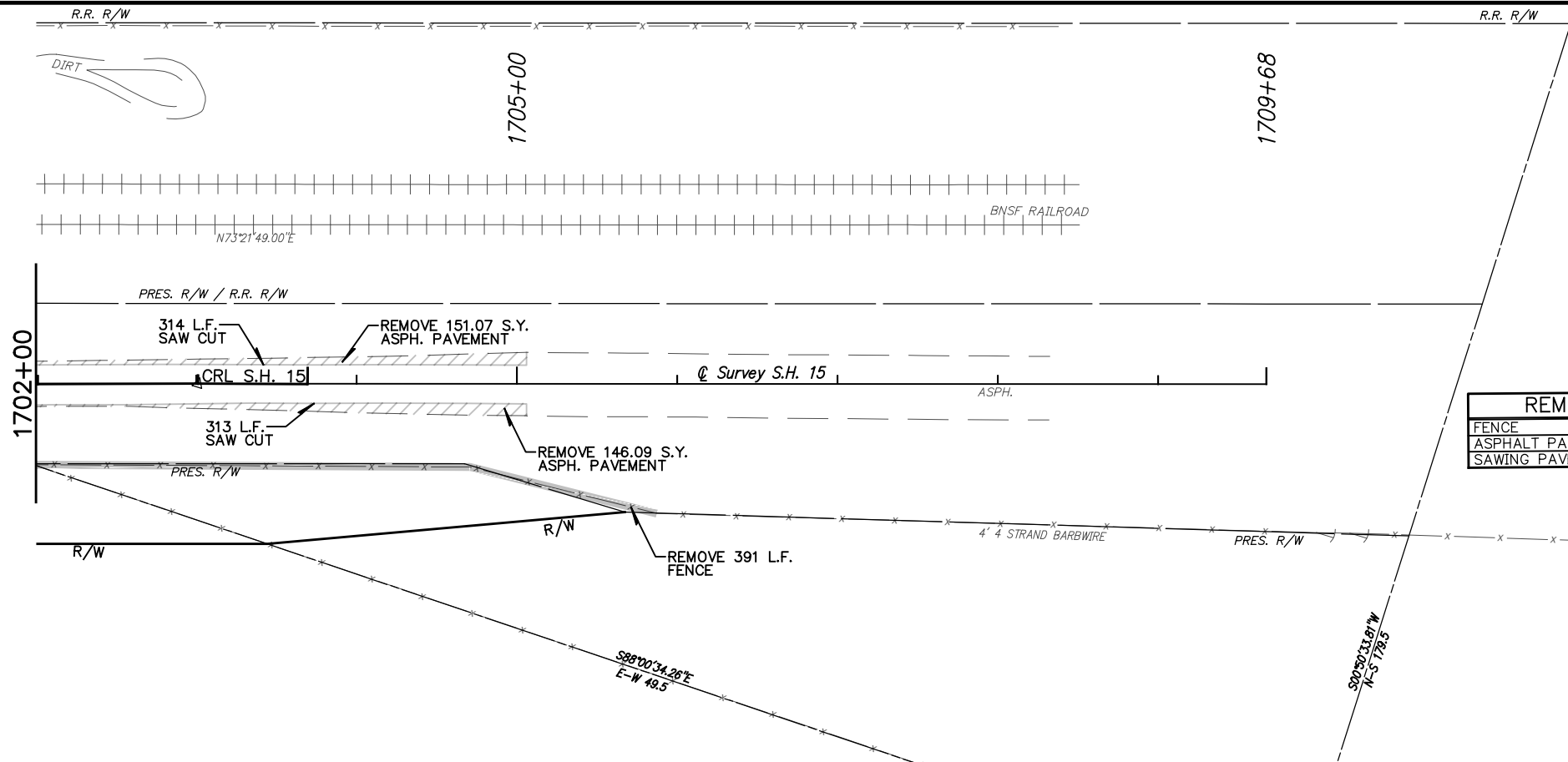
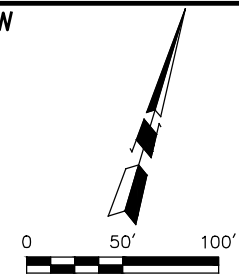
- LEGEND**
- ASPHALT PAVEMENT REMOVAL
 - MISCELLANEOUS REMOVAL

REMOVAL

State Job No. 29674(04) Sheet No. R035

ELLIS COUNTY S.H. 15

SEC.18 T21N R24W



REMOVAL QUANTITIES	
FENCE	L.F. 391
ASPHALT PAVEMENT	S.Y. 297.16
SAWING PAVEMENT	L.F. 627

LEGEND

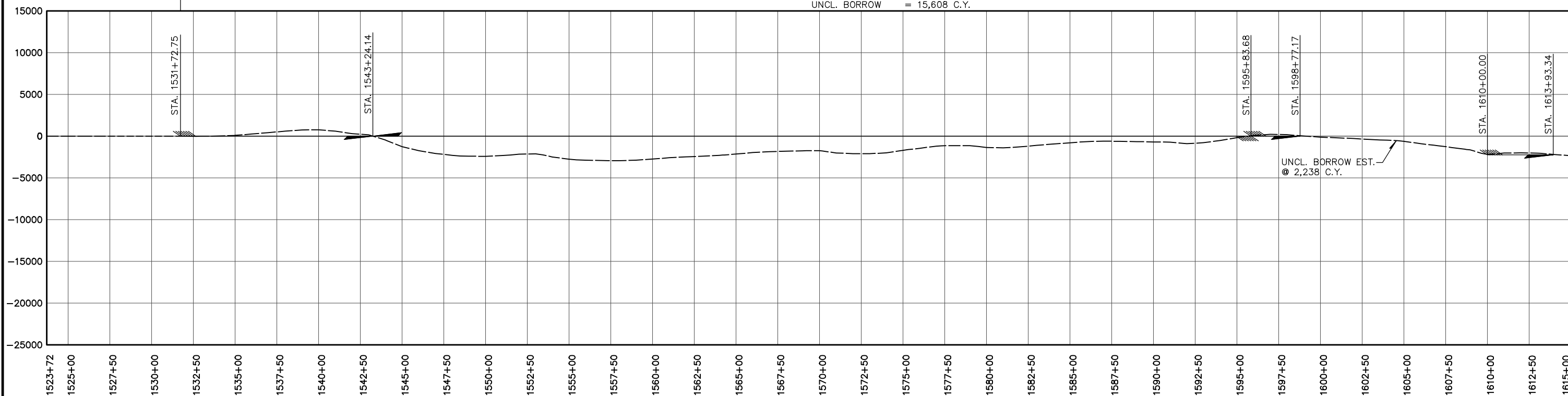
- ASPHALT PAVEMENT REMOVAL
- MISCELLANEOUS REMOVAL

SEC.18 T21N R24W

REMOVAL

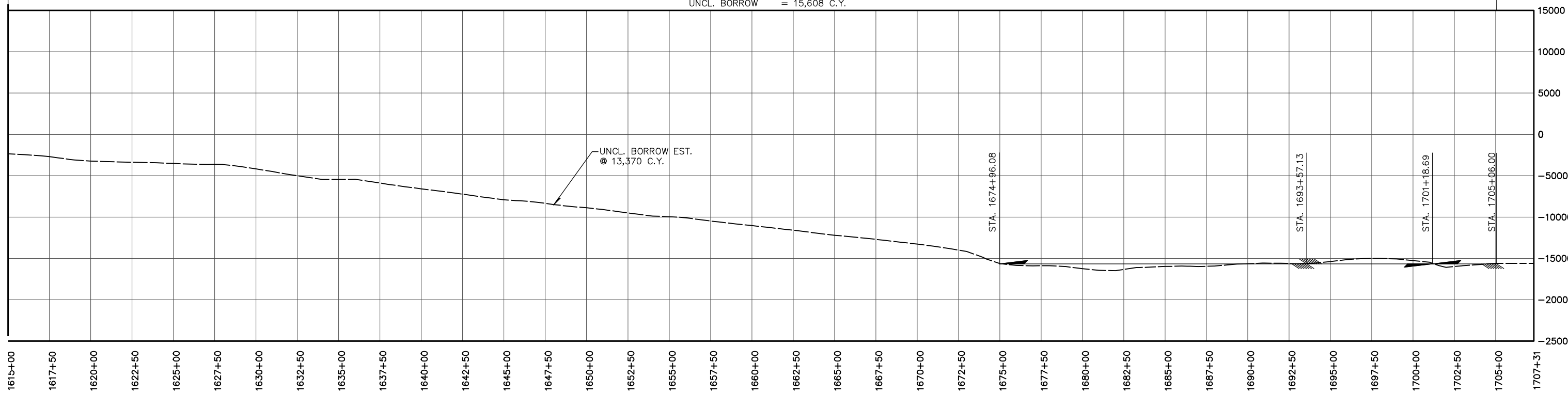
**S.H. 15
EARTHWORK ESTIMATE**

STA. 1531+72.75 TO STA. 1705+06.00
 UNCL. EXCAV. = 17,961 C.Y.
 FILL +15% = 33,569 C.Y.
 UNCL. BORROW = 15,608 C.Y.

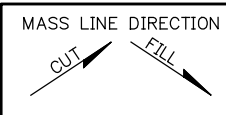


**S.H. 15
EARTHWORK ESTIMATE**

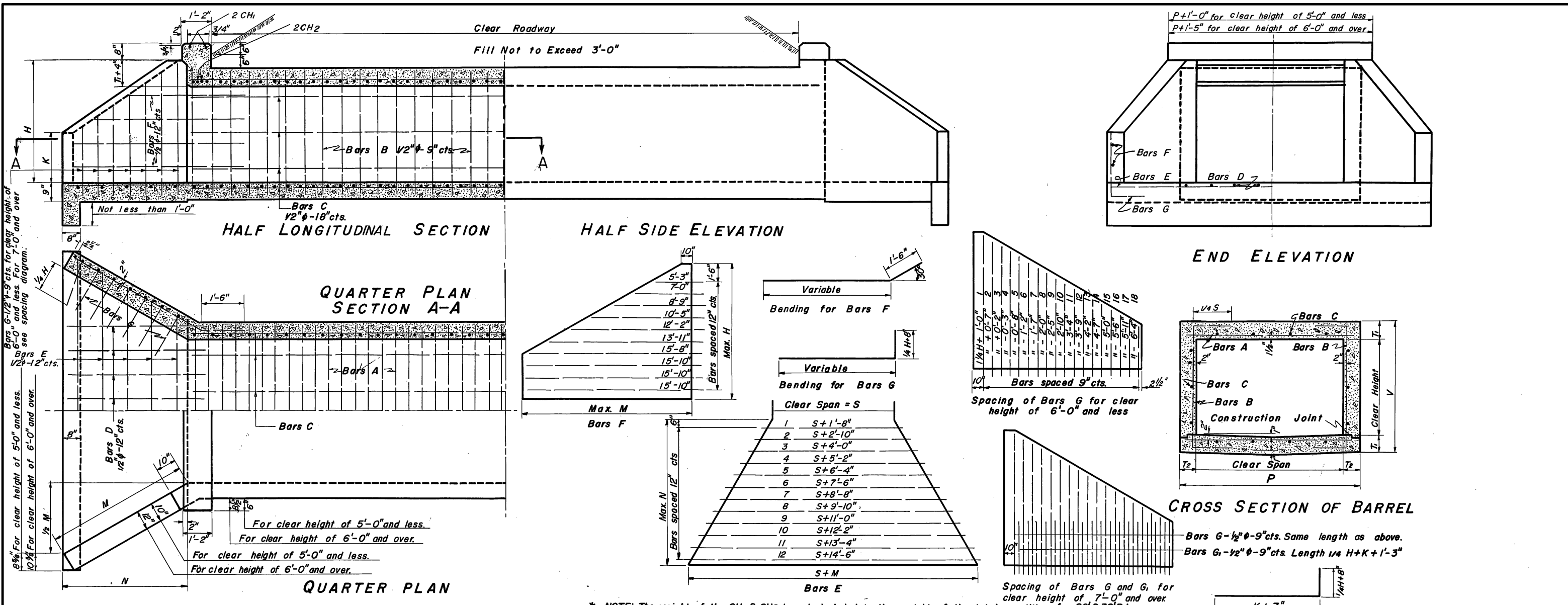
STA. 1531+72.75 TO STA. 1705+06.00
 UNCL. EXCAV. = 17,961 C.Y.
 FILL +15% = 33,569 C.Y.
 UNCL. BORROW = 15,608 C.Y.



MASS DIAGRAM PROVIDED FOR BIDDING PURPOSES ONLY. ACTUAL BALANCE POINTS TO BE DETERMINED BY CONTRACTOR AND VOLUME OF MATERIAL ENCOUNTERED DURING GRADING OPERATIONS. WHENEVER POSSIBLE, THE CONTRACTOR SHALL SEQUENCE EARTHWORK OPERATIONS IN ORDER TO OBTAIN THE MATERIAL FROM THE CUT SECTIONS FOR USE AS FILL RATHER THAN OBTAINING UNCLASSIFIED BORROW. MATERIAL DEPICTED AS WASTE SHALL ONLY BE CONSIDERED WASTE ONCE ALL EARTHWORK OPERATIONS HAVE BEEN COMPLETED. THIS MATERIAL SHALL BE USED TO REDUCE THE NEED FOR UNCLASSIFIED BORROW AT ANY LOCATION AND TIME THROUGH THE DURATION OF THE PROJECT.



MASS DIAGRAMS



DESIGN NO	Clear Span Ft.	Clear Height Ft.	Area of Slab Sq. Ft.	BARREL OF CULVERT										TWO WINGS AND ONE APRON										TOTAL QUANTITIES														
				DIMENSIONS				REINFORCING STEEL						QUANTITIES		DIMENSIONS				REINFORCING STEEL						QUANTITIES		Steel	Class A Concrete	Steel	Class A Concrete							
				T ₁	T ₂	V	P	BARS-A		BARS-B BENT		BARS-C		Steel per Lin. Ft.	Concrete per Cu. Yds.	H	K	M	N	BARS-D BARS-E		BARS-F		BARS-G BARS-G														
				Spacing	Length	Spacing	Length	Spacing	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.									
1	2'-0"	4.0	6"	6"	3'-0"	3'-0"	1/2" φ-6"	2'-8"	3'-8"	1/2" φ-9"	3'-8"	1/2" φ-18"	8	19.34	0.185	2'-4"	1'-6"	3'-2"	2'-9"	4	3'-2"	3	2	5'-2"	2	5'-2"	8	54	.87	.31	.163	667	7.56	744	8.30	1	3'-8"	2'-8"

GENERAL NOTES

All reinforcing steel shall be deformed round bars. The design and table are based upon net areas of bars as follows: 1/2" φ = 0.1963 sq. in., 3/8" φ = 0.3068 sq. in., 3/4" φ = 0.442 sq. in. Other sizes may be used, provided they are spaced so as to give as much net sectional area per ft. width of slab. Plans showing such changed sizes and spacing must be approved.

All exposed surfaces to have carborundum finish and this shall be included in price bid per cu. yd. for concrete.

Quantities shown for reinforcing steel shall be reduced by 1% (0.01) to comply with approved C.R.S.I. weights per foot for reinforcing bars.

DESIGN DATA

Conc. slab 6' span 8 1/2"	106 lbs.	L.L.M. = 909 X 40 1/4 =	36590 in. lbs.
Dirt fill	100	I = 30 % LL =	10980 "
Paving 6"	75 "	D.L.M. = 1/2 WL ² = 1/2 X 281 X 67 ² X 12 X 1.9 000 "	66570 "

8 1818
909 6'-8 1/2" 909

55 10,000
1,818

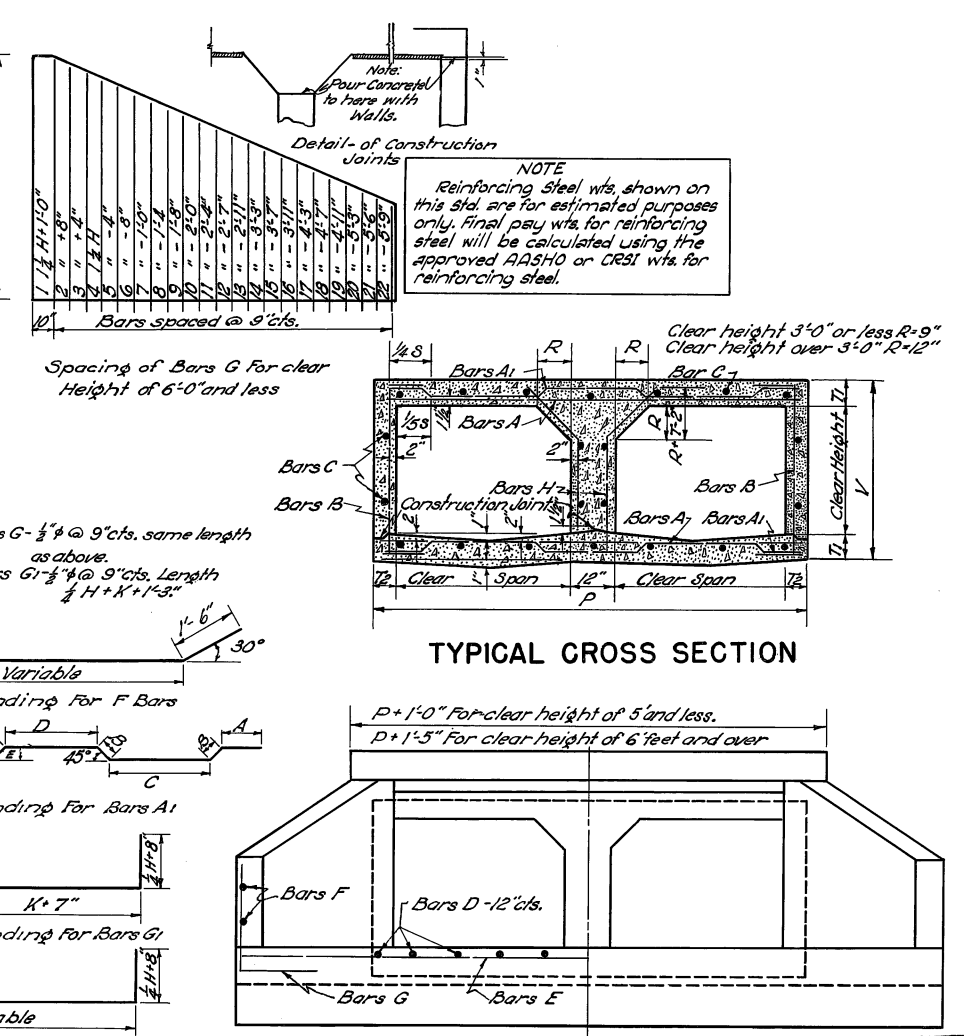
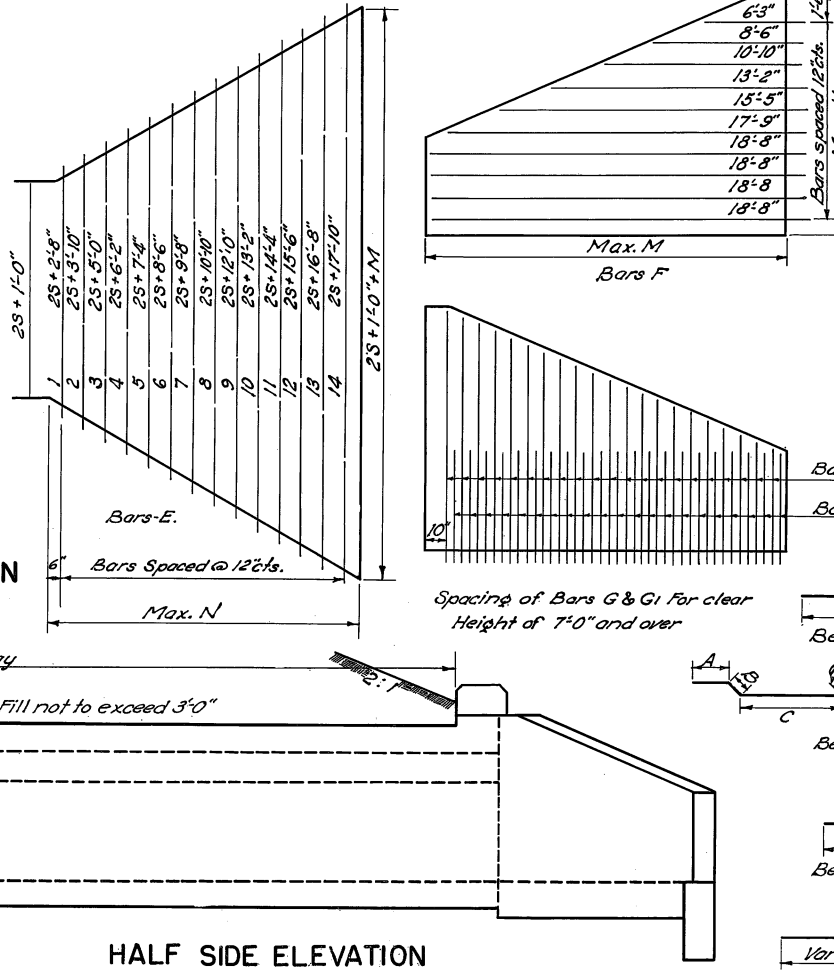
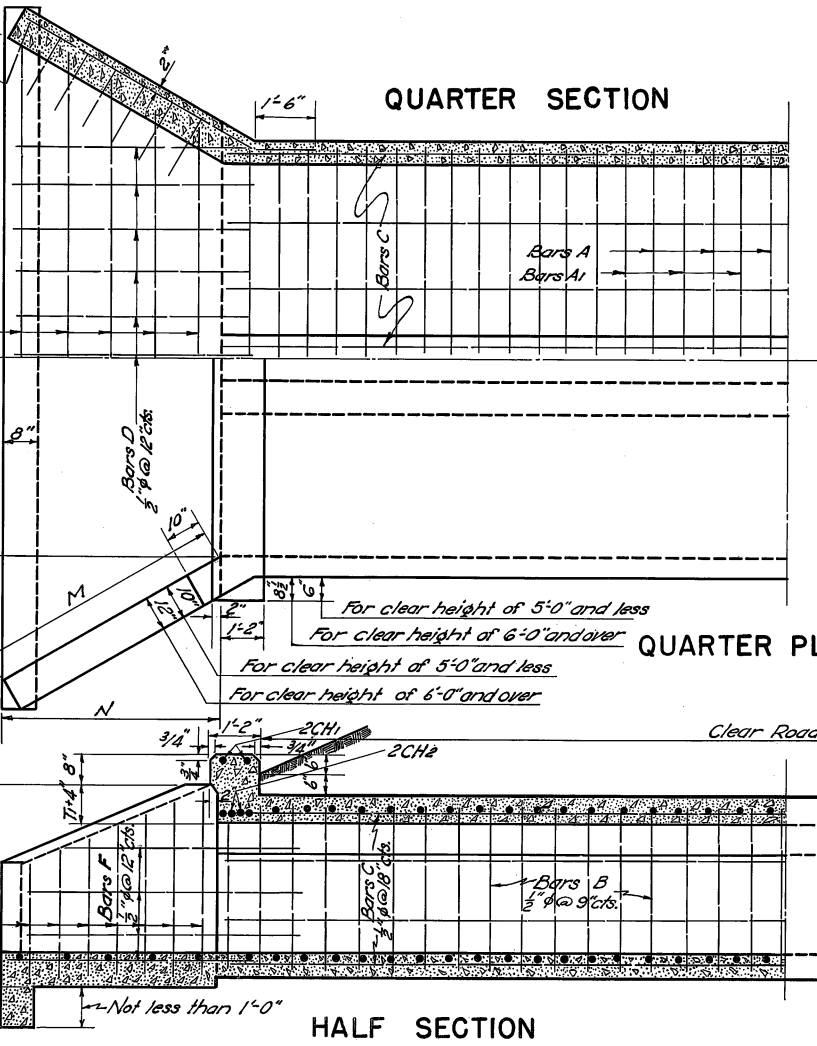
All exposed edges shall have a 3/4" chamfer.

RCB DETAIL (STR. 2, 5, 8, 10, & 16)

State Job No. 29674(04) Sheet No. R038

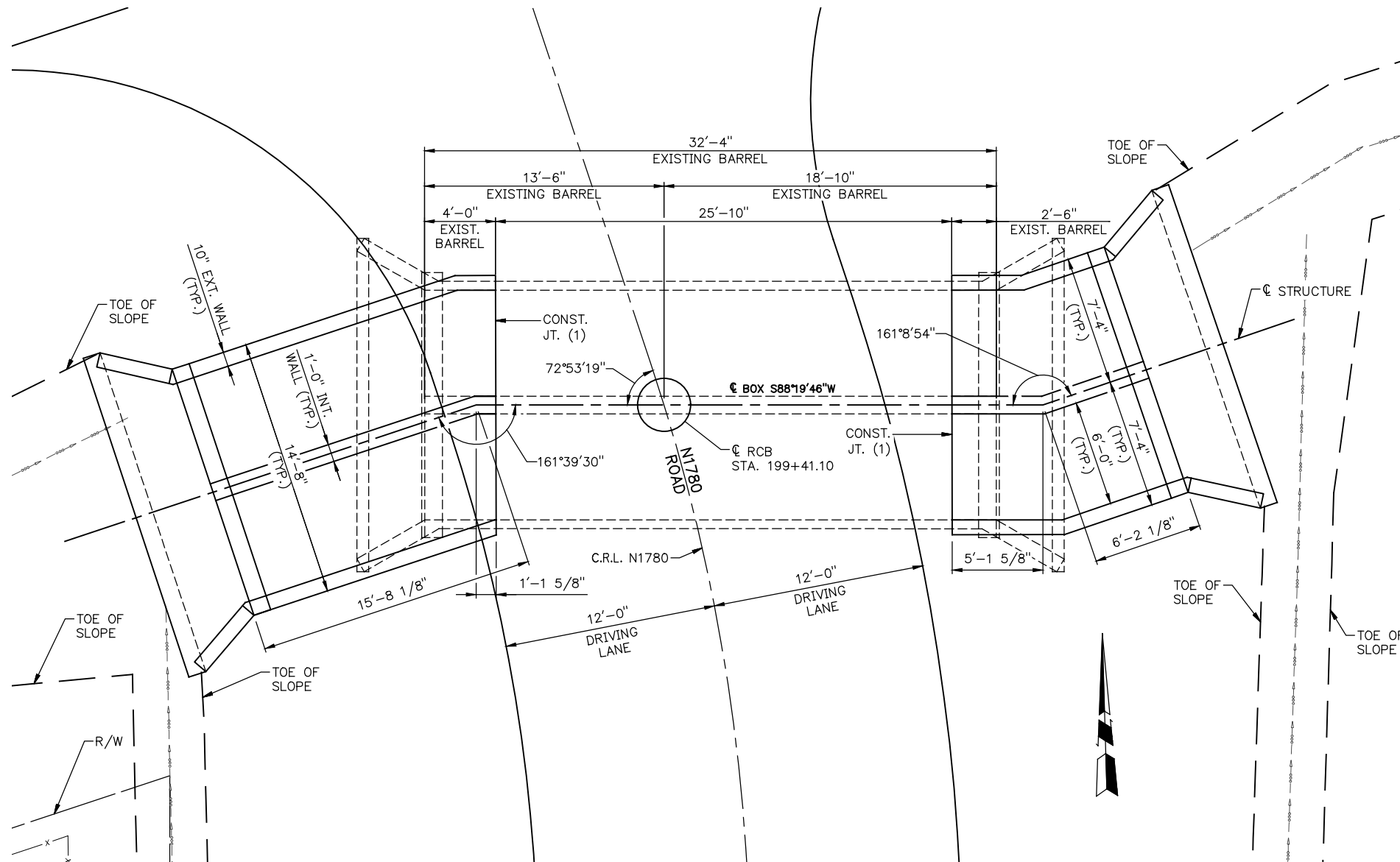
Span	Additional Steel Wt.
4	0
5	18.522
6	24.840
8	35.671
10	50.968

Use above on Interstate System
Revisions for H-20-56-53 & PPM 20-4 Loading
Bars E
1/2" @ 12 cts.



Design No.	WATERWAY														BARREL OF CULVERT														TWO WINGS AND ONE APRON														TOTAL QUANTITIES					
	Clear Span Ft.	Clear Height Ft.	Area Sq. Ft.	Dimensions -				Reinforcing Steel										Dimensions				Reinforcing Steel				Steel	C.I. Conc.	Conc. in two curbs cu. yds.	Conc. in one curb cu. yds.	Steel	Class A Conc.	Steel	Class A Conc.															
				T1	T2	V	P	Bars A Size & Spacing	Bars A1 Size & Spacing	Bars B Bent Size & Spacing	Bars C Size & Spacing	Bars H Size & Spacing	H	K	M	N	Bars D No. Length	Bars E No. Length	Bars F No. Length	Bars G No. Length	Bars G1 No. Length																											
1	2'-0"	16"	7'-6"	3'-2"	10'-0"	3/8" x 16"	9'-8"	3/8" x 18"	10'-1"	10"	4-1/2"	2-1/2"	2-1/2"	3"	1 1/2" x 9"	2'-0"	3'-4"	5.91	0.601	2.11	1.5	4'-3"	3'-8"	11	4'-1"	4	108	1.94	0.89	0.363	2216	24.73	25.74	23.34	1	10'-9"	9'-6"											
2	2'-6"	20"	7'-6"	3'-9"	10'-0"	"	9'-8"	"	10'-1"	10"	4-1/2"	2-1/2"	2-1/2"	3"	"	5'-10"	20	3'-10"	0.638	3-5"	5'-0"	4'-4"	11	4'-9"	4	2	6'-3"	2	7'-3"	12	124	2.43	0.89	0.392	2,306	26.93	2,676	30.76	2	10'-9"	9'-8"							
3	3'-0"	24"	7'-6"	4'-2"	10'-0"	"	9'-8"	"	10'-1"	10"	4-1/2"	2-1/2"	2-1/2"	3"	"	5'-10"	22	4'-4"	0.675	3-1/2"	5'-0"	5'-9"	4-1/2"	11	5'-3"	5	2	6'-3"	4	7'-11"	12	162	2.97	0.89	0.400	2,483	29.23	2,872	33.28	3	10'-9"	9'-8"						
4	4'-0"	32"	7'-6"	5'-2"	10'-0"	"	10'-0"	"	10'-0"	10"	4-1/2"	2-1/2"	2-1/2"	3"	"	6'-10"	26	5'-5"	0.829	4-1/2"	5'-0"	7'-2"	6'-2"	11	6'-8"	6	4	Var.	4	9'-2"	18	222	4.09	0.91	0.435	2,828	36.49	3,282	41.46	4	10'-9"	10'-0"						
5	2'-0"	16"	7'-6"	3'-3"	10'-0"	3/8" x 15"	11'-8"	3/8" x 15"	12'-2"	12"	5"	3'-0"	2-5/8"	3-1/2"	1 1/2" x 9"	2'-0"	3'-4"	5.91	0.725	2.11	1.5	4'-4"	3'-9"	13	4'-9"	2	125	2.20	1.05	0.414	2,681	29.28	3,173	35.83	5	12'-8"	11'-3"											
6	2'-6"	20"	7'-6"	3'-9"	10'-0"	"	11'-8"	"	12'-2"	12"	5"	3'-0"	2-5/8"	3-1/2"	"	5'-11"	24	3'-7"	0.762	3-3/4"	5'-0"	5'-4"	13	4'-10"	2	142	2.73	1.05	0.434	2,773	31.76	3,227	36.33	6	12'-8"	11'-3"												
7	3'-0"	24"	7'-6"	4'-3"	10'-0"	"	11'-8"	"	12'-2"	12"	5"	3'-0"	2-5/8"	3-1/2"	"	6'-5"	24	4'-5"	0.799	3-3/4"	5'-0"	5'-10"	13	5'-6"	5	2	6'-3"	4	8'-0"	16	183	3.31	1.05	0.452	2,913	34.14	3,377	38.94	7	12'-8"	11'-3"							
8	4'-0"	40"	7'-6"	5'-3"	10'-0"	"	12'-0"	"	12'-6"	12"	5"	3'-0"	2-5/8"	3-1/2"	"	7'-5"	29	5'-6"	0.954	4-1/2"	5'-0"	7'-3"	6'-8"	13	6'-8"	6	4	Var.	4	9'-5"	18	240	4.50	1.07	0.487	3,272	41.57	3,778	47.29	8	13'-0"	12'-0"						
9	5'-0"	50"	7'-6"	6'-3"	10'-0"	"	12'-4"	"	12'-10"	14"	5"	3'-0"	2-5/8"	3-1/2"	"	8'-5"	32	6'-6"	1.117	5-1/2"	5'-0"	8'-9"	7'-13"	8'-0"	9	4	Var.	6	10'-11"	22	327	5.93	1.10	0.520	3,690	49.75	4,239	56.45	9	13'-0"	12'-0"							
10	7'-0"	70"	7'-6"	8'-3"	10'-0"	"	12'-4"	"	12'-10"	14"	5"	3'-0"	2-5/8"	3-1/2"	"	10'-5"	36	8'-6"	1.313	7-1/2"	5'-0"	10'-4"	13	10'-6"	10	8	Var.	6	13'-10"	30	417	8.93	1.13	0.603	4,606	64.89	5,214	72.73	10	13'-0"	12'-0"							
11	2'-0"	16"	7'-6"	3'-5"	10'-0"	3/8" x 13"	13'-8"	3/8" x 13"	14'-3"	12"	6-1/2"	3'-7"	2'-8"	4-1/2"	1 1/2" x 9"	2'-0"	3'-4"	5.91	0.903	3.03	1-1/2"	4'-3"	3'-10"	15	4'-5"	4	2	6'-3"	2	6'-7"	12	136	2.48	1.22	0.466	3,271	36.01	3,810	41.43	11	14'-8"	13'-8"						
12	2'-6"	20"	7'-6"	3'-11"	10'-0"	"	13'-8"	"	14'-3"	12"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	6'-7"	26	4'-7"	0.940	3-3/4"	5'-0"	4'-9"	15	4'-4"	4	2	6'-3"	2	7'-4"	12	162	3.06	1.22	0.484	3,380	39.39	3,930	44.03	12	14'-8"	13'-8"							
13	3'-0"	30"	8'-6"	4'-3"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	7'-11"	30	4'-7"	1.092	4-3/4"	5'-0"	5'-11"	15	5'-7"	5	2	6'-3"	4	8'-11"	16	189	3.64	1.25	0.503	3,640	42.56	4,225	48.75	13	15'-0"	14'-0"							
14	4'-0"	48"	8'-6"	5'-3"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	8'-11"	30	5'-2"	1.135	5-3/4"	5'-0"	7'-5"	15	6'-10"	6	4	Var.	4	9'-11"	20	268	5.00	1.25	0.540	3,900	48.65	4,509	55.46	14	15'-0"	14'-0"							
15	5'-0"	60"	8'-6"	6'-5"	10'-0"	"	14'-4"	"	14'-11"	1-1/2"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	9'-11"	34	6'-9"	1.300	6'-0"	5'-0"	8'-10"	15	8'-11"	6	4	Var.	6	11'-0"	24	360	6.46	1.27	0.575	4,336	56.94	4,890	64.74	15	15'-0"	14'-0"							
16	6'-0"	72"	8'-6"	7'-5"	10'-0"	"	14'-4"	"	14'-11"	1-1/2"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	10'-1"	38	7'-9"	1.399	7'-0"	5'-0"	10'-4"	15	9'-5"	9	6	Var.	6	12'-6"	28	447	8.93	1.30	0.619	4,715	65.17	5,407	73.56	16	15'-0"	14'-0"							
17	2'-6"	20"	7'-6"	3'-5"	10'-0"	3/8" x 14"	13'-8"	3/8" x 14"	14'-3"	12"	6-1/2"	3'-7"	2'-8"	4-1/2"	1 1/2" x 9"	2'-0"	3'-4"	5.91	1.368	3.03	1-1/2"	4'-4"	4'-11"	15	5'-7"	5	2	6'-3"	4	7'-6"	14	210	3.68	1.37	0.587	3,525	33.88	3,952	42.09	17	16'-0"	15'-0"						
18	3'-0"	30"	8'-6"	4'-3"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	8'-11"	32	4'-7"	1.411	4'-2"	5'-0"	7'-3"	10	5'-8"	5	2	6'-3"	4	8'-5"	16	231	4.38	1.37	0.605	3,223	36.63	3,672	43.16	18	16'-0"	15'-0"							
19	4'-0"	48"	8'-6"	5'-3"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	9'-11"	36	6'-0"	1.514	5'-2"	5'-0"	7'-7"	6'-8"	10	7'-0"	7	4	Var.	4	9'-5"	20	325	5.90	1.37	0.642	3,617	43.10	4,299	48.19	19	16'-0"	15'-0"						
20	5'-0"	60"	8'-6"	6'-5"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	10'-1"	40	7'-0"	1.683	6'-2"	5'-0"	9'-0"	7'-8"	8'-3"	8	6	Var.	4	11'-3"	24	409	7.51	1.39	0.677	6,049	71.82	6,987	81.92	20	16'-0"	15'-0"							
21	6'-0"	72"	8'-6"	7'-5"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	11'-4"	40	8'-0"	1.780	7'-2"	5'-0"	10'-6"	9'-11"	10	9'-6"	9	6	Var.	6	12'-8"	28	502	10.17	1.62	0.722	6,354	80.40	7,314	91.08	21	16'-0"	15'-0"						
22	7'-0"	84"	8'-6"	8'-5"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	12'-4"	44	9'-0"	1.880	8'-3"	5'-0"	10'-10"	10	10'-10"	10	8	Var.	6	14'-2"	32	589	12.45	1.62	0.759	7,023	88.20	8,020	99.48	22	16'-0"	15'-0"							
23	8'-0"	100"	8'-6"	9'-5"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	13'-4"	48	10'-0"	2.039	9'-2"	5'-0"	11'-7"	10	12'-11"	12	8	Var.	8	15'-7"	36	697	14.82	1.63	0.794	7,580	98.11	8,621	104.84	23	16'-0"	15'-0"							
24	2'-6"	20"	7'-6"	3'-5"	10'-0"	3/8" x 12"	13'-8"	3/8" x 12"	14'-3"	12"	6-1/2"	3'-7"	2'-8"	4-1/2"	1 1/2" x 9"	2'-0"	3'-4"	5.91	1.726	3.03	1-1/2"	5'-6"	4'-8"	23	5'-2"	5	2	6'-3"	4	7'-8"	14	240	4.35	1.90	0.690	6,746	68.11	7,870	78.63	24	16'-0"	15'-0"						
25	3'-0"	30"	8'-6"	4'-10"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	9'-6"	38	5'-7"	1.898	7.97	4'-3"	6'-3"	8'-3"	23	5'-10"	5	2	6'-3"	4	8'-5"	16	264	5.73	1.90	0.708	6,853	71.08	7,987	81.86	25	16'-0"	15'-0"						
26	4'-0"	48"	8'-6"	5'-10"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	10'-6"	42	6'-3"	1.995	8'-3"	5'-0"	7'-8"	6'-7"	23	7'-11"	7	4	Var.	4	9'-10"	20	365	6.74	1.90	0.743	7,267	77.67	8,442	89.07	26	16'-0"	15'-0"						
27	5'-0"	60"	8'-6"	6'-10"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	11'-6"	42	7'-3"	2.038	9'-0"	5'-0"	9'-11"	7'-11"	23	8'-4"	9	6	Var.	4	11'-4"	24	455	8.59	1.93	0.780	7,632	86.31	8,840	99.33	27	16'-0"	15'-0"						
28	6'-0"	72"	8'-6"	7'-10"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	12'-6"	46	8'-9"	2.169	9'-3"	5'-0"	10'-7"	8'-3"	23	9'-7"	9	6	Var.	6	12'-9"	28	556	11.32	1.96	0.823	8,039	95.66	9,285	108.67	28	16'-0"	15'-0"						
29	7'-0"	84"	8'-6"	8'-10"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	13'-6"	50	9'-3"	2.268	9'-3"	5'-0"	12'-11"	10'-5"	23	10'-7"	11	8	Var.	6	14'-3"	32	647	13.72	1.96	0.860	8,766	103.74	10,251	117.34	29	16'-0"	15'-0"						
30	8'-0"	100"	8'-6"	9'-10"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	14'-6"	50	10'-3"	2.428	9'-3"	5'-0"	13'-7"	11'-9"	23	12'-2"	12	8	Var.	8	15'-9"	36	744	16.37	1.97	0.897	9,227	112.20	10,332	123.77	30	16'-0"	15'-0"						
31	9'-0"	120"	8'-6"	10'-10"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	15'-6"	54	11'-3"	2.599	10'-3"	5'-0"	15'-0"	13'-0"	24	13'-5"	13	10	Var.	8	17'-2"	40	887	17.45	1.98	0.932	9,803	125.15	11,165	140.75	31	16'-0"	15'-0"						
32	10'-0"	150"	8'-6"	11'-10"	10'-0"	"	14'-0"	"	14'-7"	14"	6-1/2"	3'-7"	2'-8"	4-1/2"	"	16'-6"	58	12'-3"	2.710	11'-3"	4'-6"	16'-6"	14'-9"	24	14'-9"	14	12	Var.	8	18'-8"	44	1,122	19.43	1.98	0.969	10,367	134.32	11,762	151.18	32	16'-0"	15'-0"						

All slab reinforcing steel shall be supported on approved metal supports.
General Notes
All exposed edges shall have 1/4" chamfer.
All reinforcing steel shall be deformed round bars. The design and table are based upon net areas of bars as follows - 3/8" - 0.1963 sq. in. 1/2" - 0.3068 sq. in. 5/8" - 0.442 sq. in. Other sizes may be used provided they are spaced so as to give as much net sectional area per ft. width of slab. Plans showing such changed



**LOAD AND RESISTANCE FACTOR DESIGN
(NEW CONSTRUCTION ONLY)**

DESIGN DATA:
 CLASS "AA" CONCRETE $F'_C = 4,000$ PSI
 REINFORCING STEEL $F_Y = 60,000$ PSI

LOADING: HL-93

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2014 EDITION, WITH 2016 INTERIMS.

THE FOLLOWING STANDARDS SHALL BE REQUIRED:

SBI-4-2

GENERAL NOTES:
 COMPLY WITH THE REQUIREMENTS OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT WHERE MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

CONCRETE:
 ALL CONCRETE SHALL BE CLASS AA CONCRETE. ALL CONCRETE EDGES SHALL HAVE A 1 1/2" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. ALL CHAMFER STRIPS SHALL BE SIZED LUMBER.

REINFORCING STEEL:
 ALL REINFORCING STEEL SHALL BE GRADE 60 AND HAVE A 2" MINIMUM CLEARANCE UNLESS OTHERWISE SHOWN ON THE PLANS.

REINFORCING STEEL IN BOTTOM SLAB SHALL BE SUPPORTED ON BAR CHAIRS. THE TOP CHAIR SUPPORTS SHALL BE AT THE ELEVATION OF THE BOTTOM OF FOOTING. REINFORCING STEEL IN THE TOP SLAB SHALL BE SUPPORTED ON SLAB SPACERS. REINFORCING STEEL IN THE WALLS SHALL BE HELD IN PLACE BY METAL CHAIRS. MAXIMUM SPACING OF CHAIRS SHALL BE ON 6'-0" CENTERS. COST OF METAL CHAIRS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

NOTES:
 ALL STATIONING FOLLOWS C.R.L. N1780, UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION.

FOR CHANNEL WORK DETAILS, SEE PLAN AND PROFILE SHEETS AND CROSS-SECTIONS (ROADWAY ITEMS).

SEE SHEET X063 FOR FLOWLINES.

ITEM "REMOVAL OF HEADWALL" SHALL INCLUDE THE STRIPPING OF CONCRETE AND EXPOSING REINFORCING FOR BOND, THE REMOVAL AND DISPOSAL OF THE WINGS, APRON, CURTAIN WALL, HEADWALL AND A PORTION OF BARREL OF THE EXISTING 2-6'X2' RCB AT C.R.L. N1780 STA 199+41.10 AS SHOWN IN THE PLANS.

ALL MATERIALS REMOVED FROM THE EXISTING STRUCTURE SHALL BECOME PROPERTY OF THE CONTRACTOR.

VERIFICATION OF EXISTING CONDITIONS:
 ALL STATIONS, OFFSETS, FLOW LINES AND DIMENSIONS OF THE EXISTING RCB'S SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS NECESSARY TO CONNECT THE NEW MATERIAL AND SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY THEREOF.

BIDDERS SHALL FULLY INFORM THEMSELVES OF THE NATURE OF THE WORK AND CONDITION UNDER WHICH IT WILL BE PERFORMED. THE CONTRACTOR SHALL ADOPT METHODS CONSISTENT WITH GOOD CONSTRUCTION PRACTICES AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THE EXISTING RCB OR ATTACHMENTS. ANY DAMAGE TO THE EXISTING RCB STRUCTURE DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

SEE SHEET R039 FOR ADDITIONAL CONSTRUCTION NOTES.

BM#110-3/4" IRON PIN IN SOUTH
 R.O.W. FENCE
 STA. 1622+04.89, \odot SURVEY S.H. 15
 70.67' RT. ELEV. = 2178.14

RCB EXTENSION PLAN
 SCALE 1" = 4'

BM#109-3/4" IRON PIN IN SOUTH
 R.O.W. FENCE
 STA. 1631+31.14, \odot SURVEY S.H. 15
 101.09' RT. ELEV. = 2174.02

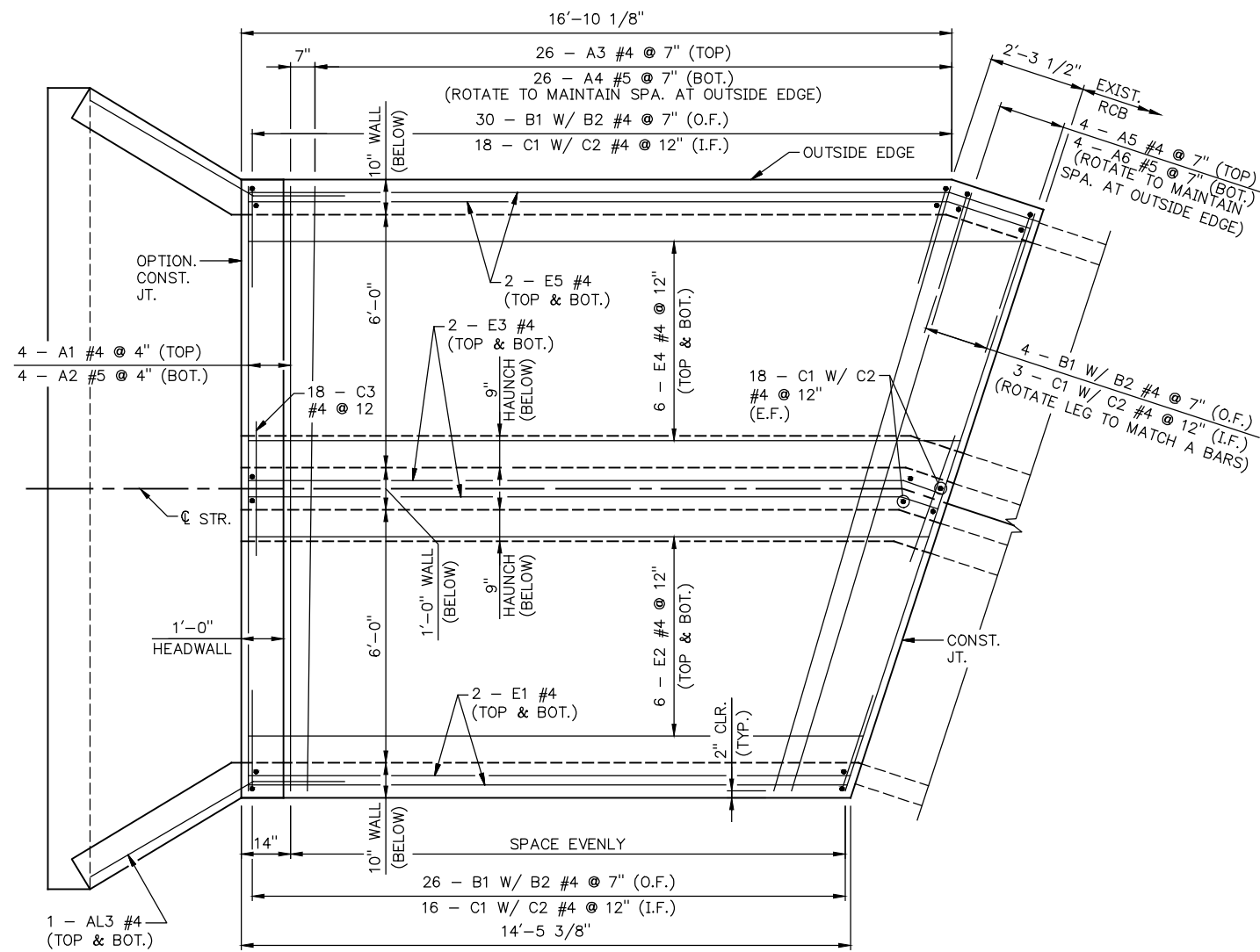
- (1) STRIP CONCRETE AND EXPOSE LONGITUDINAL STEEL TO THIS LINE FOR BOND.

SUMMARY OF QUANTITIES - STRUCTURE NO. 12				
DESCRIPTION	UNIT	WEST BARREL [1]	EAST BARREL [1]	TOTAL
UNCLASSIFIED EXCAVATION [2]	CY	73.00	65.00	138.00
STRUCTURAL EXCAVATION UNCLASSIFIED	CY	13.00	10.00	23.00
REMOVAL OF HEADWALL	EA	1.00	1.00	2.00
CLASS AA CONCRETE	CY	28.40	21.40	49.80
REINFORCING STEEL	LB	4,380.00	3,430.00	7,810.00

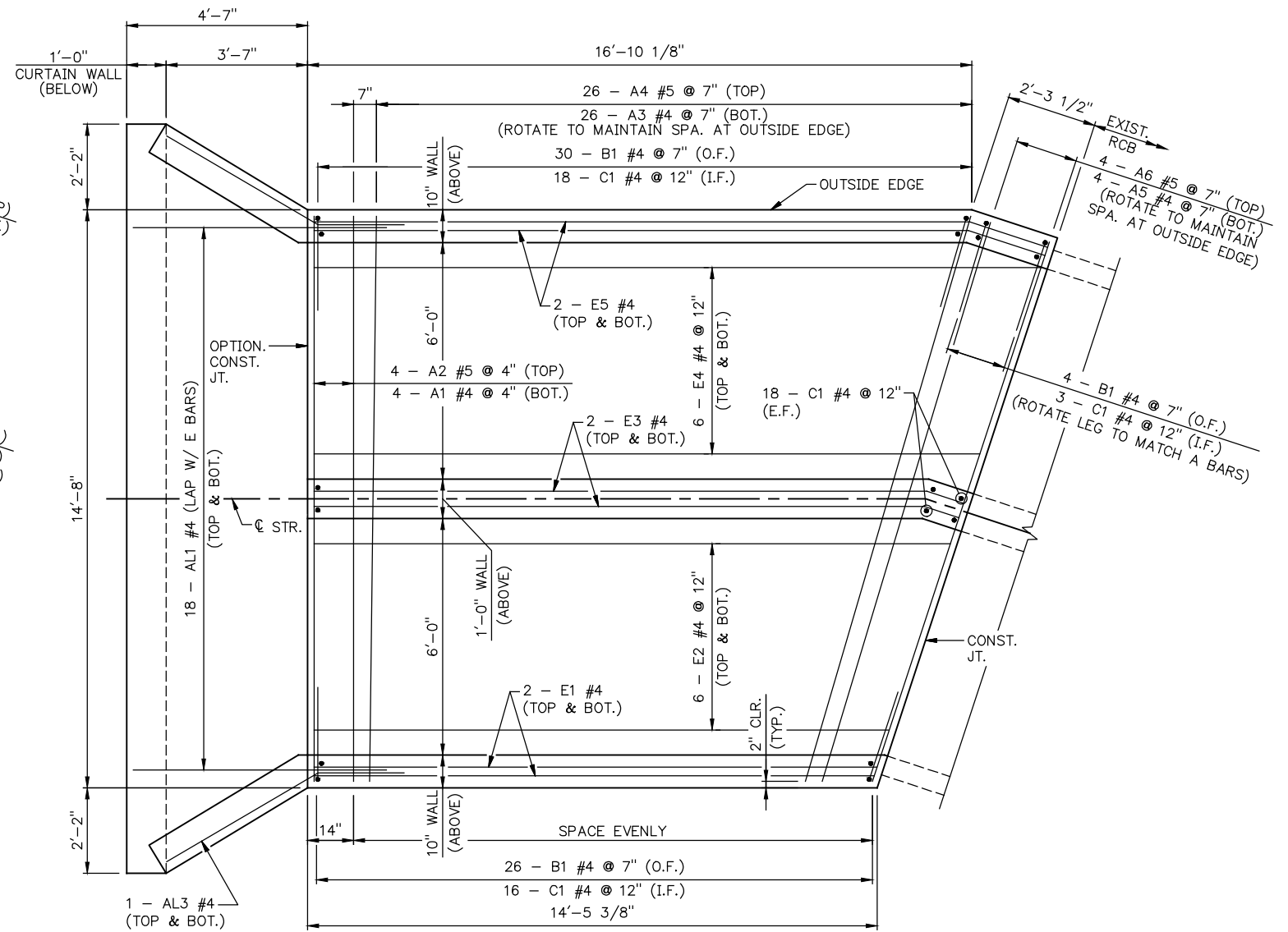
- [1] INCLUDES HEADWALL, WING WALLS, APRON, AND CURTAIN WALL.
- [2] FIGURED IN ACCORDANCE WITH THE DETAILS SHOWN ON STD. SBI-4-2, WITH AN ADDITIONAL 4' OF EXCAVATION FROM THE REMOVAL LINE TOWARD THE C.R.L. OF N1780 ROAD. ANY ADDITIONAL EXCAVATIONS, SHEET PILING, OR OTHER EARTH RETAINING STRUCTURES REQUIRED FOR OR DURING CONSTRUCTION TO BE INCLUDED IN OTHER ITEMS OF WORK.

EXTEND 2-6'X2' RCB WITH APRONS AND 4' CURTAIN WALLS, SKEWED 17°06'41" L.F.

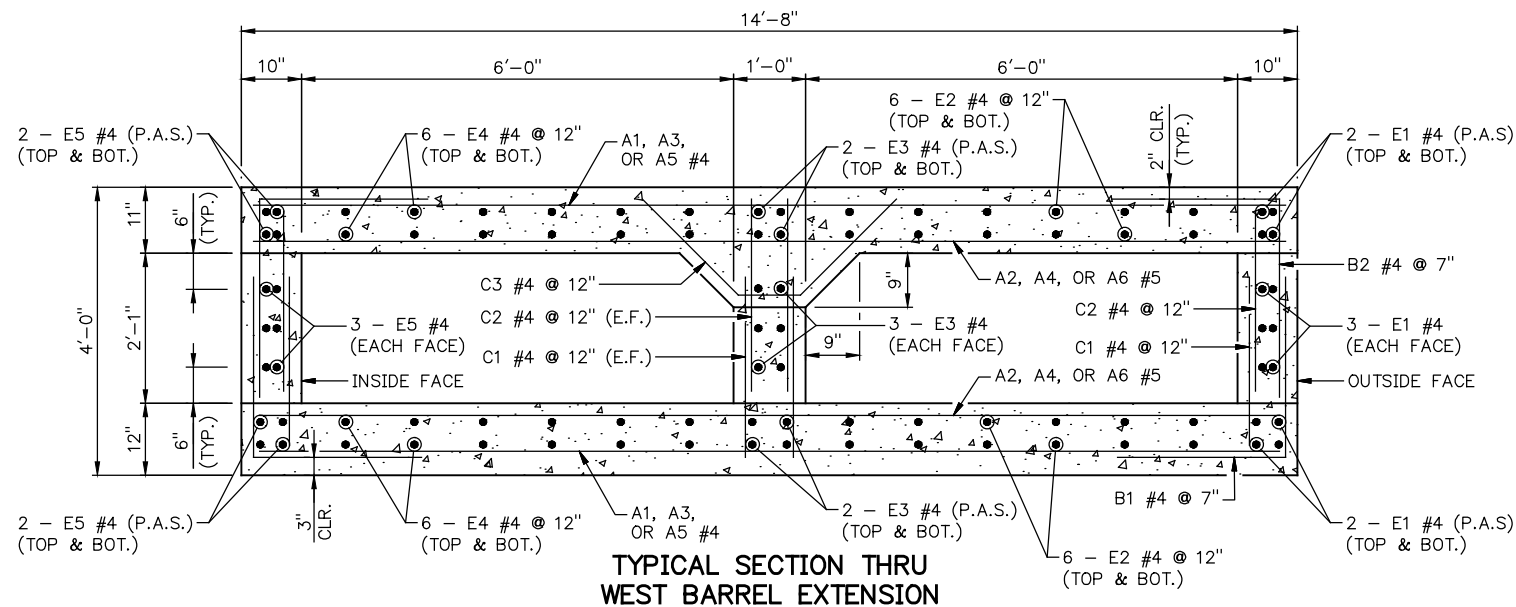
STRUCTURE NO. 12 DETAILS
 (DETAIL 1 OF 5)



**WEST BARREL EXTENSION
TOP SLAB REINFORCING PLAN**
(HEADWALL WALL REINFORCING NOT SHOWN FOR CLARITY)



**WEST BARREL EXTENSION
BOTTOM SLAB REINFORCING PLAN**
(CURTAIN WALL AND APRON REINFORCING NOT SHOWN FOR CLARITY)

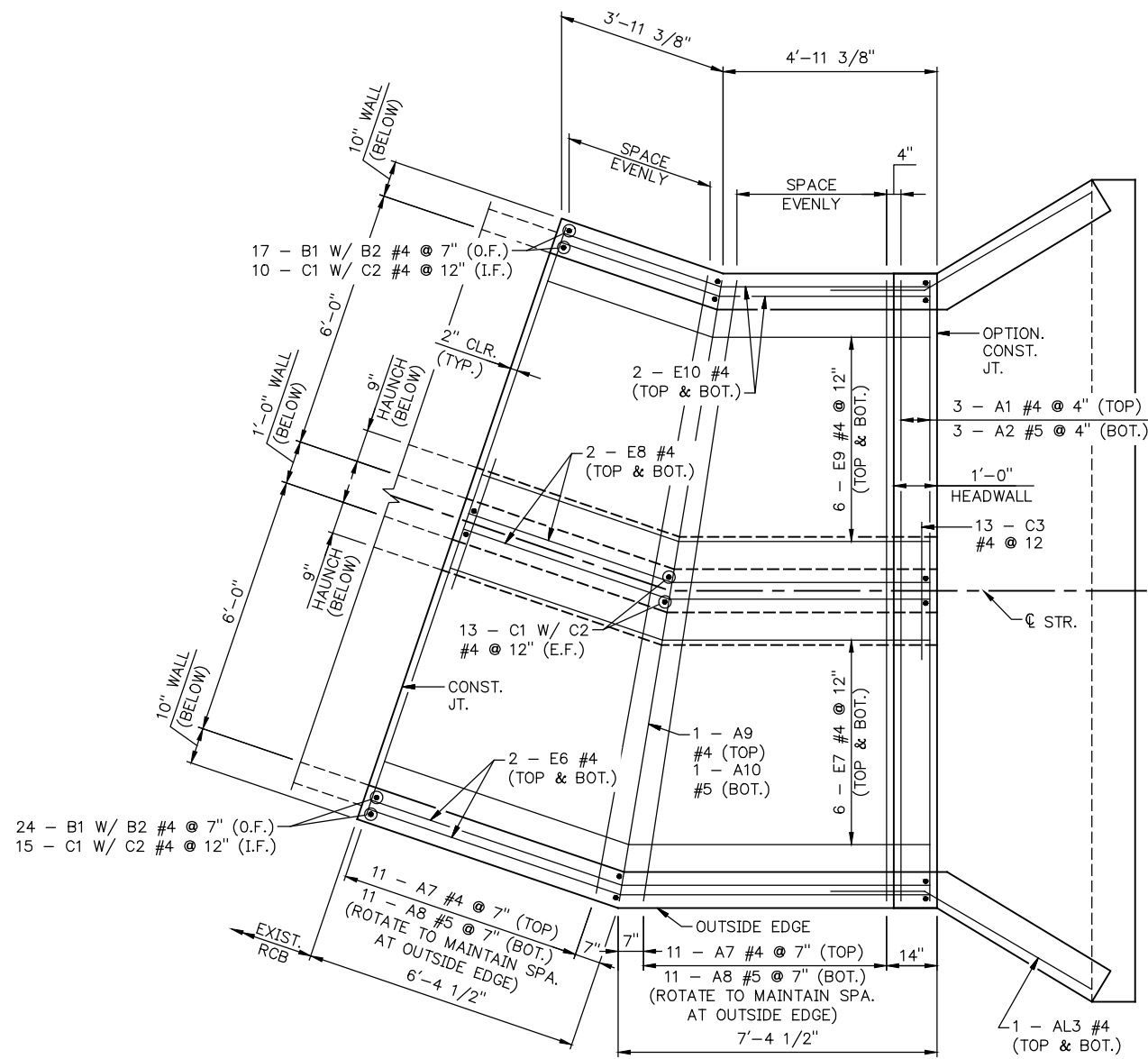


**TYPICAL SECTION THRU
WEST BARREL EXTENSION**

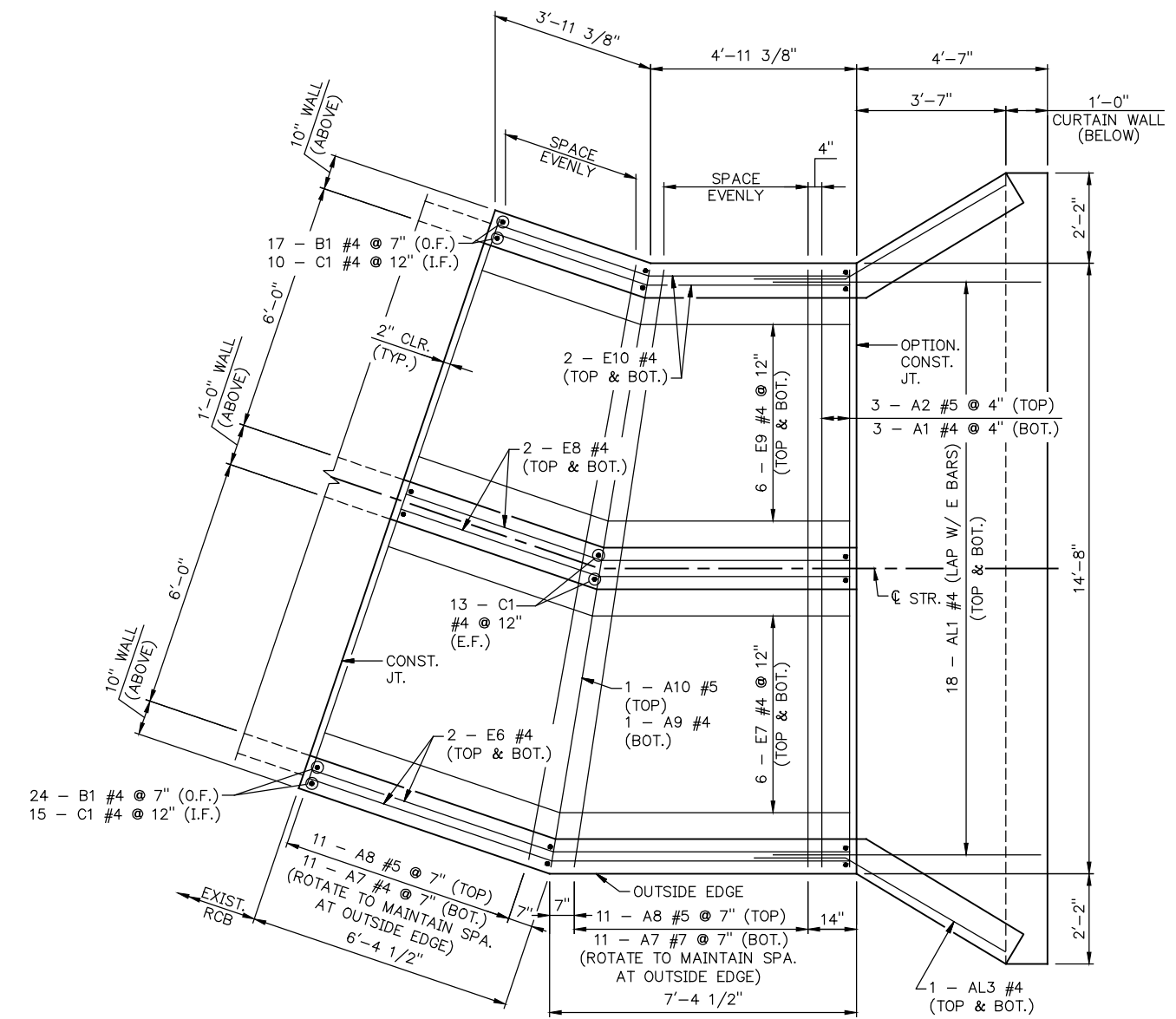
- NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 F.F. - DENOTES FILL FACE
 O.F. - DENOTES OUTSIDE FACE
 P.A.S. - DENOTES PLACED AS SHOWN

STRUCTURE NO. 12 DETAILS
(DETAIL 2 OF 5)

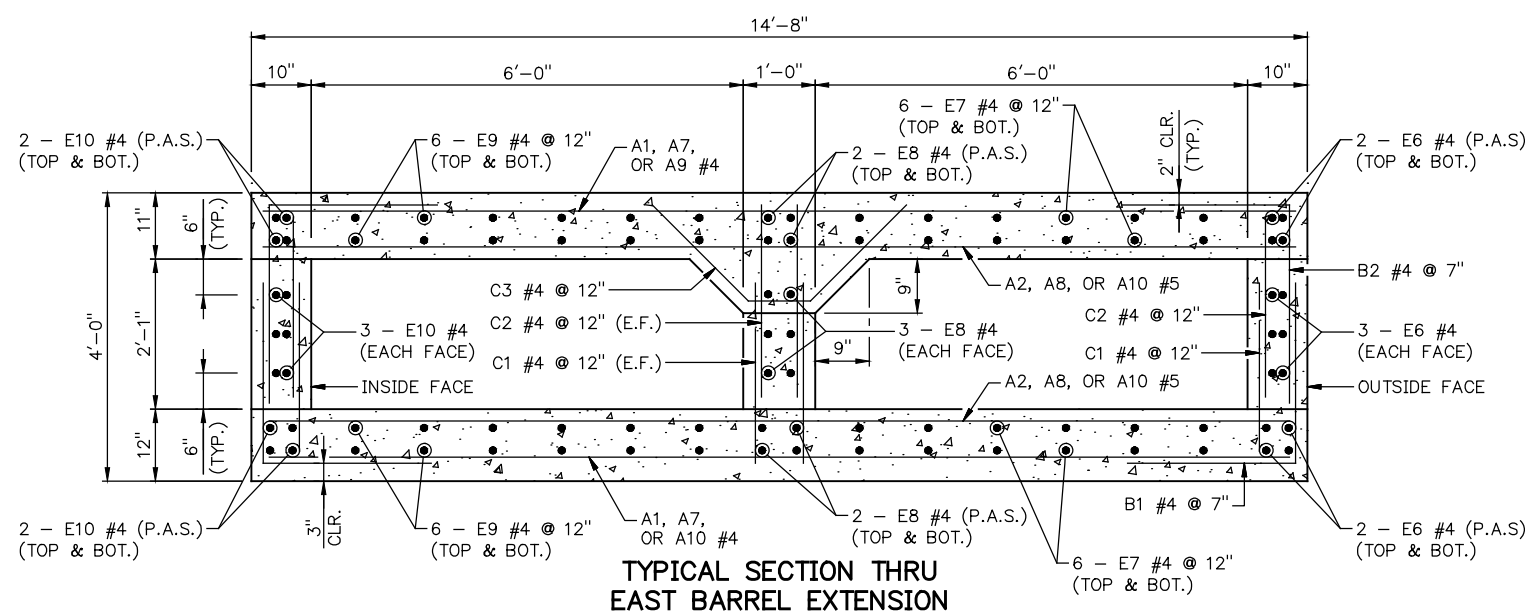
State Job No. 29674(04) Sheet No. R041



**EAST BARREL EXTENSION
TOP SLAB REINFORCING PLAN**
(HEADWALL WALL REINFORCING NOT SHOWN FOR CLARITY)



**EAST BARREL EXTENSION
BOTTOM SLAB REINFORCING PLAN**
(CURTAIN WALL AND APRON REINFORCING NOT SHOWN FOR CLARITY)

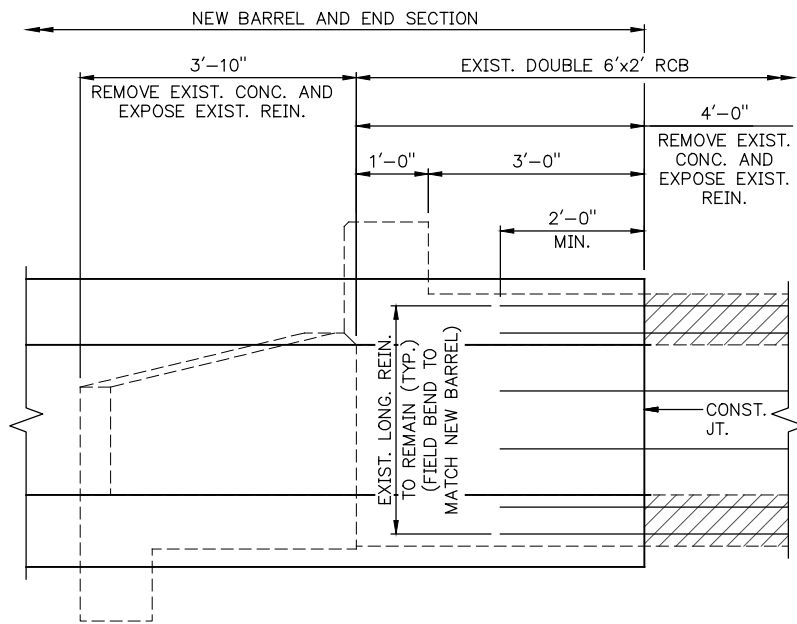


**TYPICAL SECTION THRU
EAST BARREL EXTENSION**

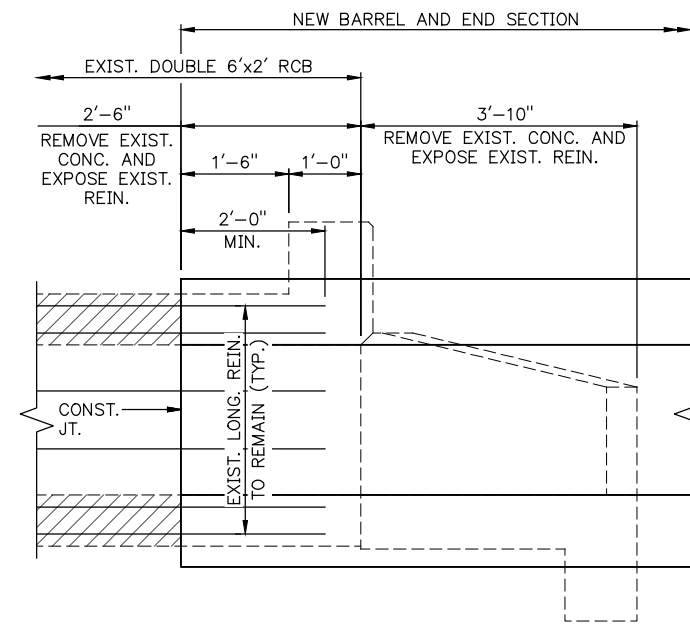
NOTES:
E.F. - DENOTES EACH FACE
I.F. - DENOTES INSIDE FACE
F.F. - DENOTES FILL FACE
O.F. - DENOTES OUTSIDE FACE
P.A.S. - DENOTES PLACED AS SHOWN

STRUCTURE NO. 12 DETAILS
(DETAIL 3 OF 5)

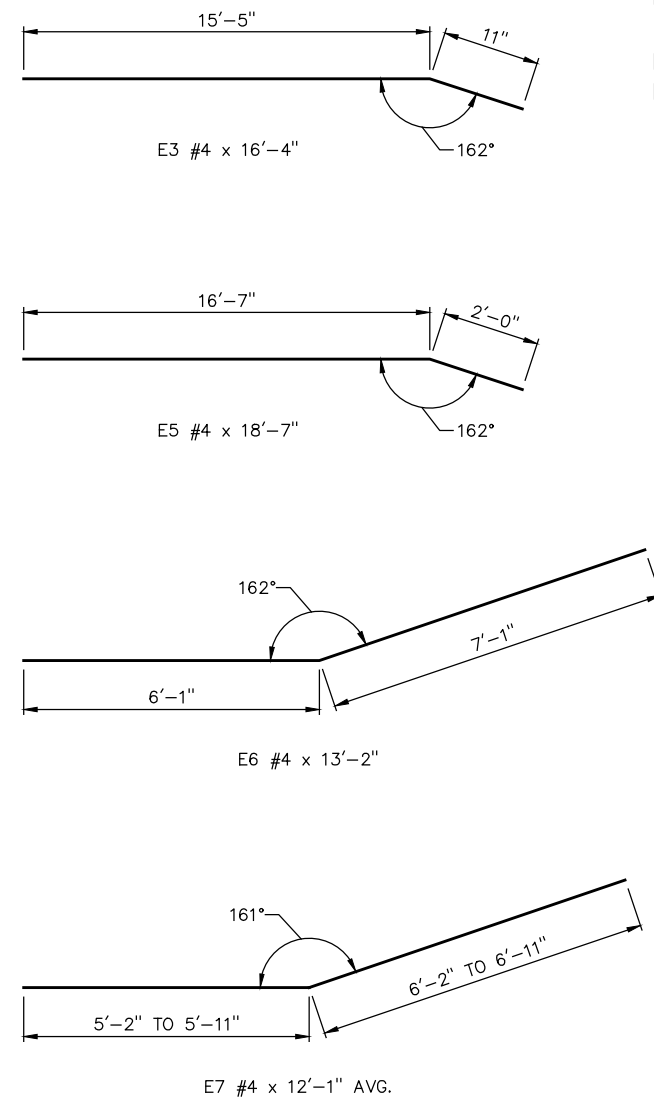
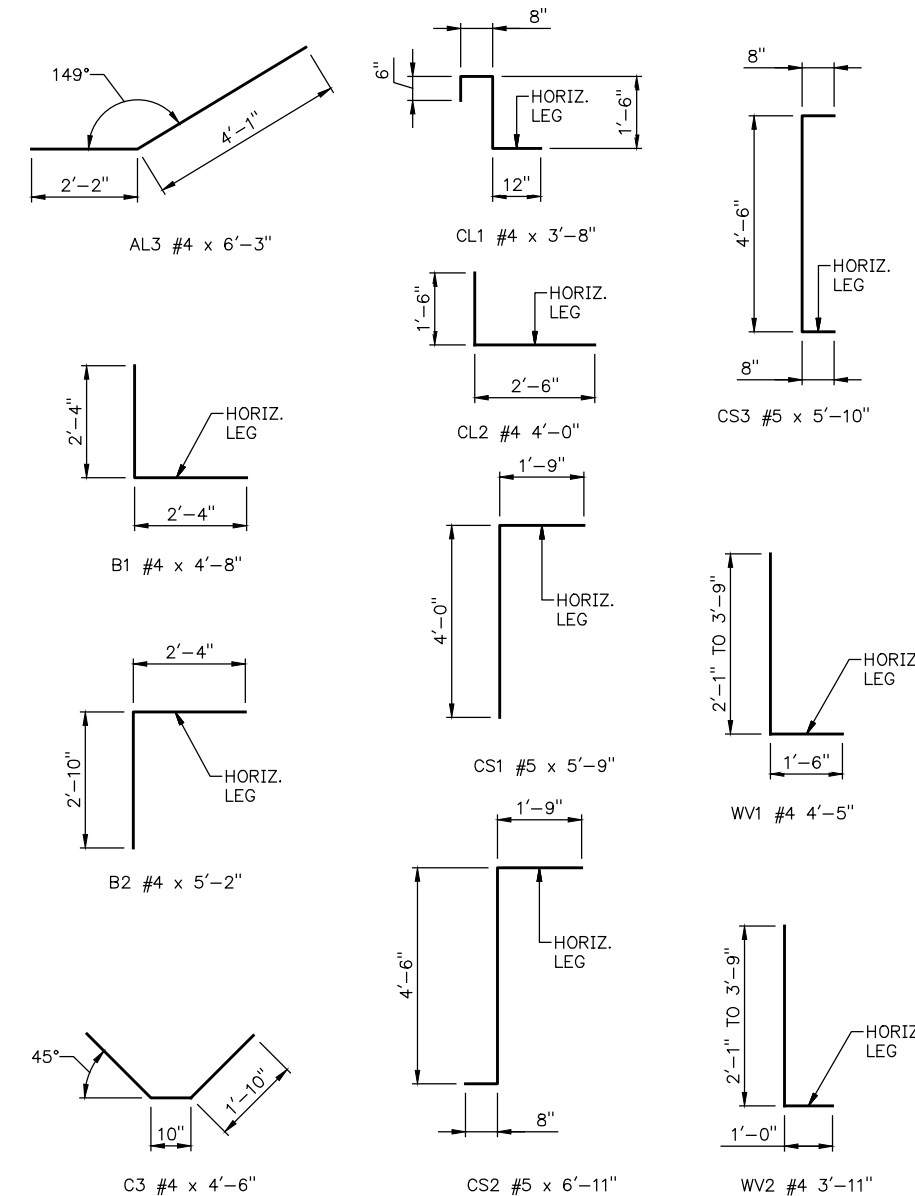
State Job No. 29674(04) Sheet No. R042



TYPICAL SECTION THRU WEST BARREL EXTENSION CONNECTION



TYPICAL SECTION THRU EAST BARREL EXTENSION CONNECTION



WEST BARREL EXTENSION BAR LIST					
(STRUCTURE NO. 12)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
A1	8	#4	STR.	14' - 4"	
A2	8	#5	STR.	14' - 4"	
[1] A3	52	#4	STR.	14' - 7" AVG.	14' - 4" TO 14' - 10"
[1] A4	52	#5	STR.	14' - 7" AVG.	14' - 4" TO 14' - 10"
A5	8	#4	STR.	14' - 6" AVG.	14' - 4" TO 14' - 8"
A6	8	#5	STR.	14' - 6" AVG.	14' - 4" TO 14' - 8"
B1	60	#4	BNT.	4' - 8"	
B2	60	#4	BNT.	5' - 2"	
C1	73	#4	STR.	2' - 1"	
C2	73	#4	STR.	2' - 10"	
C3	18	#4	BNT.	4' - 6"	
CH1	4	#4	STR.	14' - 4"	
CL1	16	#4	BNT.	3' - 8"	
CL2	16	#4	BNT.	4' - 0"	
E1	14	#4	STR.	14' - 2"	
[2] E2	24	#4	STR.	15' - 4" AVG.	14' - 7" TO 16' - 1"
[2] E3	14	#4	BNT.	16' - 4"	
[2] E4	24	#4	STR.	17' - 7" AVG.	16' - 10" TO 18' - 4"
E5	14	#4	BNT.	18' - 7"	

[1] INCLUDES TWO (2) SETS OF TWENTY-SIX (26) BARS EACH.
 [2] INCLUDES FOUR (4) SETS OF SIX (6) BARS EACH.

EAST BARREL EXTENSION BAR LIST					
(STRUCTURE NO. 12)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
A1	6	#4	STR.	14' - 4"	
A2	6	#5	STR.	14' - 4"	
[1] A7	44	#4	STR.	14' - 5" AVG.	14' - 4" TO 14' - 6"
[1] A8	44	#5	STR.	14' - 5" AVG.	14' - 4" TO 14' - 6"
A9	2	#4	STR.	14' - 6"	
A10	2	#5	STR.	14' - 6"	
B1	41	#4	BNT.	4' - 8"	
B2	41	#4	BNT.	5' - 2"	
C1	51	#4	STR.	2' - 1"	
C2	51	#4	STR.	2' - 10"	
C3	13	#4	BNT.	4' - 6"	
CH1	4	#4	STR.	14' - 4"	
CL1	16	#4	BNT.	3' - 8"	
CL2	16	#4	BNT.	4' - 0"	
E6	14	#4	BNT.	13' - 2"	
[2] E7	24	#4	BNT.	12' - 1" AVG.	11' - 4" TO 12' - 10"
E8	14	#4	BNT.	10' - 10"	
[2] E9	24	#4	BNT.	9' - 9" AVG.	9' - 0" TO 10' - 6"
E10	14	#4	BNT.	8' - 6"	

[1] INCLUDES FOUR (4) SETS OF ELEVEN (11) BARS EACH.
 [2] INCLUDES FOUR (4) SETS OF SIX (6) BARS EACH.

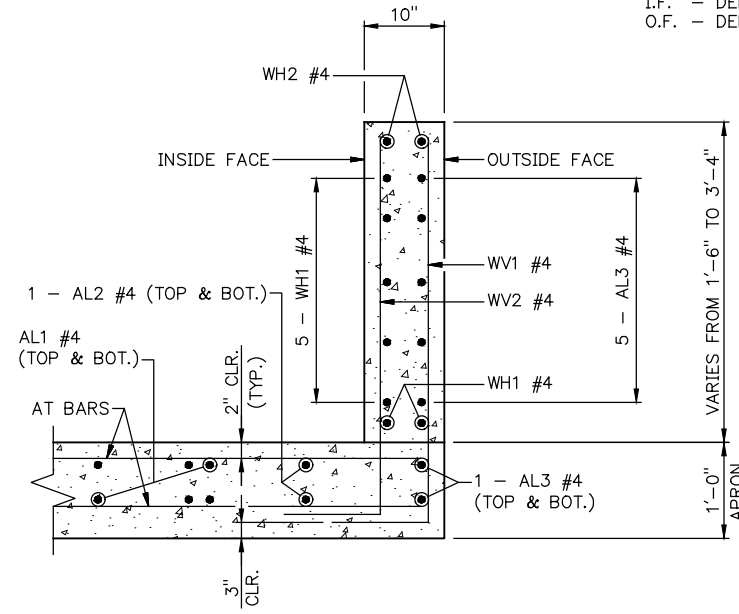
APRON BAR LIST					
(INCLUDES CURTAIN WALL)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
AL1	36	#4	STR.	6' - 7"	
AL2	4	#4	STR.	2' - 7"	
AL3	4	#4	BNT.	6' - 3"	
AT1	12	#4	STR.	18' - 8"	
[1] AT2	8	#4	STR.	16' - 4" AVG.	14' - 5" TO 18' - 3"
CS1	20	#5	BNT.	5' - 9"	
CS2	20	#5	BNT.	6' - 11"	
CS3	4	#5	BNT.	5' - 10"	

[1] INCLUDES TWO (2) SETS OF FOUR (4) BARS EACH.

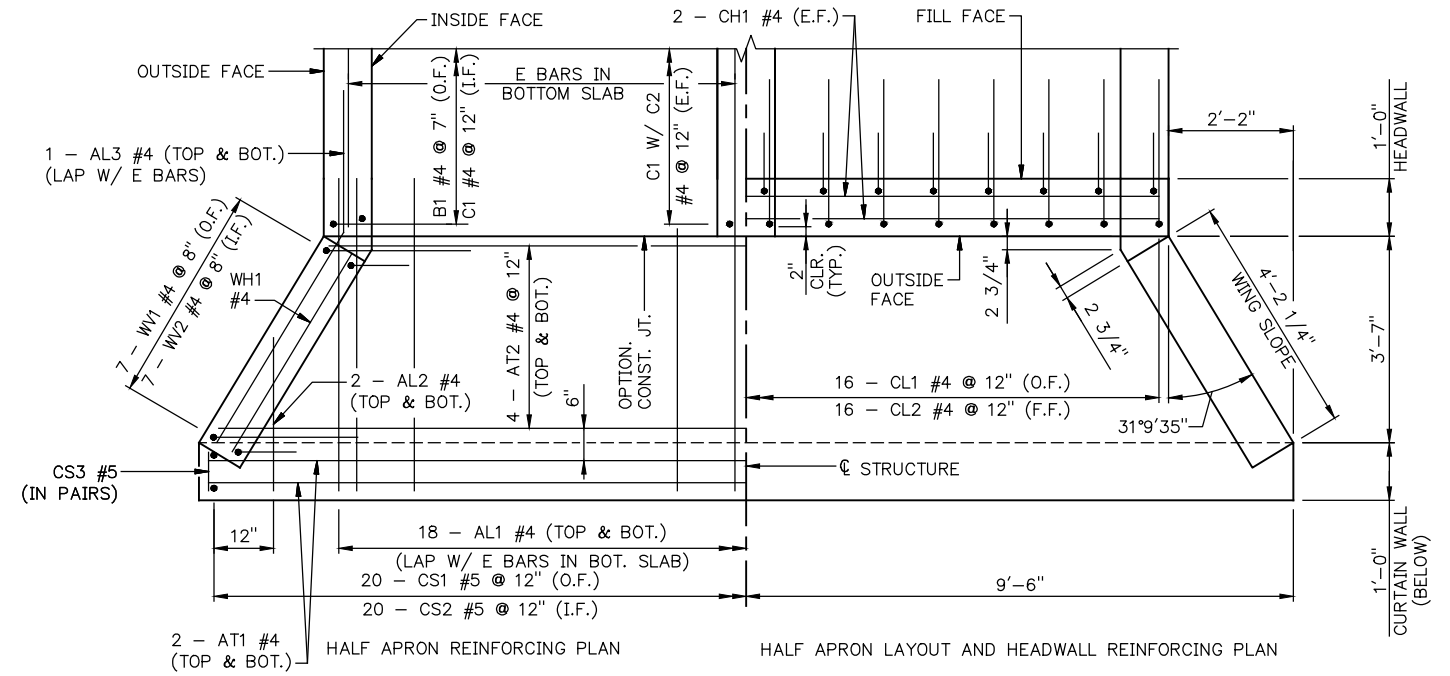
WING WALL BAR LIST					
(ONE WING WALL SHOWN; TWO REQUIRED PER END SECTION)					
MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
WH1	7	#4	STR.	3' - 10"	
WH2	2	#4	STR.	4' - 2"	
AL3	5	#4	BNT.	6' - 3"	
WV1	7	#4	BNT.	4' - 5" AVG.	3' - 7" TO 5' - 3"
WV2	7	#4	BNT.	3' - 11" AVG.	3' - 1" TO 4' - 9"

STRUCTURE NO. 12 DETAILS
 (DETAIL 4 OF 5)

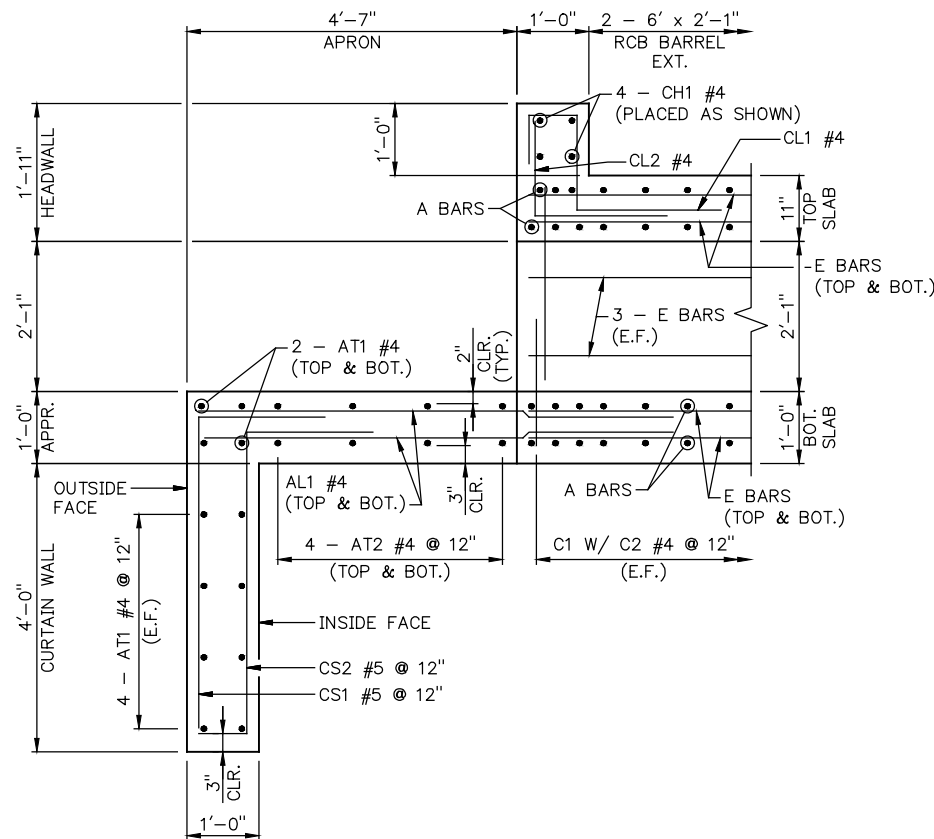
NOTES:
 E.F. - DENOTES EACH FACE
 I.F. - DENOTES INSIDE FACE
 O.F. - DENOTES OUTSIDE FACE



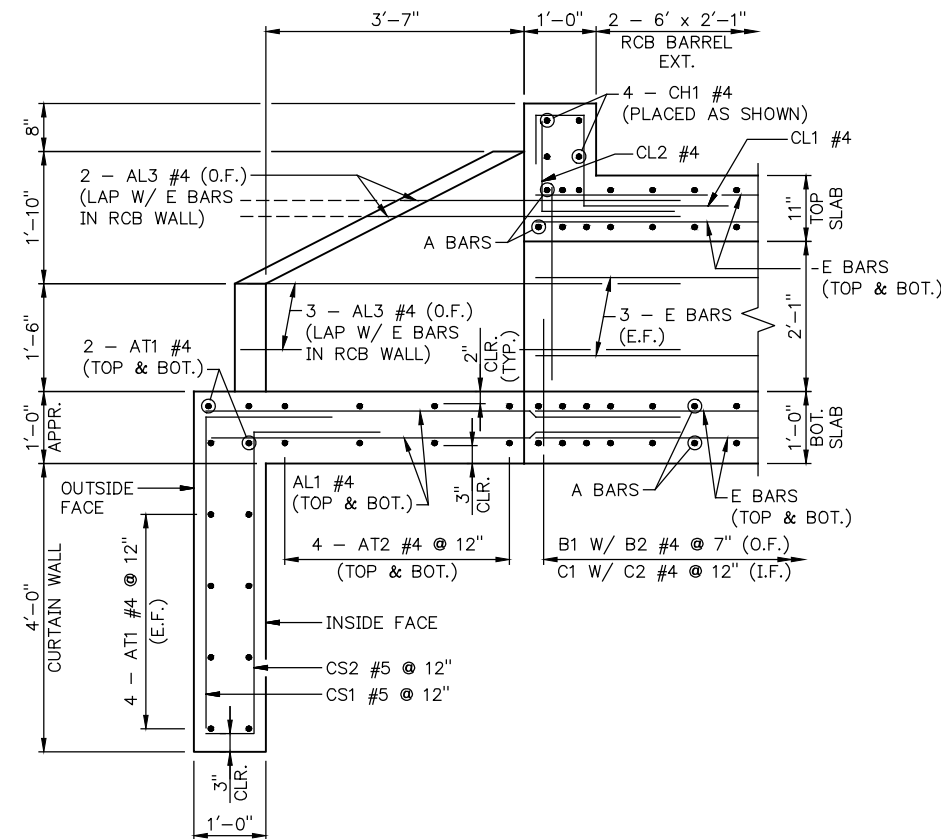
TYPICAL SECTION THRU WING WALL



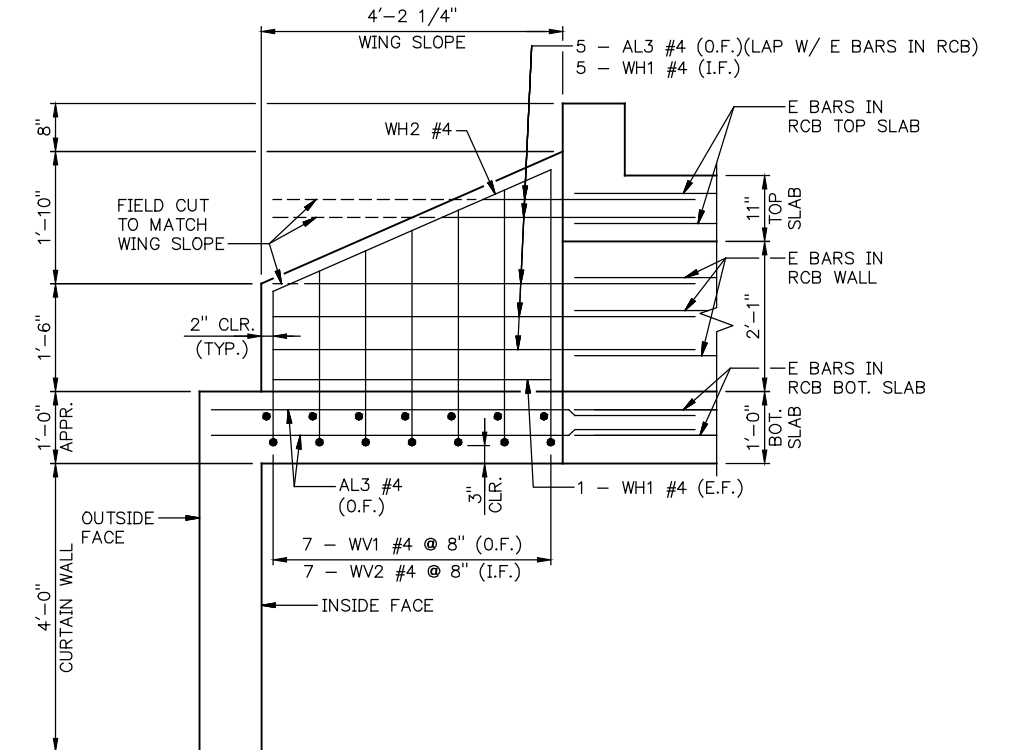
END SECTION PLAN



END SECTION DETAIL AT INTERIOR WALL

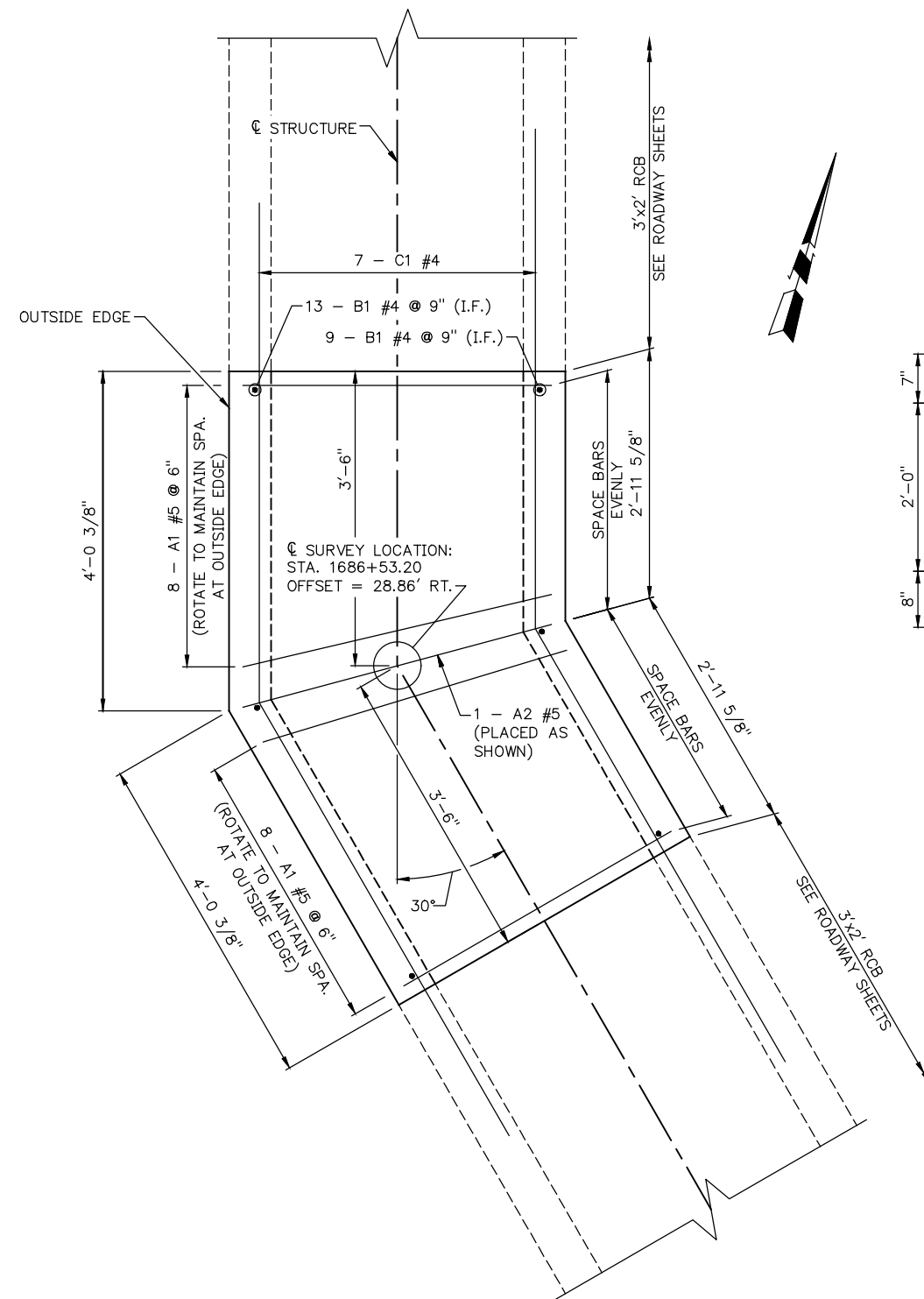


END SECTION DETAIL AT EXTERIOR WALL

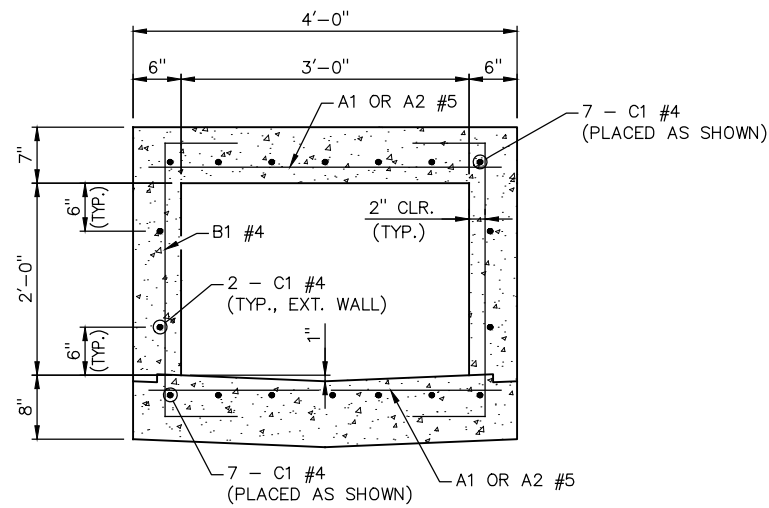


TYPICAL WING WALL ELEVATION
 (WEST ABUTMENT WING WALL SHOWN SHOWN FROM FILL SIDE, MIRROR FOR EAST END SECTION)

STRUCTURE NO. 12 DETAILS
 (DETAIL 5 OF 5)



BARREL BEND PLAN AND REINFORCING DETAIL



BARREL SECTION DETAIL

GENERAL NOTES:
 COMPLY WITH THE REQUIREMENTS OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT WHERE MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

CONCRETE:
 ALL CONCRETE SHALL BE CLASS A CONCRETE. ALL CONCRETE EDGES SHALL HAVE A 1 1/2" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. ALL CHAMFER STRIPS SHALL BE SIZED LUMBER.

REINFORCING STEEL:
 ALL REINFORCING STEEL SHALL BE GRADE 60 AND HAVE A 2" MINIMUM CLEARANCE UNLESS OTHERWISE SHOWN ON THE PLANS.

REINFORCING STEEL IN BOTTOM SLAB SHALL BE SUPPORTED ON BAR CHAIRS. THE TOP CHAIR SUPPORTS SHALL BE AT THE ELEVATION OF THE BOTTOM OF FOOTING. REINFORCING STEEL IN THE TOP SLAB SHALL BE SUPPORTED ON SLAB SPACERS. REINFORCING STEEL IN THE WALLS SHALL BE HELD IN PLACE BY METAL CHAIRS. MAXIMUM SPACING OF CHAIRS SHALL BE ON 6'-0" CENTERS. COST OF METAL CHAIRS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

NOTES:
 ALL STATIONING FOLLOWS C SURVEY S.H.15, UNLESS NOTED OTHERWISE.

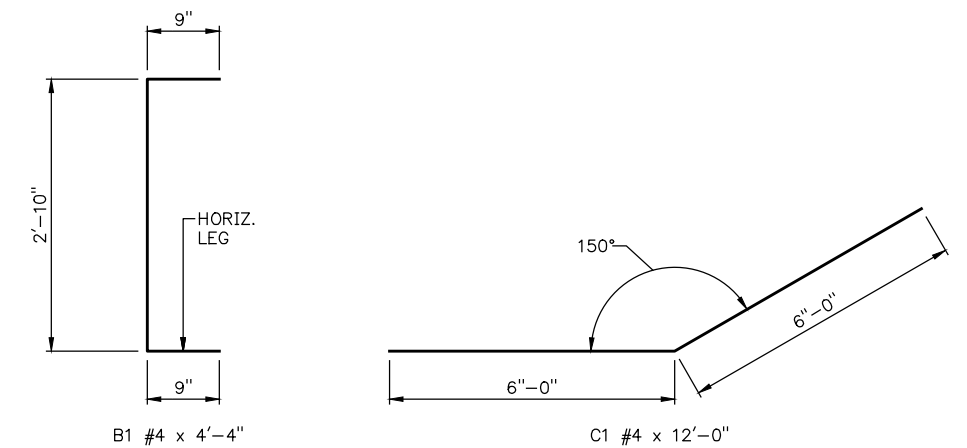
THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION.

FOR CHANNEL WORK DETAILS, SEE PLAN AND PROFILE SHEETS AND CROSS-SECTIONS (ROADWAY ITEMS).

SEE SHEET R038 ADDITIONAL CONSTRUCTION NOTES.

SEE SHEET AR06 AND X043 FOR FLOWLINES.

SEE SHEET AR06 FOR STRUCTURE NO. 16 QUANTITIES.



BAR BEND DETAIL

BARREL BEND SECTION BAR LIST

(STRUCTURE NO. 16)

MARK	NO.	SIZE	FORM	LENGTH	REMARKS
PLAIN REINFORCING BARS					
[1]	A1	32	#5 STR.	3'-9" AVG.	3'-8" TO 3'-10"
	A2	2	#5 STR.	3'-10"	
	B1	22	#4 BNT.	4'-4"	
	C1	18	#4 BNT.	12'-0"	

[1] INCLUDES FOUR (4) SETS OF EIGHT (8) BARS EACH.

STRUCTURE NO. 16 DETAILS
 (DETAIL 1 OF 1)

State Job No. 29674(04) Sheet No. R045

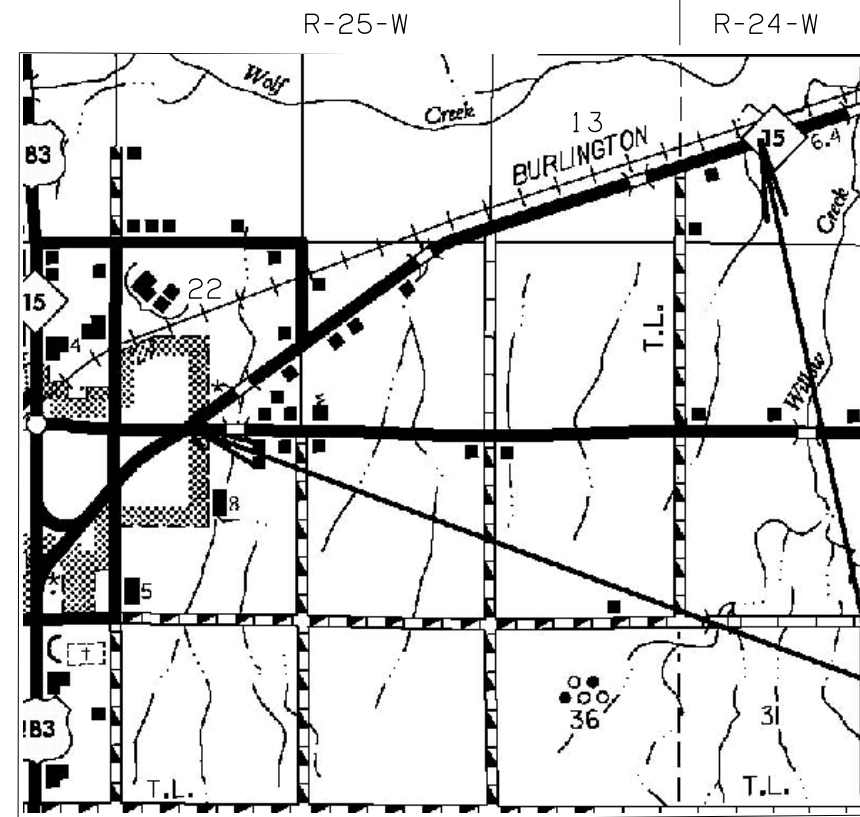
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

SURVEY OF
S.H. 15
SWO 5012(1)
J P NO. 29674(04)
ELLIS

S.H.15 FROM 1ST STREET IN SHATTUCK
NORTHEAST 3.53 MILES

PROJECT LOCATION



PROJECT EXTENTS

PROJECT LENGTH 18,596 Ft. 3.5219 MI.

1. TITLE SHEET & SURVEYORS CERTIFICATION
2. HISTORICAL LETTER & WRITTEN REPORT
3. ALIGNMENT REPORT & PRIMARY CONTROL MAP
4. LEVEL DATA SHEET
5. PRIMARY CONTROL DATA
6. COGO POINTS LIST
- 7-14. SURVEY DATA SHEETS
- 15-22. LAND TIE DATA SHEETS

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SWO 5012(1) J/P 29674(04) ; _____ CO. Ellis

HORIZONTAL CONTROL:
 Oklahoma Coordinate System of 1927 _____ Zone.
 Oklahoma Coordinate System of 1983 North Zone.
 Oklahoma Dept. of Transportation Plane Coordinate System of 1927 _____ Zone.
 Oklahoma Dept. of Transportation Plane Coordinate System of 1983 _____ Zone.
 Arbitrary Coordinate System

HORIZONTAL PLANE DATUM DEFINITION:
 Oklahoma Department of Transportation coordinates were derived by multiplying the Oklahoma Coordinate Systems of 1927 or 1983 by the combined adjustment factor of 1.00010. The ODOT Coordinate System is 2350 feet above sea level.

1. Primary adjusted to HARN and HARNs (B) Order _____
 Stations _____
 A) Closure before adjustment X _____ ; Y _____ Angles _____
 Trav. Length _____ No. Angles _____ ; 1:
 B) _____ ; is _____ Order before adjustment.
 C) Method of Distance Measurement:
 Electronic GPS Triangulation Chained
 Instrument used for angles Leica GPS Equipment
 D) _____
 2. Secondary adjusted to Primary () Order _____
 Stations _____
 A) Closure before adjustment X _____ ; Y _____ Angles _____
 B) _____ ; is _____ Order; _____ Tied to _____
 C) Method of Distance Measurement:
 Electronic GPS Triangulation Chained
 Instrument used for angles Topcon Hyperlite

VERTICAL CONTROL 3rd order. Level Line taken from _____
 order and tied to _____ order. NGVD 29 datum NAVD 88 datum

ACCURACY DEFINITION:
 (1) HORIZONTAL: (3rd Order = Class I = 1 : 10,000')
 (3rd Order = Class II = 1 : 5,000')
 (2) VERTICAL: (1st Order = 0.017 Ft. x sqrt. of MI.) (2nd Order = 0.035 Ft. x sqrt. of MI.)
 (3rd Order = 0.050 Ft. x sqrt. of MI.)

Distribution:
Copy w/survey reports
Copy in each Alignment
and level book

(FORM SD #20)
Rev. 11/03

Randall A. Mansfield
Professional Land Surveyor
Date FEBRUARY 21, 2015

SURVEY BEGAN: May 1, 2014
SURVEY COMPLETED: February 21, 2015

PERSONNEL
 RANDALL MANSFIELD, PROFESSIONAL LAND SURVEYOR
 CHRISTOPHER L. TRIPP, PROFESSIONAL LAND SURVEYOR
 GUY MURPHY, FIELD CREW CHIEF
 JAKE CLARKSON, FIELD CREW CHIEF
 JOSH HARRYMAN, FIELD CREW CHIEF
 JEFF HOUSER, INSTRUMENTMAN
 MATT OVERALL, INSTRUMENTMAN

DODSON THOMPSON MANSFIELD, PLLC
20 N.E. 38TH STREET
OKLAHOMA CITY, OK 73105
405-601-7402

EQUIPMENT:
LEICA GPS EQUIPMENT
TOPCON HYPERLITE
TRIMBLE DIGITAL LEVEL

LINE TYPE LEGEND
 --- SECTION LINES
 --- QUARTER SECTION LINES
 --- PRESENT RIGHT OF WAY
 --- CURVE TANGENT LINE

SCALES
 1" = 100' & 1" = 50'
 SURVEY DATA SHEETS 1" = 100' & 1" = 50'
 LAND TIE DATA SHEETS 1" = 500'

THIS SURVEY MEETS THE OKLAHOMA MINIMUM STANDARDS FOR THE PRACTICE OF LAND SURVEYING AS ADOPTED BY THE OKLAHOMA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS, MAY 17, 2010.

SPECIFICATIONS FOR SURVEYS FOR PRIMARY AND SECONDARY HIGHWAYS DATED JANUARY 2011 GOVERN.
SDS 1 OF 22

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STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

No. SWO 5012(1) Job/Piece 29674(04) E.C. 1475

LAND SURVEYOR'S CERTIFICATION

I hereby certify that all land and property sub-division distances, angles, corners, and monumentation made or used in conjunction with this survey and depicted or recorded herein or hereon were recovered, established or re-established in substantial conformity with:

- Applicable instructions contained in the U.S. Government Bureau of Land Management publication "Manual of Survey Instruction",
- Its supplement, "Restoration of Lost or Obliterated Corners and Sub-division of Sections";
- "Oklahoma Minimum Standards for the Practice of Land Surveying" as adopted by the State Board of Licensure for Professional Engineers and Land Surveyors; and
- Sound land surveying practices;

including a thorough search, study, analysis and consideration of all existing records and field evidence.

I further certify that all survey monuments depicted exist and that all land survey work was done by me or under my direct supervision.

Dated this 21st day of February, 2015

Land Surveyor *Randall A. Mansfield*
Signature
 Randall A. Mansfield
Printed Name
 Oklahoma Licensed Land Surveyor No. 1613
 Certificate of Authorization No. 6391

OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
PLS	RAM		SURVEY DATA SHEET
DRAWN	RDJ		
CHECKED	CLT		
APPROVED	RAM		
CREW	GUY		
SWO <u>5012</u> (1) PROJECT NO. <u>29674(04)</u> SHEET NO. <u>1</u>			

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				

DESCRIPTION	REVISIONS	DATE

Historical Letter & Written Report

1. General:

Survey Began: May 1, 2014
 Survey Completed: February 21, 2015

Personnel on this survey:

Randall Mansfield, Professional Land Surveyor
 Christopher L. Tripp, Professional Land Surveyor
 Guy Murphy, Field Crew Chief
 Jake Clarkson, Field Crew Chief
 Josh Harryman, Field Crew Chief
 Jeff Houser, Instrumentman
 Jesse Powers, Instrumentman
 Matt Overall, Instrumentman

2. Purpose:

Furnish sufficient data to develop plans to widen and resurface existing S.H. 15 southwest of Gage.

3. Limits:

State Highway 15: Begins at Sta. 1523+72 (E-W 51) as established under SWO 1092, SWO 4035(1) and shown on NRWR-5, SEC. 3 plans and extends northeasterly to P.O.T. Sta. 1337+42.58 as established by NRWR-5, SEC. 3 plans, approximately 3.5219 miles in length.

4. Stationing and Alignment:

S.H.15: Centerline taken from SWO 1092, SWO 4035(1) and shown on NRWR-5, SEC. 3 plans. Stationing to begin at E-W 51 Section line with a value of 1523+72 and increase northerly to end.

5. Sections and Rights of Way:

For this survey, Sections 13, 14, 21, 22, 23, 24 and 27, Township 21 North, Range 25 West and Section 18, Township 21 North, Range 24 West of the Indian Meridian were bounded and recovered per specifications and statute. Rights of Way for this project were determined from existing surveys, plats and deeds of record.

6. Property Owners:

Property lines and ownership information were taken from deeds and instruments filed separately, obtained from Ellis County Records and applied to the survey based on the established Section lines.

7. Horizontal and Vertical Datum:

Horizontal: Oklahoma State Plane Coordinate System (North Zone) NAD 83 using NGS Station "Gageport" and NGS Station "Yealy" and BM No. 101 from SWO 4633(1) survey.

Vertical: NAVD 88 using NGS Station "Gageport".

Horizontal and vertical control benchmarks were set along the project with vertical elevations verified and/or adjusted by digital level as shown.

8. Topography:

Acting as a Sub-contractor, this firm used conventional surveying methods to obtain survey and surface data only in the areas designated by the client for inclusion of said data into the clients LIDAR and Aerial Mapping data.

9. Cross Section/DTM:

Not performed by this company. A limited amount of surface data was obtained during the course of this survey by field conventional methods and provided to the client.

10. Measurement Units:

The distances, coordinates and elevations shown on this survey are in U.S. Feet. All angles and bearings are in degrees, minutes and seconds.

11. Photo Control:

Aerial targets were set per specifications and provided to the client.

12. Underground Storage Tanks/Hazardous Waste Sites:

There were no visible hazardous waste sites encountered during this survey. There were no visible underground storage tanks encountered during this survey.

13. Utilities:

Call "Okie" was notified to locate utilities in the project area. Observable and flagged utilities were located and incorporated into the drawing file.

14. Land Ties:

Land ties were recovered and/or established. Oklahoma Certified Corner Records were executed and mailed per specifications.

15. Drainage:

Drainage areas were not computed on this project by this company.

16. Data Submitted:

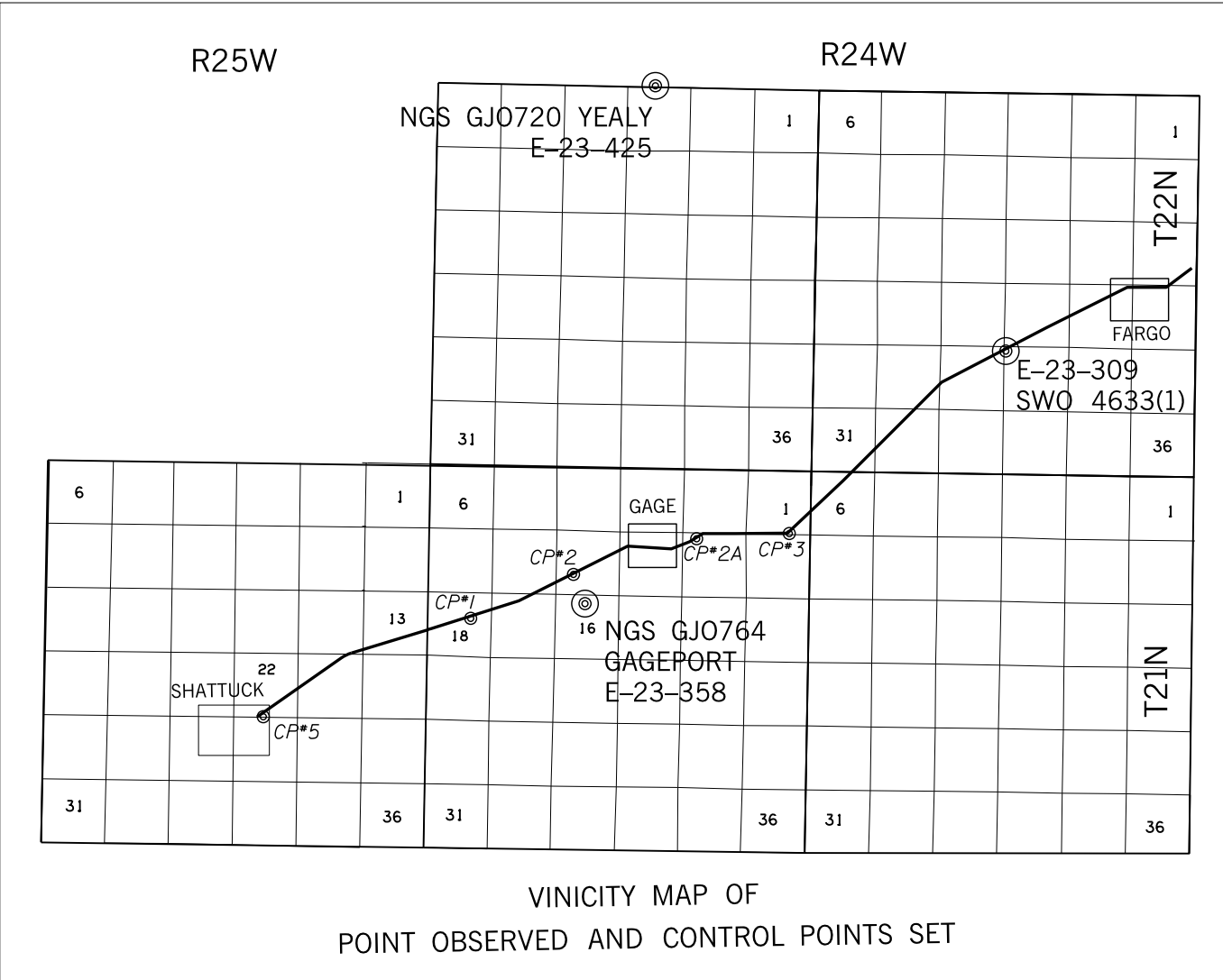
1. ODOT forms SD-11, Survey Control.
2. ODOT form SD-41, Surveyor's Certification
3. ODOT form SD-20, Control and Accuracy
4. COGO points data list
5. Check level data
6. Alignment Report
7. Historical Letter
8. Location Map
9. SWO drawing file, SFF and TOPO DGN (limited scope) drawing files
10. ALG alignment file

PLS	RAM		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	RDJ		
CHECKED	CLT		
APPROVED	RAM		
CREW	GUY		
			SURVEY DATA SHEET
			SWO 5012 (d) PROJECT NO. 29674(04) SHEET NO. S2

Horizontal Alignment Review Report

Alignment Name: A001

	Station	Northing	Easting
Element: Linear			
POB 300	1523+72.00	469644.8508	1418081.9105
PC 301	1608+64.26	474510.2758	1425042.2352
Tangential Direction:	N 55°02'44.08" E		
Tangential Length:	8492.26		
Element: Circular			
PC 301	1608+64.26	474510.2758	1425042.2352
PI 310	1613+25.28	474774.4081	1425420.0947
CC 302		472162.1561	1426683.6242
PT 303	1617+78.47	474906.6656	1425861.7412
Radius:	2864.93		
Delta:	18°17'00.00" Right		
Degree of Curvature (Arc):	1°59'59.65"		
Length:	914.21		
Tangent:	461.02		
Chord:	910.34		
Middle Ordinate:	36.39		
External:	36.86		
Tangent Direction:	N 55°02'44.08" E		
Radial Direction:	S 34°57'15.92" E		
Chord Direction:	N 64°11'14.08" E		
Radial Direction:	S 16°40'15.92" E		
Tangent Direction:	N 73°19'44.08" E		
Element: Linear			
PT 303	1617+78.47	474906.6656	1425861.7412
POE 304	1709+67.55	477542.8016	1434664.5759
Tangential Direction:	N 73°19'44.08" E		
Tangential Length:	9189.08		



GAGEPORT TO CP#2 LEVEL RUN USING TRIMBLE DINI 3D DIGITAL LEVEL						
BM / CP NO.	RUN 1	RUN 2	MEAN DIFFERENCE	ADJUSTED ELEVATION	PUBLISHED ELEVATION	DESCRIPTION / STATION-OFFSET
GAGEPORT					2182.000	NGS GAGEPORT G10764 (SOURCE)
TP 1	4.113	4.115	4.114	2177.886		STEEL ROD IN SLEEVE
TP 2	7.250	7.258	7.254	2170.627		
TP3	3.468	3.467	3.468	2174.094		
TP 4	0.602	0.602	0.602	2173.492		
TP 5	6.375	6.377	6.376	2179.868		
TP 6	6.803	6.805	6.804	2173.064		
TP 7	0.190	0.195	0.193	2173.167		
TP 8	4.738	4.739	4.739	2168.428		
TP 9	6.727	6.728	6.728	2161.701		
CP#2/BM#7	2.710	2.697	2.704	2158.997		END GAGEPORT TO HWY 15 RUN-3/4" IRON PIN

CP#1 TO CP#2 LEVEL RUN USING TRIMBLE DINI 3D DIGITAL LEVEL						
BM / CP NO.	RUN 1	RUN 2	MEAN DIFFERENCE	ADJUSTED ELEVATION	PUBLISHED ELEVATION	DESCRIPTION / STATION-OFFSET
CP#1					2165.690	CP#1 CARRIED FORWARD FROM GAGEPORT LOOP (SOURCE)
TP 1	3.178	3.179	3.179	2162.512		3/4" IRON PIN IN SOUTH R.O.W. FENCE
TP 2	1.050	1.038	1.044	2161.468		
BM 1	2.877	2.876	2.877	2158.591		3/4" IRON PIN IN SOUTH R.O.W. FENCE
TP 3	2.407	2.406	2.407	2160.998		
TP 4	1.872	1.875	1.874	2162.871		
BM 2	5.494	5.497	5.496	2157.376		3/4" IRON PIN IN SOUTH R.O.W. FENCE
TP 4	0.802	0.810	0.806	2158.182		
TP 5	0.634	0.635	0.635	2157.547		
TP 5	3.164	3.162	3.163	2160.710		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 3	0.194	0.195	0.195	2160.516		
TP 6	1.084	1.088	1.086	2159.430		
TP 7	1.449	1.452	1.451	2157.979		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 4	4.132	4.136	4.134	2162.113		
TP 8	1.720	1.715	1.718	2160.396		
TP 9	5.283	5.286	5.285	2165.680		3/4" IRON PIN
BM 5	3.071	3.069	3.070	2168.750		
TP 10	7.334	7.332	7.333	2161.417		
TP 11	1.713	1.711	1.712	2163.129		3/4" IRON PIN
BM 6	6.685	6.679	6.683	2156.447		
TP 12	0.608	0.606	0.607	2155.840		
TP 13	3.156	3.158	3.157	2158.997		3/4" IRON PIN-GAGEPORT LEVEL RUN END (SOURCE)

LEVEL RUN USING TRIMBLE DINI 3D DIGITAL LEVEL						
BM / CP NO.	RUN 1	RUN 2	MEAN DIFFERENCE	ADJUSTED ELEVATION	PUBLISHED ELEVATION	DESCRIPTION / STATION-OFFSET
CP#1					2165.690	Set Out from SWO 5012(1)-Gageport Level Run
TP 1	0.520	0.532	0.531	2165.160		
TP 1	0.516	0.514	0.515	2165.675		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 101	1.657	1.655	1.656	2167.331		Sta. 1710+78.71 93.86 RT.
TP 2	4.561	4.562	4.562	2162.769		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 102	3.720	3.716	3.718	2166.487		Sta. 1702+00.98 51.03 RT.
TP 3	4.112	4.110	4.111	2170.598		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 103	1.983	1.985	1.984	2172.582		Sta. 1692+26.61 50.08 RT.
TP 4	2.274	2.271	2.273	2170.310		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 104	1.424	1.420	1.422	2168.888		Sta. 1680+27.75 95.88 RT.
TP 5	1.671	1.679	1.675	2167.213		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 105	0.742	0.743	0.742	2167.954		Sta. 1670+85.21 98.37 RT.
TP 6	0.120	0.125	0.123	2167.832		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 106	1.107	1.101	1.104	2168.936		Sta. 1661+41.62 97.36 RT.
TP 7	1.643	1.640	1.642	2170.577		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 107	1.761	1.758	1.760	2173.333		Sta. 1651+55.38 99.19 RT.
TP 8	0.994	0.999	0.997	2173.216		
BM 108	0.118	0.117	0.118	2174.024		3/4" IRON PIN IN SOUTH R.O.W. FENCE
TP 9	1.342	1.340	1.341	2176.718		Sta. 1641+79.62 99.97 RT.
TP 10	0.534	0.532	0.533	2178.138		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 109	2.686	2.686	2.686	2181.330		Sta. 1631+31.14 101.09 RT.
TP 11	1.428	1.428	1.428	2184.410		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 110	3.193	3.191	3.192	2184.410		Sta. 1622+04.89 70.67 RT.
TP 12	3.070	3.082	3.081	2188.234		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 111	3.822	3.826	3.824	2188.561		Sta. 1609+94.64 81.05 RT.
TP 13	0.327	0.327	0.327	2193.171		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 112	4.611	4.609	4.610	2194.858		Sta. 1600+41.07 52.67 RT.
TP 14	1.687	1.687	1.687	2200.782		3/4" IRON PIN
BM 113	5.924	5.924	5.924	2204.197		Sta. 1589+42.62 51.99 RT.
TP 15	3.414	3.416	3.415	2209.398		3/4" IRON PIN
BM 114	5.200	5.202	5.201	2210.604		Sta. 1580+41.36 55.55 RT.
TP 16	1.208	1.204	1.206	2218.326		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 115	7.721	7.722	7.722	2216.088		Sta. 1569+94.23 52.67 RT.
TP 17	2.238	2.238	2.238	2209.703		3/4" IRON PIN IN SOUTH R.O.W. FENCE
BM 116	6.384	6.386	6.385	2211.195		Sta. 1559+01.70 64.99 RT.
TP 18	1.492	1.493	1.493	2206.919		3/4" IRON PIN
TP 19	4.276	4.275	4.277	2210.553		Sta. 1547+47.12 75.11 RT.
BM 117	3.634	3.635	3.635	2210.952		3/4" IRON PIN IN SOUTH R.O.W. FENCE
TP 20	0.997	0.400	0.999	2220.144		Sta. 1538+23.08 71.66 RT.
BM 118	9.193	9.191	9.192	2224.198		3/4" IRON PIN
TP 21	4.053	4.056	4.055	2233.076		Sta. 1532+28.74 74.41 RT.
BM 119	8.870	8.877	8.878	2241.481		3/4" IRON PIN
TP 22	8.403	8.406	8.405			Sta. 1523+84.09 42.67 RT. End Run

STATE OF OKLAHOMA S.D. FORM NO. 11
DEPARTMENT OF HIGHWAYS REVISED 3/10/75
SURVEY DIVISION
POSITION AND DESCRIPTION OF SURVEY MONUMENTS

COUNTY ELLIS STATION NUMBER E-23-358 SWO 5012 (1) DATE 5-7-14
 NGS: GAGEPORT GJ0764
 TYPE OF MONUMENT METAL ROD MARKED 1989 MONUMENT SET FOR HORIZ. & VERT.
 METHOD ESTABLISHED: TRILATERATION, TRIANGULATION, TRAVERS, OTHER (SPECIFY) CLASSIC GEODETIC METHODS AND ADJUSTED TO NGS IN NOVEMBER 1994
 HEIGHT OF INSTRUMENT ABOVE MONUMENT: 5 FEET, TYPE OF WITNESS POST _____
 WRITTEN DESCRIPTION OF LOCATION: 2.15 MILES SOUTHWEST OF GAGE AT GAGE MUNICIPAL AIRPORT, ALONG EAST SIDE AND NORTH END OF RUNWAY 17-35
 ESTABLISHED BY: NATIONAL GEODETIC SURVEY

COORDINATE SYSTEM: <input type="checkbox"/> USC&GS, <input type="checkbox"/> DHD, <input checked="" type="checkbox"/> OTHER (SPECIFY) <u>NAD 83</u>			
GRID DATA:	COORDINATES (FEET)	GRID BEARING	DISTANCE
NORTH ZONE	X <u>1446164.06</u>	EAST	29.5'
ACCURACY:		WNW	27.2'
3RD ORDER	Y <u>478948.15</u>	NW	40.4'
			POINTS OBSERVED
			<u>E-23-358</u>

GEODETTIC DATA		POSITION	ELEVATION
ANGLE OF VARIANCE @	LATITUDE		
<u>-1°02'53.46"</u>	<u>036°18'09.26033"</u>	<u>NORTH</u>	<u>2102</u> FEET
	LONGITUDE		SOURCE <u>NAVDB8</u>
	<u>099°46'34.12947"</u>	<u>WEST</u>	ACCURACY: <u>3RD</u> ORDER

GENERAL VICINITY:
SEC 16
R 24 W

T 21
N

△ = CONTROL MONUMENT
□ = LAND CORNER
□ = OTHER

DETAIL SKETCH:

STATE OF OKLAHOMA S.D. FORM NO. 11
DEPARTMENT OF HIGHWAYS REVISED 3/10/75
SURVEY DIVISION
POSITION AND DESCRIPTION OF SURVEY MONUMENTS

COUNTY ELLIS STATION NUMBER E-23-309 SWO 5012 (1) DATE 5-7-14
 NGS: BM 100 FROM SWO 4633 (1)
 TYPE OF MONUMENT ODOT 2" Brass Cap E-23-309 MONUMENT SET FOR HORIZONTAL
 METHOD ESTABLISHED: TRILATERATION, TRIANGULATION, TRAVERS, OTHER (SPECIFY) CONVENTIONAL METHODS
 HEIGHT OF INSTRUMENT ABOVE MONUMENT: 5 FEET, TYPE OF WITNESS POST _____
 WRITTEN DESCRIPTION OF LOCATION: 2" BRASS CAP IN A 6" POST LOCATED FROM THE JCT. OF S.H. 15 AND MAIN STREET IN FARGO, APPROXIMATELY 2.25 MILES SOUTHWEST ON SH 15 106' SOUTH OF SH 15, AS SHOWN ON SWO 4633(1) BY DARYL WILLIAMS, PLS 1444
 ESTABLISHED BY: DARYL WILLIAMS, PLS 1444

COORDINATE SYSTEM: <input type="checkbox"/> USC&GS, <input type="checkbox"/> DHD, <input checked="" type="checkbox"/> OTHER (SPECIFY) <u>STATE PLANE</u>			
GRID DATA:	COORDINATES (FEET)	GRID BEARING	DISTANCE
NORTH ZONE	X <u>1479990.1764</u>	N68°13'12.34"E	14,516.74
ACCURACY:			POINTS OBSERVED
3RD ORDER	Y <u>499060.8806</u>		<u>E-23-310</u>

GEODETTIC DATA		POSITION	ELEVATION
ANGLE OF VARIANCE @	LATITUDE		
<u>-0°58'46.00"</u>	<u>36° 21'42.12074"</u>	<u>NORTH</u>	<u>2124.37</u> FEET
	LONGITUDE		SOURCE <u>NAVD 88</u>
	<u>098° 39'33.08567"</u>	<u>WEST</u>	ACCURACY: <u>3rd</u> ORDER

GENERAL VICINITY:
SEC 27
R 23 W

T 22
N

△ = CONTROL MONUMENT
□ = LAND CORNER
□ = OTHER

DETAIL SKETCH:

STATE OF OKLAHOMA S.D. FORM NO. 11
DEPARTMENT OF HIGHWAYS REVISED 3/10/75
SURVEY DIVISION
POSITION AND DESCRIPTION OF SURVEY MONUMENTS

COUNTY ELLIS STATION NUMBER E-23-425 SWO 5012 (1) DATE 5-7-14
 NGS: YEALY GJ0720
 TYPE OF MONUMENT DISC MARKED YEALY 1963 MONUMENT SET FOR HORIZ. & VERT.
 METHOD ESTABLISHED: TRILATERATION, TRIANGULATION, TRAVERS, OTHER (SPECIFY) CLASSIC GEODETIC METHODS AND ADJUSTED TO NGS IN NOVEMBER 1994
 HEIGHT OF INSTRUMENT ABOVE MONUMENT: 5 FEET, TYPE OF WITNESS POST _____
 WRITTEN DESCRIPTION OF LOCATION: NORTH SIDE OF E 410 ROAD APPROX. 7.2 MILES NORTH OF GAGE ON HIGHWAY 46, RIGHT ON E 410 ROAD APPROX. 0.4 MILES
 ESTABLISHED BY: NATIONAL GEODETIC SURVEY

COORDINATE SYSTEM: <input type="checkbox"/> USC&GS, <input type="checkbox"/> DHD, <input checked="" type="checkbox"/> OTHER (SPECIFY) <u>NAD 83</u>			
GRID DATA:	COORDINATES (FEET)	GRID BEARING	DISTANCE
NORTH ZONE	X <u>1450993.27</u>	SSW	106'
ACCURACY:		N	28'
3RD ORDER	Y <u>521822.79</u>	S	8.5'
			POINTS OBSERVED
			<u>E-23-425</u>

GEODETTIC DATA		POSITION	ELEVATION
ANGLE OF VARIANCE @	LATITUDE		
<u>-1°02'17.06"</u>	<u>036°25'14.21858"</u>	<u>NORTH</u>	<u>2402.3</u> FEET
	LONGITUDE		SOURCE <u>NAVD 88</u>
	<u>099°45'32.42465"</u>	<u>WEST</u>	ACCURACY: <u>3RD</u> ORDER

GENERAL VICINITY:
SEC 34
R 24 W

T 23
N

△ = CONTROL MONUMENT
□ = LAND CORNER
□ = OTHER

DETAIL SKETCH:

List Coordinates Report

Point Name	Easting	Northing	Point Name	Easting	Northing
300	1418081.9105	469044.8508	7632	1425958.0188	474840.6049
301	1425042.2352	474510.2758	7633	1426124.4757	474912.2738
302	1426883.8242	472182.1581	7634	1426740.7830	475098.8359
303	1425881.7412	474906.8656	7635	1426806.4842	475085.1888
304	1434884.5759	477542.8016	7636	1429467.3375	475882.0258
305	1418756.2463	470116.2288	7637	1432114.6728	476674.8086
306	1421412.5527	471973.0453	7638	1432181.3582	476720.8754
307	1421784.9148	472219.3544	7639	1432578.0049	476829.4883
308	1424095.0107	473848.1443	7640	1432860.4128	476956.3143
309	1425436.1849	474741.2391	7641	1433940.2203	477273.8990
310	1425420.0947	474774.4081	7642	1434199.8817	477351.4484
311	1425601.2812	474814.7694	7643	1434304.2847	477351.3971
312	1426778.3005	475180.5435	7644	1434960.9901	477454.6870
313	1429466.6859	475987.1107	7645	1434850.2320	477590.7000
314	1432149.5814	476789.8502	7646	1433827.8871	477284.5440
315	1433784.0537	477279.1185	7647	1432183.2877	476851.9379
7600	1417748.9717	469382.0481	7648	1418211.9883	476832.8835
7601	1417890.7940	469483.8179	7649	1429470.8300	476038.8532
7602	1417951.8084	469499.7005	7650	1428811.1881	475243.1850
7603	1418093.6911	469592.1203	7651	1428744.5821	475223.2329
7604	1418114.0099	469606.2843	7652	1425497.7510	474849.8573
7605	1418120.7309	469610.9824	7653	1425291.1795	474787.9965
7606	1418748.2620	469597.1188	7654	1425110.5966	474733.9093
7607	1418747.4617	469603.1084	7655	1425137.2300	474644.8725
7608	1418876.4443	469604.8824	7656	1424859.5858	474315.9888
7609	1418814.9883	469606.0449	7657	1424865.2948	474307.7907
7610	1418475.0027	469609.1499	7658	1424096.2012	473909.9813
7611	1418455.0078	469609.5901	7659	1421081.7831	472222.2343
7612	1418315.0419	469672.8921	7660	1421447.0446	472058.1807
7613	1418255.0587	469674.0215	7661	1421380.2185	472011.4478
7614	1418212.2893	469674.9898	7662	1420799.0439	471805.1934
7615	1418255.7390	469705.3581	7663	1420784.7207	471825.8837
7616	1418317.4920	469743.8450	7664	1418758.0822	470209.0034
7617	1418458.8786	469847.3553	7665	1419888.2184	470128.2791
7618	1418479.1925	469881.5552	7666	1418824.0881	470084.8501
7619	1418621.3902	469900.9546	7667	1418319.3788	469871.8513
7620	1418683.6081	470004.4449	7668	1418258.4369	469829.2516
7621	1418754.4303	470023.4503	7669	1418118.2393	469728.8522
7622	1420886.3918	471513.7397	7670	1418095.9253	469715.8522
7623	1420872.0887	471534.2299	7671	1418043.0902	469678.7193
7624	1421378.0808	471887.9299	7672	1417755.1794	469685.1002
7625	1421444.8889	471934.8429	7673	1417735.1843	469685.5434
7626	1421848.0865	472216.4746	7674	1417595.2187	469688.6454
7627	1424093.8202	473786.3074	7675	1417594.2449	469682.8508
7628	1424722.5873	474225.8299	7676	1417734.2106	469619.5488
7629	1424728.3166	474217.8338	7677	1417754.2056	469619.1056
7630	1425076.8500	474481.1288	7678	1417894.1713	469618.0036
7631	1425811.5386	474777.5362	7679	1417893.4031	469581.3436

List Coordinates Report

Point Name	Easting	Northing	Point Name	Easting	Northing
7880	1417824.7548	469541.0355	8044	1432780.1001	475328.9924
7881	1417751.5534	469499.4354	8045	1432129.0087	475353.1883
7883	1425010.7499	474500.4294	8046	1432138.4862	476013.9856
7884	1425557.7922	474815.8436	8047	1433440.1884	475986.8361
8000	1417743.3031	469127.1753	8048	1432147.2556	476827.3483
8001	1417883.2783	469124.5075	8049	1432889.9409	476896.3502
8002	1417885.4941	469224.4829	8050	1432870.8595	476927.2967
8003	1417745.5188	469227.1507	8051	1432148.4479	476711.0200
8004	1417946.5913	469273.3273	8052	1433455.9584	477128.8898
8005	1418098.5866	469270.8595	8053	1433459.8708	477418.8075
8006	1417948.2531	469348.3089	8054	1433478.1211	476814.1277
8007	1418088.2284	469345.8410	8055	1433494.0879	476937.8124
8008	1418109.8887	469420.2415	8056	1432178.3657	476857.1584
8009	1418108.5830	469270.2783	8057	1432185.9891	477035.4253
8010	1418246.5383	469267.8105	8058	1432119.3037	476898.3585
8011	1418249.8819	469417.5737	8059	1428815.9120	475401.1812
8012	1418254.0829	469608.0289	8060	1426749.2859	474581.2290
8013	1418314.0882	469606.8975	8061	1425007.7700	474859.7069
8014	1419157.2181	469621.0403	8062	1424108.2733	474433.1592
8015	1418957.1738	469625.4635	8063	1421441.8737	473835.2063
8016	1418478.0912	469719.1351	8064	1421441.0113	473597.4005
8017	1418616.0568	469716.0330	8065	1421413.8316	472034.8043
8018	1418749.8889	469780.0878	8066	1420862.5418	473424.2755
8019	1418860.1532	469777.8934	8067	1420182.0195	473220.5900
8020	1418864.0358	469976.0531	8068	1420143.9839	471177.7941
8021	1418876.4044	469975.8110	8069	1420087.1385	471138.0585
8022	1418880.4290	470181.4285	8070	1420095.1640	471571.4821
8023	1419186.5477	470096.3318	8071	1419930.4228	471488.3243
8024	1419170.7915	470314.4682	8072	1419922.3953	471022.8986
8025	1419824.5945	470831.7148	8073	1419888.9188	471272.1290
8028	1419824.4358	470088.2075	8074	1419880.7589	470938.5377
8027	1419824.2975	469810.7128	8075	1419798.8350	470938.5272
8028	1419874.2119	469802.9759	8076	1418772.7403	470958.8993
8029	1419974.3503	470078.4706	8077	1418542.3908	470027.7418
8030	1420052.7303	470930.9915	8078	1418459.1740	469989.5714
8031	1420879.9274	470910.7756	8079	1417955.1303	469880.8888
8032	1421393.8380	470901.7510	8080	1417895.1451	469881.9982
8033	1420894.0787	471148.0274	8081	1417981.8815	469980.5977
8034	1420781.7951	471163.5725	8082	1418101.8272	469977.4958
8035	1420892.4441	471378.1659	8083	1418121.8222	469977.0525
8036	1421006.3784	471628.1141	8084	1418261.5879	469973.9504
8037	1421411.4738	471911.2884	8085	1418321.5731	469972.8210
8038	1424036.1187	470789.1313	8086	1418322.8794	470032.6088
8039	1422705.9347	472186.7635	8087	1418462.8450	470029.5047
8040	1422681.8892	472785.3412	8088	1418482.8401	470029.0816
8041	1425884.7777	474809.0705	8089	1418488.1057	470179.0280
8042	1426774.0860	475108.8120	8090	1418828.0713	470175.9240
8043	1432770.8773	474687.9489	8091	1433422.2228	474643.2293

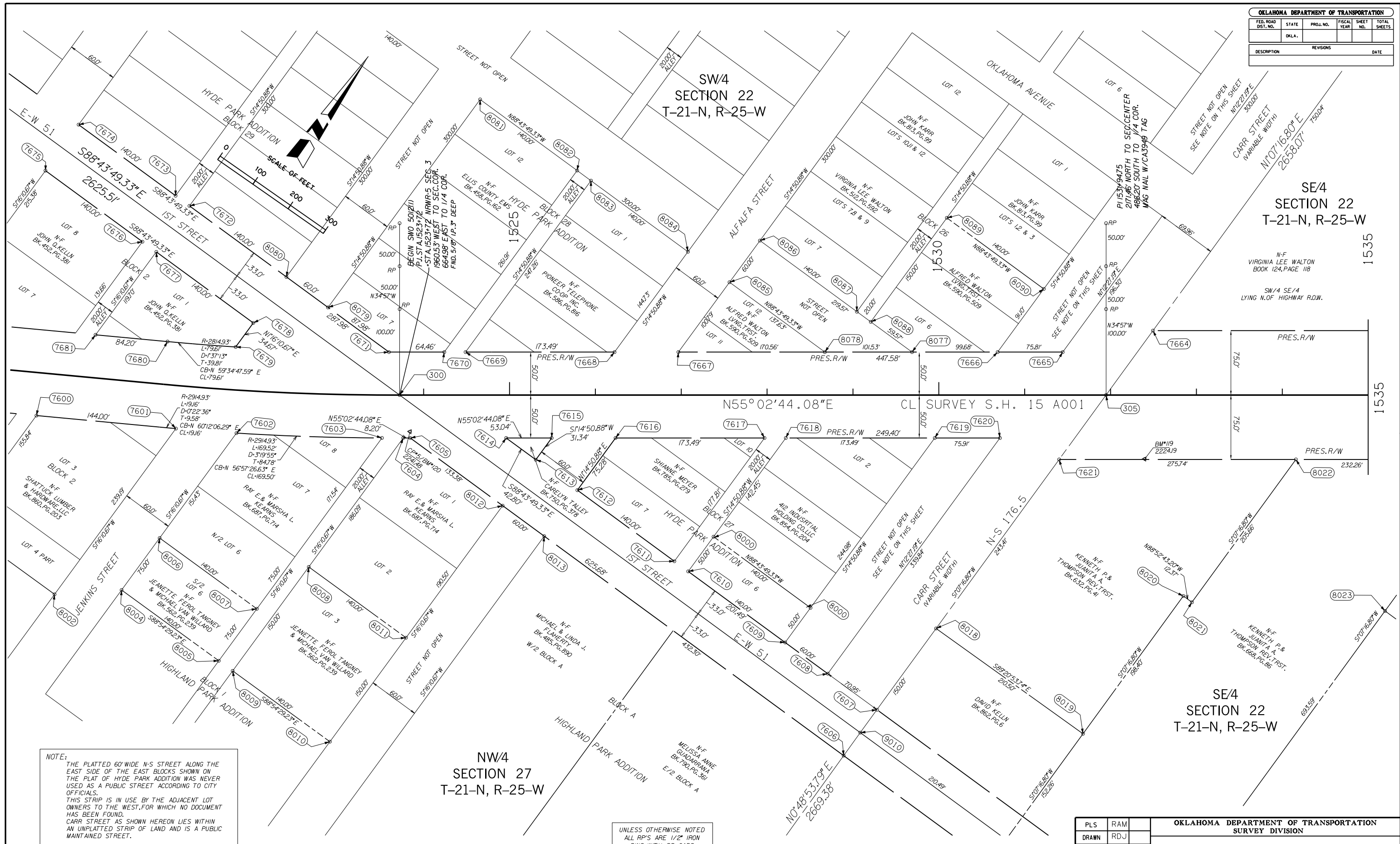
List Coordinates Report

Point Name	Easting	Northing	Point Name	Easting	Northing
8092	1424801.1988	474797.8461	9048	1437452.3492	479813.8915
9001	1418030.2044	464388.9886	9049	1424012.9838	469439.4078
9002	1418672.0080	464313.4347			
9003	1421300.7723	464238.2133			
9004	1421335.5383	466885.3238			
9005	1418711.8023	466961.9379			
9006	1418078.2881	467037.6358			
9007	1418894.3878	468950.4428			
9008	1413509.8152	468789.8983			
9009	1418124.8941	468689.2205			
9010	1418740.5689	469631.0558			
9011	1421373.4527	469573.0395			
9012	1428852.3296	469305.8917			
9013	1429325.1057	469328.3894			
9014	1431993.0688	469353.7181			
9015	1432054.5327	472023.2889			
9016	1429385.0331	472038.1964			
9017	1428709.9438	472049.1330			
9018	1424084.9897	472140.7381			
9019	1421419.9088	472232.3482			
9020	1418801.5887	472288.8287			
9021	1416182.5241	472344.9232			
9022	1413583.5439	472416.3695			
9023	1410960.0345	472487.8886			
9024	1411004.3158	475101.9838			
9025	1413817.4179	475080.1929			
9026	1416240.4509	474987.5388			
9027	1418853.5449	474943.1523			
9028	1421488.0518	474898.9120			
9029	1424117.0438	474845.8127			
9030	1428787.5188	474792.3325			
9031	1429444.9384	474742.9137			
9032	1432122.3981	474803.8178			
9033	1434737.3448	474504.3765			
9034	1437382.1325	474494.8358			
9035	1437407.2703	477154.2477			
9036	1434776.3439	477245.8842			
9037	1432180.2898	477338.8045			
9038	1428903.4695	477384.8888			
9039	1428846.4641	477432.7729			
9040	1424186.1187	477503.8288			
9041	1421525.1541	477574.8973			
9042	1421583.9895	480249.7234			
9043	1424255.1881	480161.8315			
9044	1428925.6174	480073.2139			
9045	1428982.0074	480026.8816			
9046	1432188.1903	479979.8270			
9047	1434815.3476	479887.3001			

List Coordinates Report

Point Name	Easting	Northing	Elevation
BM 101	1434800.8632	477485.7208	2165.870
BM 102	1433947.7354	477274.9629	2162.770
BM 103	1433014.0706	476996.353	

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	



NOTE:
 THE PLATTED 60' WIDE N-S STREET ALONG THE EAST SIDE OF THE EAST BLOCKS SHOWN ON THE PLAT OF HYDE PARK ADDITION WAS NEVER USED AS A PUBLIC STREET ACCORDING TO CITY OFFICIALS. THIS STRIP IS IN USE BY THE ADJACENT LOT OWNERS TO THE WEST, FOR WHICH NO DOCUMENT HAS BEEN FOUND. CARR STREET AS SHOWN HEREON LIES WITHIN AN UNPLATTED STRIP OF LAND AND IS A PUBLIC MAINTAINED STREET.

UNLESS OTHERWISE NOTED ALL RP'S ARE 1/2" IRON PINS WITH RP CAPS

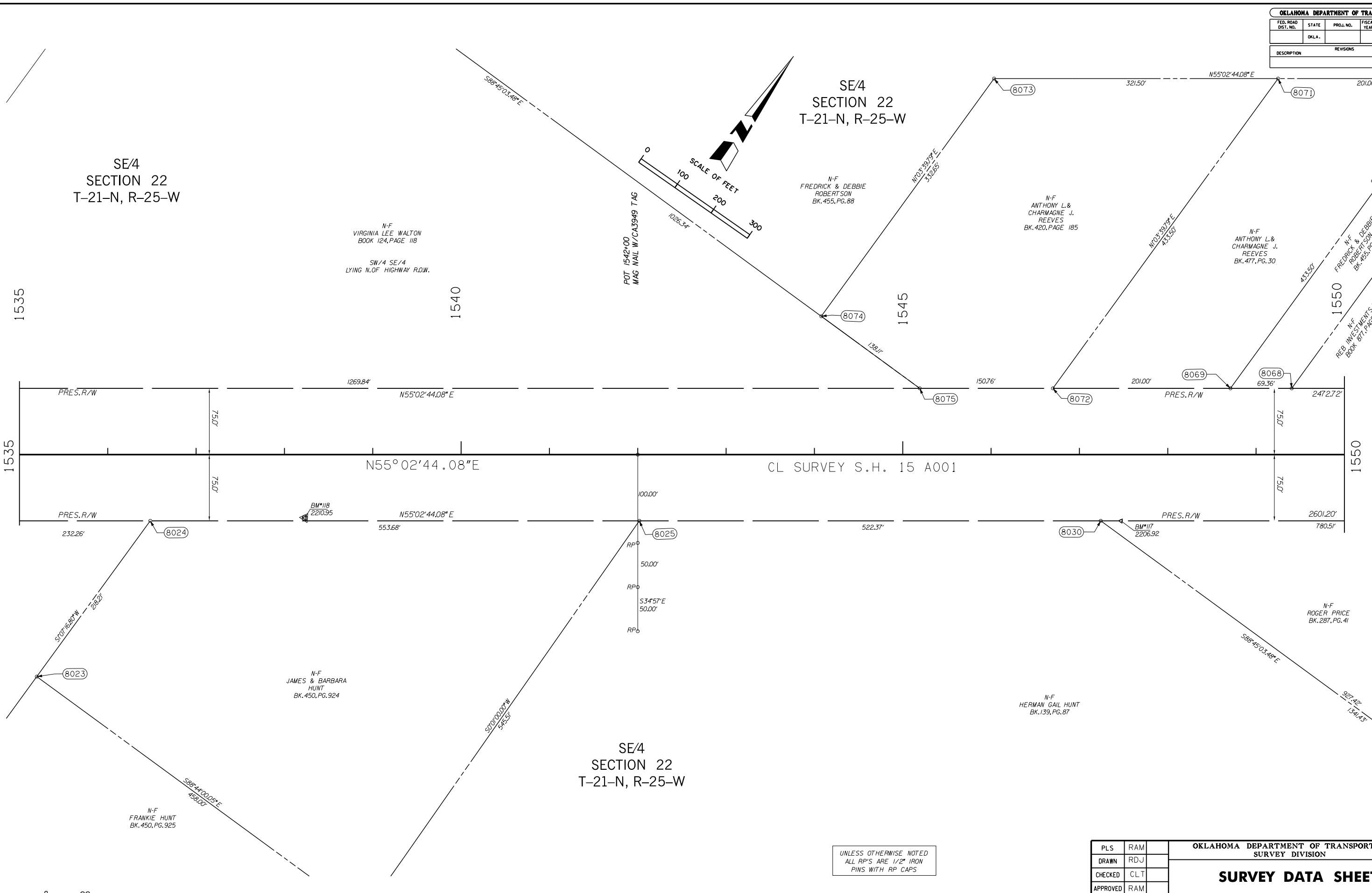
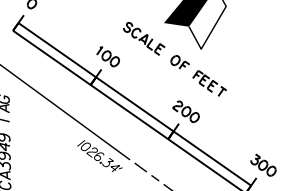
OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
SURVEY DATA SHEET			
PLS	RAM		
DRAWN	RDJ		
CHECKED	CLT		
APPROVED	RAM		
CREW	GUY		
SWO 5012 (1) PROJECT NO. 29674(04) SHEET NO. 57			

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

SE/4
SECTION 22
T-21-N, R-25-W

SE/4
SECTION 22
T-21-N, R-25-W

SE/4
SECTION 22
T-21-N, R-25-W



N-F
VIRGINIA LEE WALTON
BOOK 124, PAGE 118

SW/4 SE/4
LYING N. OF HIGHWAY R.O.W.

N-F
FREDRICK & DEBBIE
ROBERTSON
BK. 455, PG. 88

N-F
ANTHONY L. &
CHARMAGNE J.
REEVES
BK. 420, PAGE 185

N-F
ANTHONY L. &
CHARMAGNE J.
REEVES
BK. 477, PG. 30

N-F
FREDRICK & DEBBIE
ROBERTSON
BK. 455, PG. 88

N-F
REB INVESTMENTS, LLC
BOOK 877, PAGE 99

N-F
JAMES & BARBARA
HUNT
BK. 450, PG. 924

N-F
HERMAN GAIL HUNT
BK. 139, PG. 87

N-F
ROGER PRICE
BK. 287, PG. 41

N-F
FRANKIE HUNT
BK. 450, PG. 925

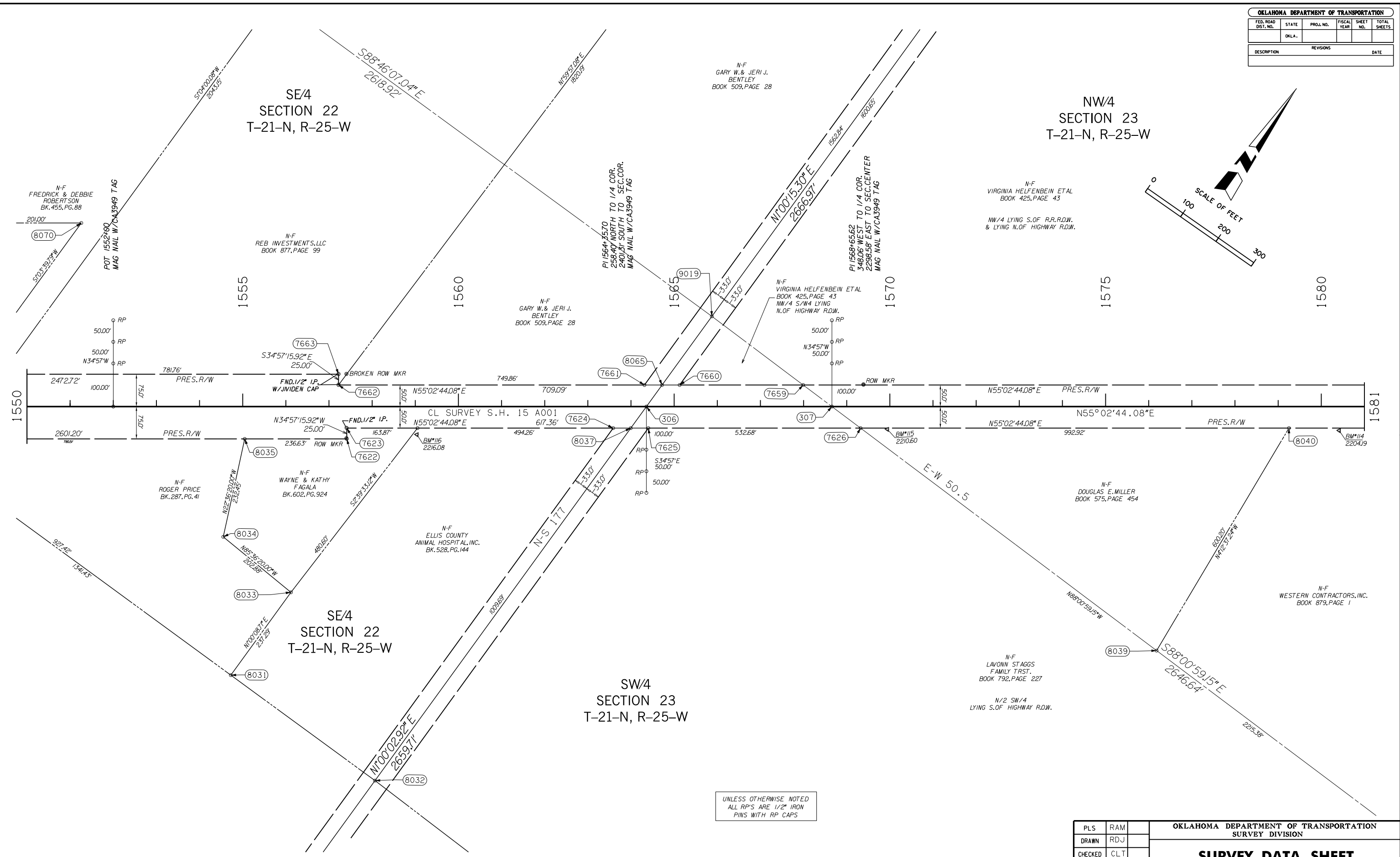
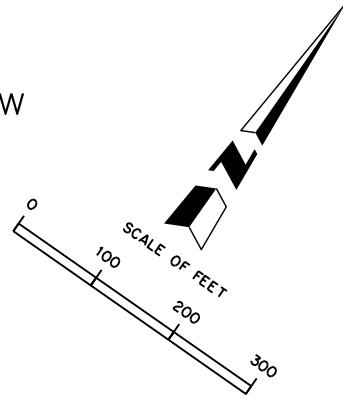
UNLESS OTHERWISE NOTED
ALL RP'S ARE 1/2" IRON
PINS WITH RP CAPS

OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
PLS	RAM		
DRAWN	RDJ		
CHECKED	CLT		
APPROVED	RAM		
CREW	GUY		

SURVEY DATA SHEET

SWO 5012 (1) PROJECT NO. 29674(04) SHEET NO. S8

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	



UNLESS OTHERWISE NOTED
ALL R.P.'S ARE 1/2" IRON
PINS WITH RP CAPS

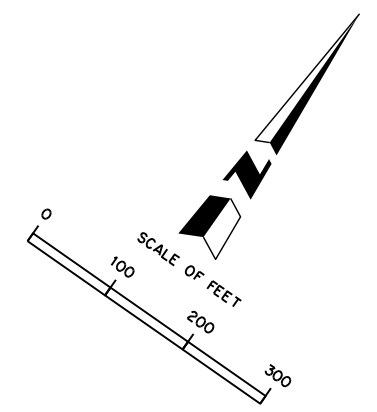
OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION					
PLS	RAM				
DRAWN	RDJ				
CHECKED	CLT				
APPROVED	RAM				
CREW	GUY				
SURVEY DATA SHEET					
SWO 5012 (1) PROJECT NO. 29674(04) SHEET NO. S9					

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION			REVISIONS		DATE

SE/4
SECTION 14
T-21-N, R-25-W

N-F
VIRGINIA LEE WALTON
BOOK 43, PAGE 390

NW/4 & S/2
LYING N.OF R.R.R.D.W.



NW/4
SECTION 23
T-21-N, R-25-W

NE/4
SECTION 23
T-21-N, R-25-W

NW/4
SECTION 23
T-21-N, R-25-W

NE/4
SECTION 23
T-21-N, R-25-W

POT 1582+00
MAG NAIL W/CA3949 TAG

1585

1590

1595

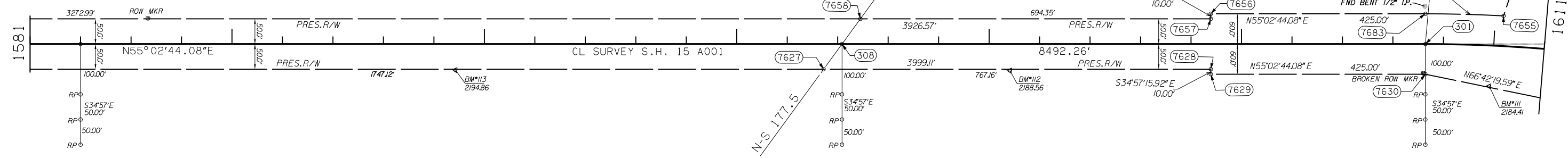
1600

1605

PC
1608+64.26
MAG NAIL W/CA3949 TAG

1610

1611



N-F
VIRGINIA HELFENBEIN ETAL
BOOK 425, PAGE 43

NW/4 LYING S.OF R.R.R.D.W.
& LYING N.OF HIGHWAY R.D.W.

PI 1597+08.56
996.70' NORTH TO 1/4 COR.
1708.67' SOUTH TO SEC.CENTER
MAG NAIL W/CA3949 TAG

N-F
CAPITAL R LAND, LLC
BOOK 782, PAGE 259

NE/4
LYING S.OF R.R.R.D.W.

R=2924.93'
L=155.00'
D=3°02'10"
T=77.52'
CB-N 56°33'52.65" E
CL=154.98'

FND BENT 1/2" IP.

N7°31'44.08" E
188.54'

N16°40'15.92" W
92.94'

N-F
WESTERN CONTRACTORS, INC.
BOOK 879, PAGE 1

N-F
CAPITAL R LAND, LLC
BOOK 782, PAGE 259

NE/4
LYING S.OF R.R.R.D.W.

CI
P.J. 1613+25.28
X=1425420.0947
Y=474774.4081
DOC=015959.65° RT.
D=1817.00'
T=461.02'
L=914.21'
R=2864.93'
E=36.86'
CB-N 64°11'14.08" E
CL=910.34'

UNLESS OTHERWISE NOTED
ALL R.P.'S ARE 1/2" IRON
PINS WITH R.P. CAPS

OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
SURVEY DATA SHEET			
PLS	RAM		
DRAWN	RDJ		
CHECKED	CLT		
APPROVED	RAM		
CREW	GUY	SWO 5012	PROJECT NO. 29674(04) SHEET NO. S10

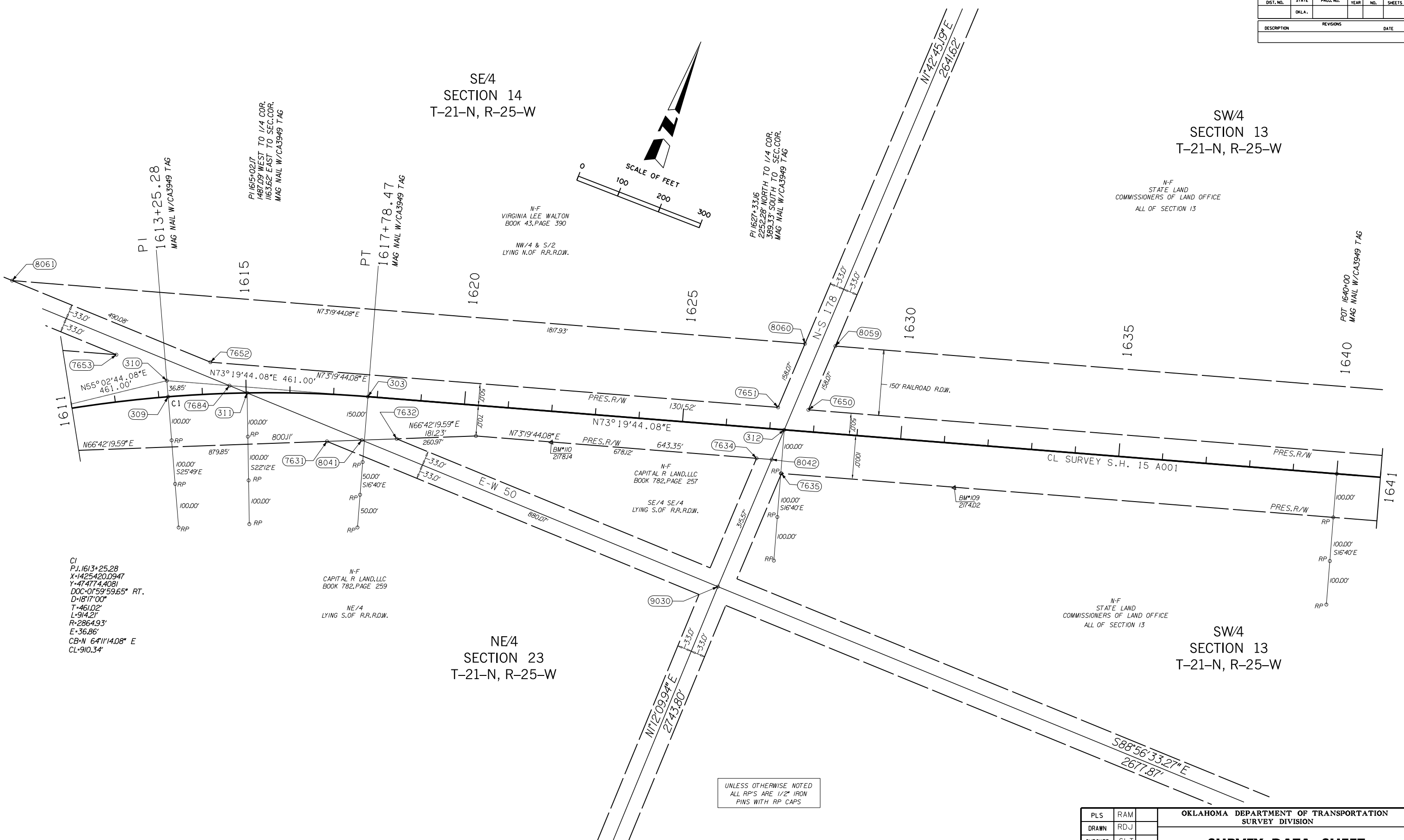
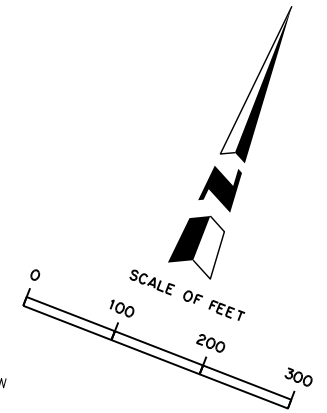
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

SE/4
SECTION 14
T-21-N, R-25-W

SW/4
SECTION 13
T-21-N, R-25-W

N-F
STATE LAND
COMMISSIONERS OF LAND OFFICE
ALL OF SECTION 13

N-F
STATE LAND
COMMISSIONERS OF LAND OFFICE
ALL OF SECTION 13



CI
P.J. 1613+25.28
X=1425420.0947
Y=474774.4081
DOC=01°59'59.65\"/>

N-F
CAPITAL R LAND, LLC
BOOK 782, PAGE 259
NE/4
LYING S.OF R.R. R.O.W.

NE/4
SECTION 23
T-21-N, R-25-W

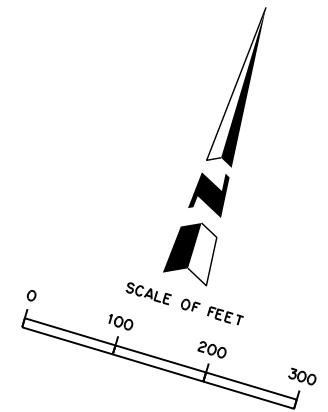
UNLESS OTHERWISE NOTED
ALL R.P.'S ARE 1/2\"/>

OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
PLS	RAM		
DRAWN	RDJ		
CHECKED	CLT		
APPROVED	RAM		
CREW	GUY		

SURVEY DATA SHEET

SWO 5012 (1) PROJECT NO. 29674(04) SHEET NO. S11

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	



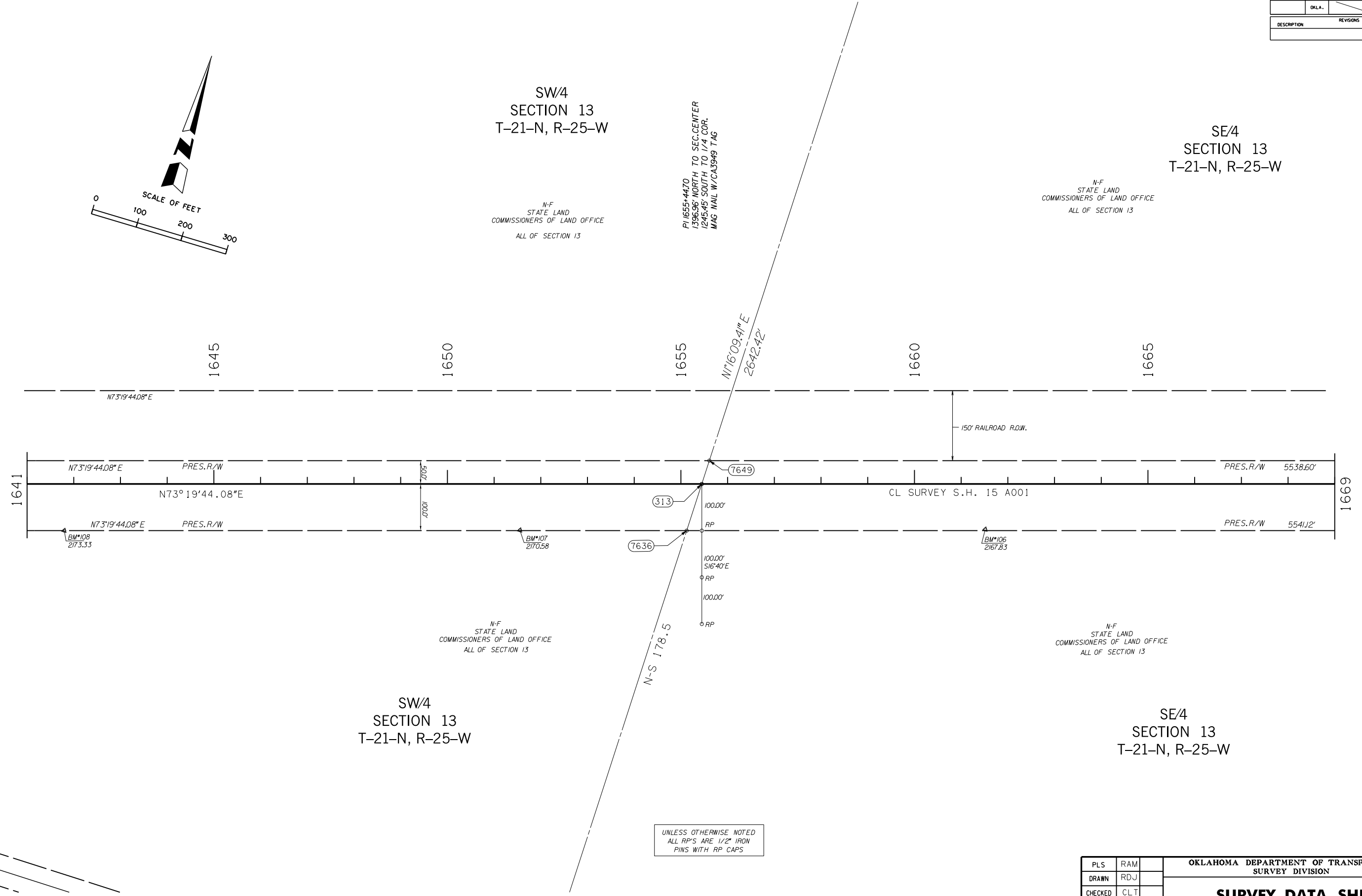
SW/4
SECTION 13
T-21-N, R-25-W

N-F
STATE LAND
COMMISSIONERS OF LAND OFFICE
ALL OF SECTION 13

SE/4
SECTION 13
T-21-N, R-25-W

N-F
STATE LAND
COMMISSIONERS OF LAND OFFICE
ALL OF SECTION 13

PI 1655-4470
1396.96' NORTH TO SEC. CENTER
1245.45' SOUTH TO 1/4 COR.
MAG NAIL W/CA3949 TAG



SW/4
SECTION 13
T-21-N, R-25-W

N-F
STATE LAND
COMMISSIONERS OF LAND OFFICE
ALL OF SECTION 13

SE/4
SECTION 13
T-21-N, R-25-W

N-F
STATE LAND
COMMISSIONERS OF LAND OFFICE
ALL OF SECTION 13

UNLESS OTHERWISE NOTED
ALL R.P.'S ARE 1/2" IRON
PINS WITH R.P. CAPS

OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
PLS	RAM		
DRAWN	RDJ		
CHECKED	CLT		
APPROVED	RAM		
CREW	GUY	SWO 5012 (1) PROJECT NO. 29674(04) SHEET NO. S12	

SURVEY DATA SHEET

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

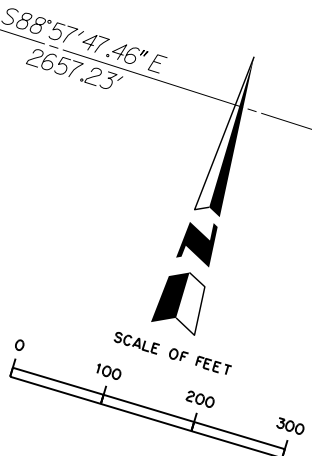
NE/4
SECTION 13
T-21-N, R-25-W

NW/4
SECTION 18
T-21-N, R-25-W

SE/4
SECTION 13
T-21-N, R-25-W

SE/4
SECTION 13
T-21-N, R-25-W

SW/4
SECTION 18
T-21-N, R-25-W



N-F
STATE LAND
COMMISSIONERS OF LAND OFFICE
ALL OF SECTION 13

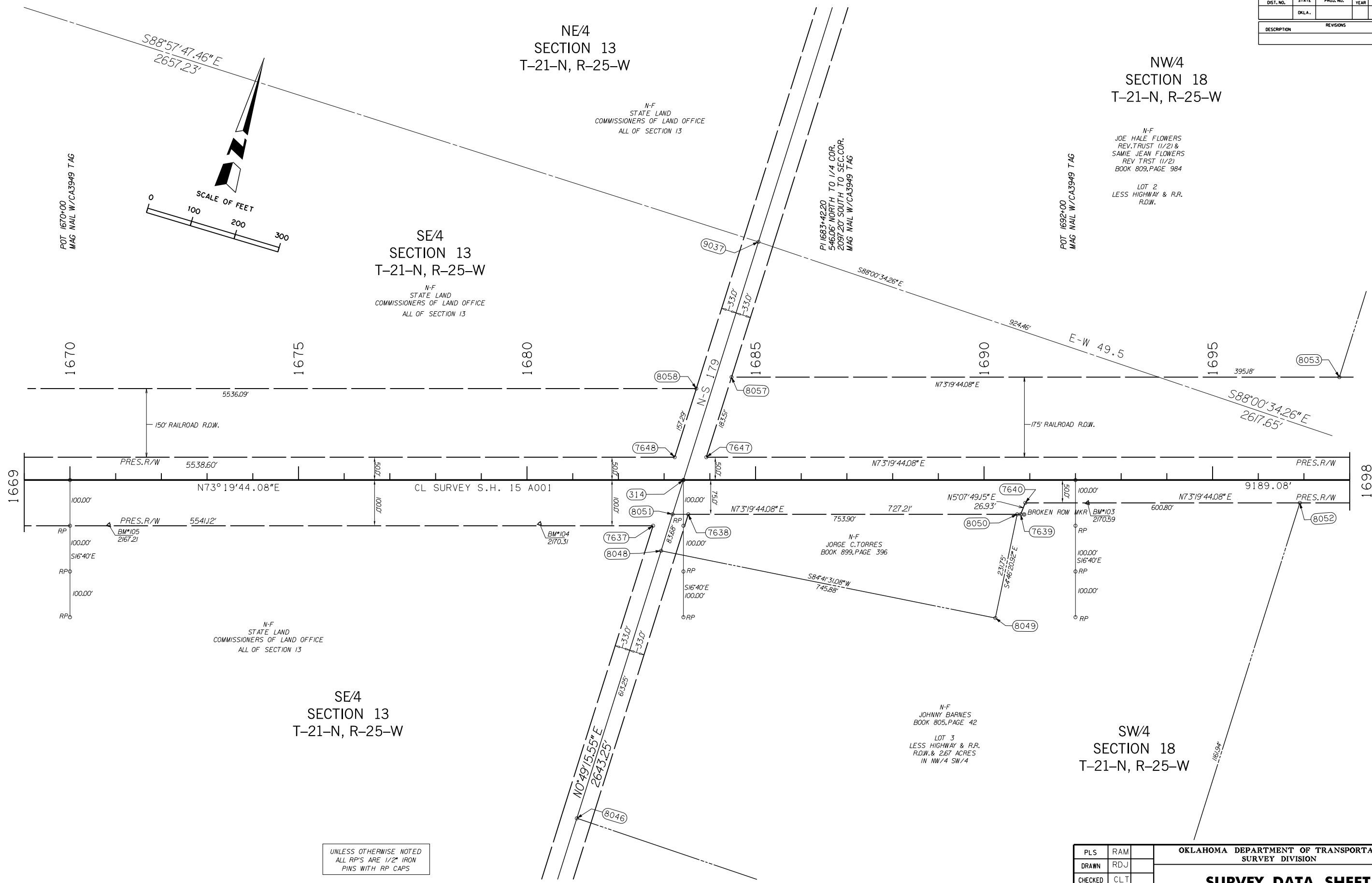
N-F
JOE HALE FLOWERS
REV. TRUST (1/2) &
SAMIE JEAN FLOWERS
REV. TRST (1/2)
BOOK 809, PAGE 984

LOT 2
LESS HIGHWAY & R.R.
R.O.W.

PI 1683-42-20
546.06' NORTH TO 1/4 COR.
2097.20' SOUTH TO SEC. COR.
MAG. NAIL W/CA3949 TAG

POT 1670-00
MAG. NAIL W/CA3949 TAG

POT 1692-00
MAG. NAIL W/CA3949 TAG



UNLESS OTHERWISE NOTED
ALL RP'S ARE 1/2" IRON
PINS WITH RP CAPS

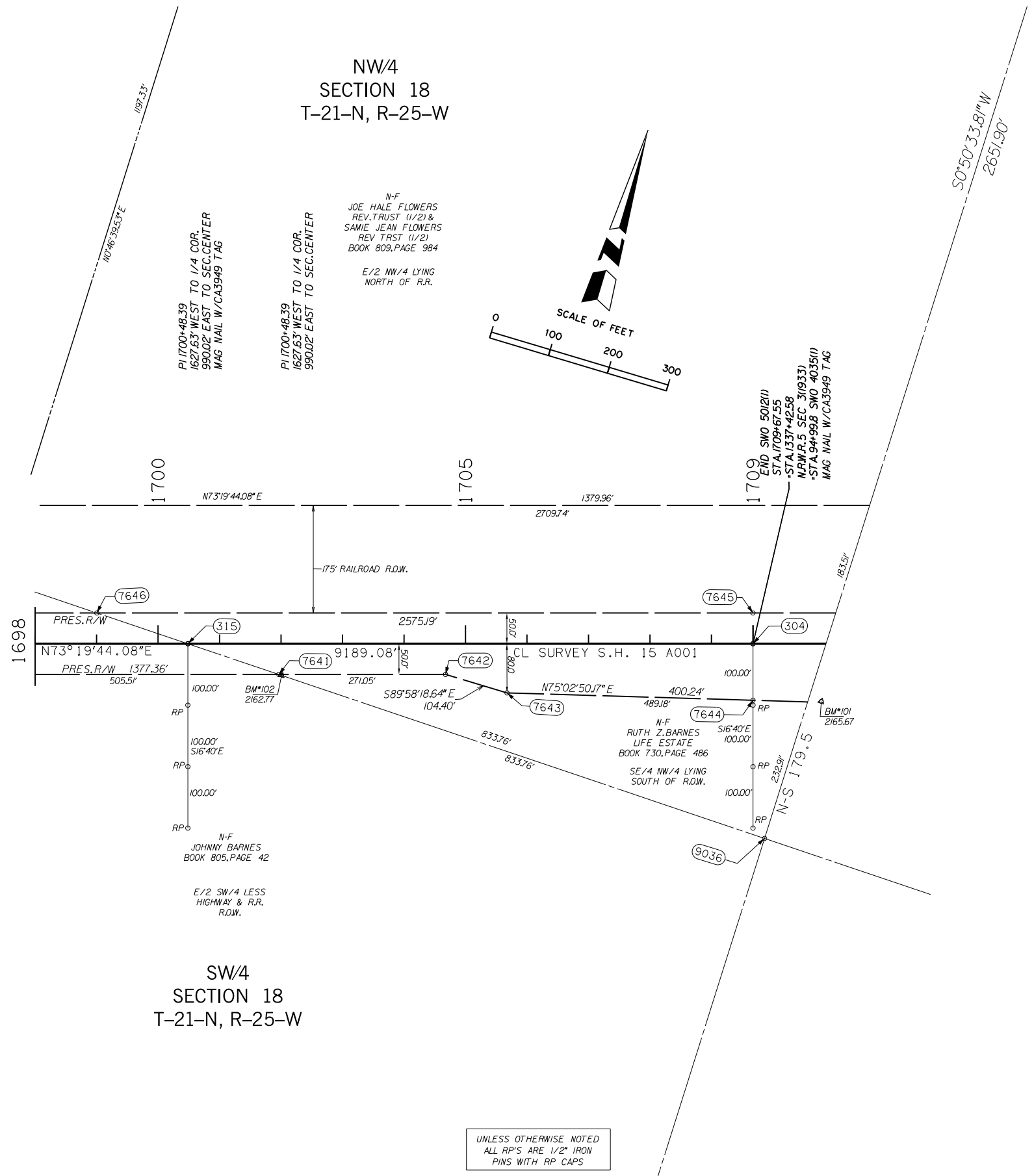
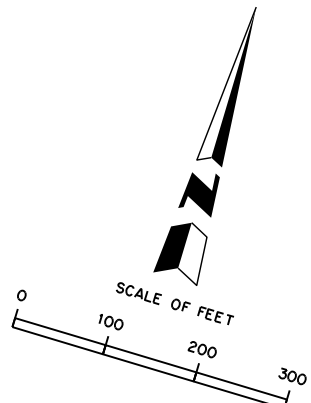
OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
PLS	RAM	SURVEY DATA SHEET	
DRAWN	RDJ		
CHECKED	CLT		
APPROVED	RAM		
CREW	GUY	SWO 5012 (1) PROJECT NO. 29674(04) SHEET NO. S13	

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

NW/4
SECTION 18
T-21-N, R-25-W

N-F
JOE HALE FLOWERS
REV. TRUST (1/2) &
SAMIE JEAN FLOWERS
REV. TRST (1/2)
BOOK 809, PAGE 984

E/2 NW/4 LYING
NORTH OF R.R.



SW/4
SECTION 18
T-21-N, R-25-W

N-F
RUTH Z. BARNES
LIFE ESTATE
BOOK 730, PAGE 486

SE/4 NW/4 LYING
SOUTH OF R.O.W.

N-F
JOHNNY BARNES
BOOK 805, PAGE 42

E/2 SW/4 LESS
HIGHWAY & R.R.
R.O.W.

UNLESS OTHERWISE NOTED
ALL R.P.'S ARE 1/2" IRON
PINS WITH RP CAPS

PLS	RAM	OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	RDJ	
CHECKED	CLT	
APPROVED	RAM	
CREW	GUY	
		SURVEY DATA SHEET
		SWO 5012 (1) PROJECT NO. 29674(04) SHEET NO. S14

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

SECTION CORNER
FND. 1/2" IRON PIN
PER O.C.C.R. TIE BY
HUBERT DIVIDEN, PLS 128
DATED 12-12-1980
O.D.D.T. MON. NO. E-23-437

1/4 SECTION CORNER
FND. 5/8" I.P.
FITS LOCAL EVIDENCE
O.D.D.T. MON. NO. E-23-434
SET TIES

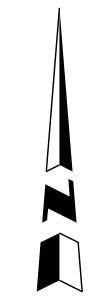
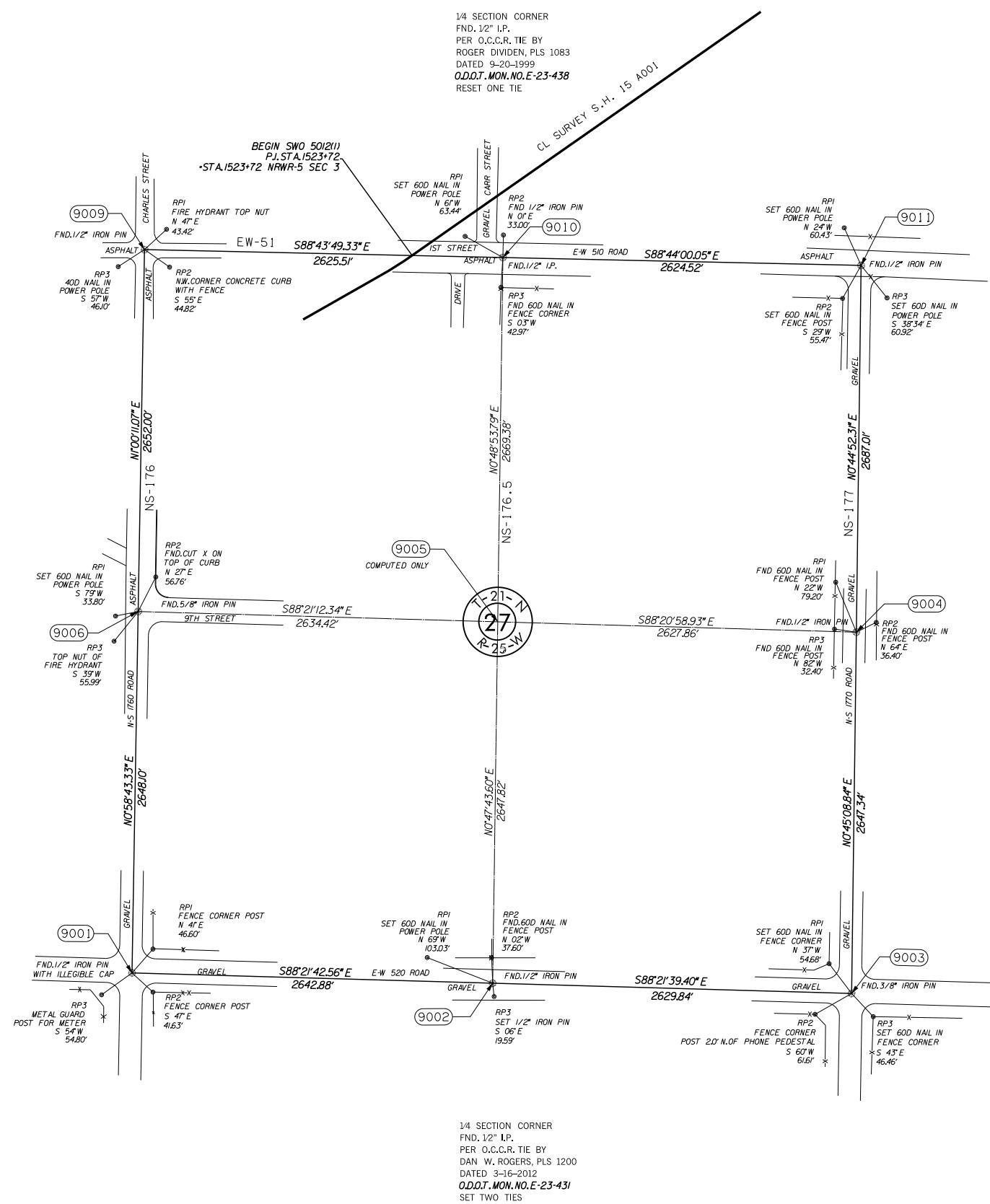
SECTION CORNER
FND. 1/2" I.P.
PER O.C.C.R. TIE BY
FRANK WINDHOLZ, PLS 1421
DATED 12-8-2010
O.D.D.T. MON. NO. E-23-430

1/4 SECTION CORNER
FND. 1/2" I.P.
PER O.C.C.R. TIE BY
ROGER DIVIDEN, PLS 1083
DATED 9-20-1999
O.D.D.T. MON. NO. E-23-438
RESET ONE TIE

SECTION CORNER
FND. 1/2" I.P.
PER O.C.C.R. TIE BY
ROGER DIVIDEN, PLS 1083
DATED 1-14-1982
O.D.D.T. MON. NO. E-23-439
RESET TIES

1/4 SECTION CORNER
FND. 1/2" I.P.
PER O.C.C.R. TIE BY
DAN ROGERS, PLS 1200
DATED 3-15-2012
O.D.D.T. MON. NO. E-23-433

SECTION CORNER
FND. 3/8" I.P.
PER O.C.C.R. TIE BY
DAN ROGERS, PLS 1200
DATED 3-15-2012
O.D.D.T. MON. NO. E-23-432
SET NEW TIES



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS		OKLAHOMA DEPARTMENT OF TRANSPORTATION
DRAWN		SURVEY DIVISION
CHECKED		LAND TIE DATA SHEET
APPROVED		
CREW		
SWO 5011 (1) PROJECT NO. 26497(04) SHEET NO. S15		

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

SECTION CORNER
FND. 3/8" I.P.
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 1-20-2005
O.D.D.T. MON. NO. E-23-449

1/4 SECTION CORNER
FND. 1/2" I.P.
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 1-20-2005
O.D.D.T. MON. NO. E-23-450

SECTION CORNER
FND. 1/2" IRON PIN
WITH JIVIDEN CAP
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 1-20-2005
O.D.D.T. MON. NO. E-23-451

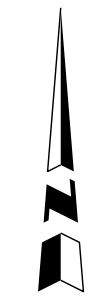
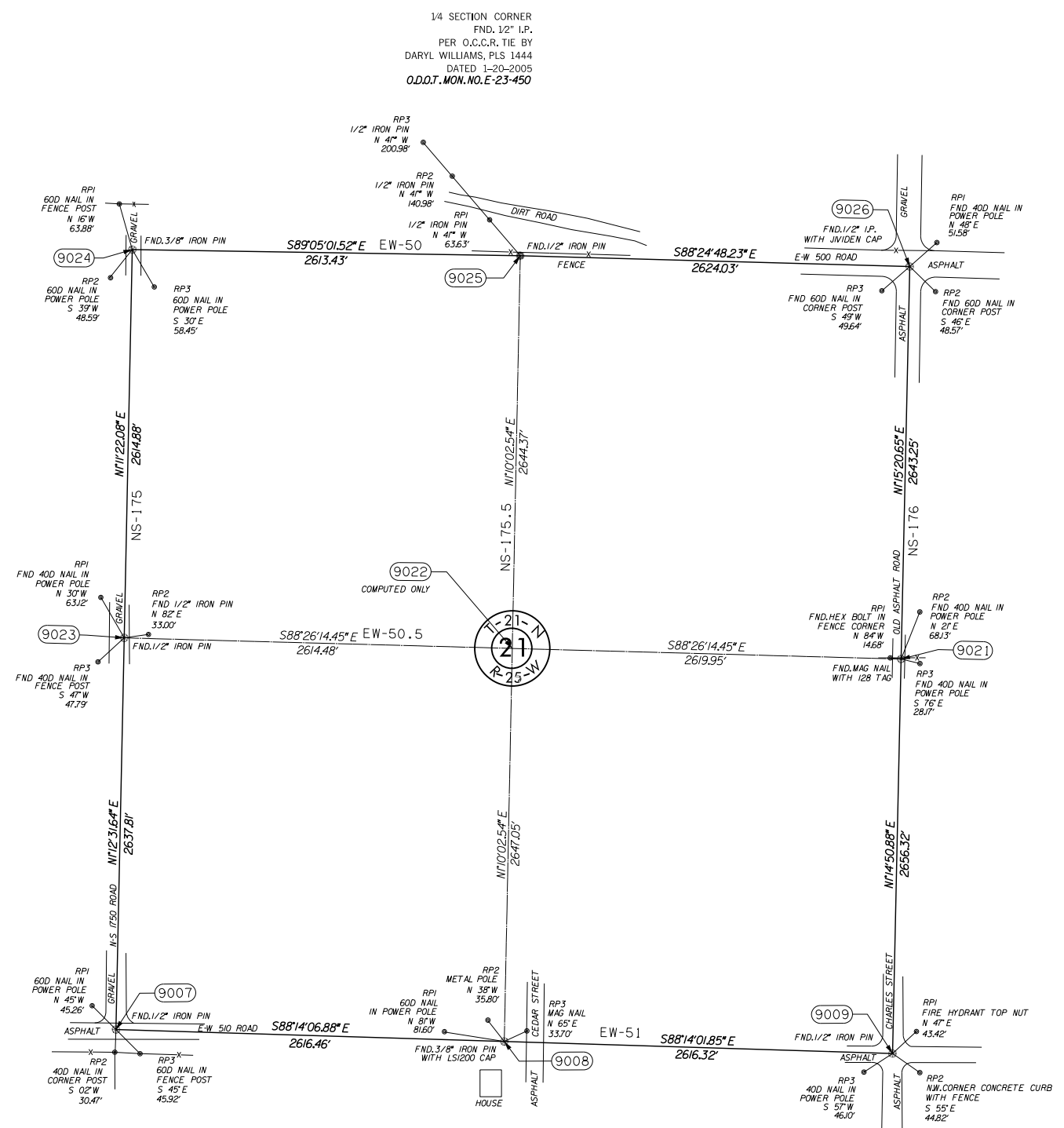
1/4 SECTION CORNER
FND. 1/2" IRON PIN
PER O.C.C.R. TIE BY
HUBERT DIVIDEN, PLS 128
DATED 12-12-1980
O.D.D.T. MON. NO. E-23-448

1/4 SECTION CORNER
FND. MAG NAIL
WITH 128 TAG
PER O.C.C.R. TIE BY
HUBERT DIVIDEN, PLS 128
DATED 12-12-1980
O.D.D.T. MON. NO. E-23-447
RESET ONE TIE

SECTION CORNER
FND. 1/2" I.P.
PER O.C.C.R. TIE BY
RUSSAL B. BRAWLEY, LS 1089
DATED 10-8-1997
O.D.D.T. MON. NO. E-23-435

1/4 SECTION CORNER
FND. 3/8" I.P.
WITH LS1293 CAP
PER O.C.C.R. TIE BY
DAN W. ROGERS, PLS 1200
DATED 2-11-2013
O.D.D.T. MON. NO. E-23-436

SECTION CORNER
FND. 1/2" IRON PIN
PER O.C.C.R. TIE BY
HUBERT DIVIDEN, PLS 128
DATED 12-12-1980
O.D.D.T. MON. NO. E-23-437



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS		OKLAHOMA DEPARTMENT OF TRANSPORTATION
DRAWN		SURVEY DIVISION
CHECKED		LAND TIE DATA SHEET
APPROVED		
CREW		
SWO 5011 (1) PROJECT NO. 26497(04) SHEET NO. S16		

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

SECTION CORNER
FND. 1/2" IRON PIN
WITH JIVIDEN CAP
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 1-20-2005
O.D.O.T. MON. NO. E-23-451

1/4 SECTION CORNER
FND. 1/2" IRON PIN
WITH JIVIDEN CAP
PER O.C.C.R. TIE BY
ROGER JIVIDEN, PLS 1083
DATED 9-20-1999
O.D.O.T. MON. NO. E-23-452

SECTION CORNER
FND. 1/2" IRON PIN
WITH LS 1444 CAP
PER O.C.C.R. TIE BY
ROGER JIVIDEN, PLS 1083
DATED 10-1-1986
O.D.O.T. MON. NO. E-23-453
SET NEW TIES

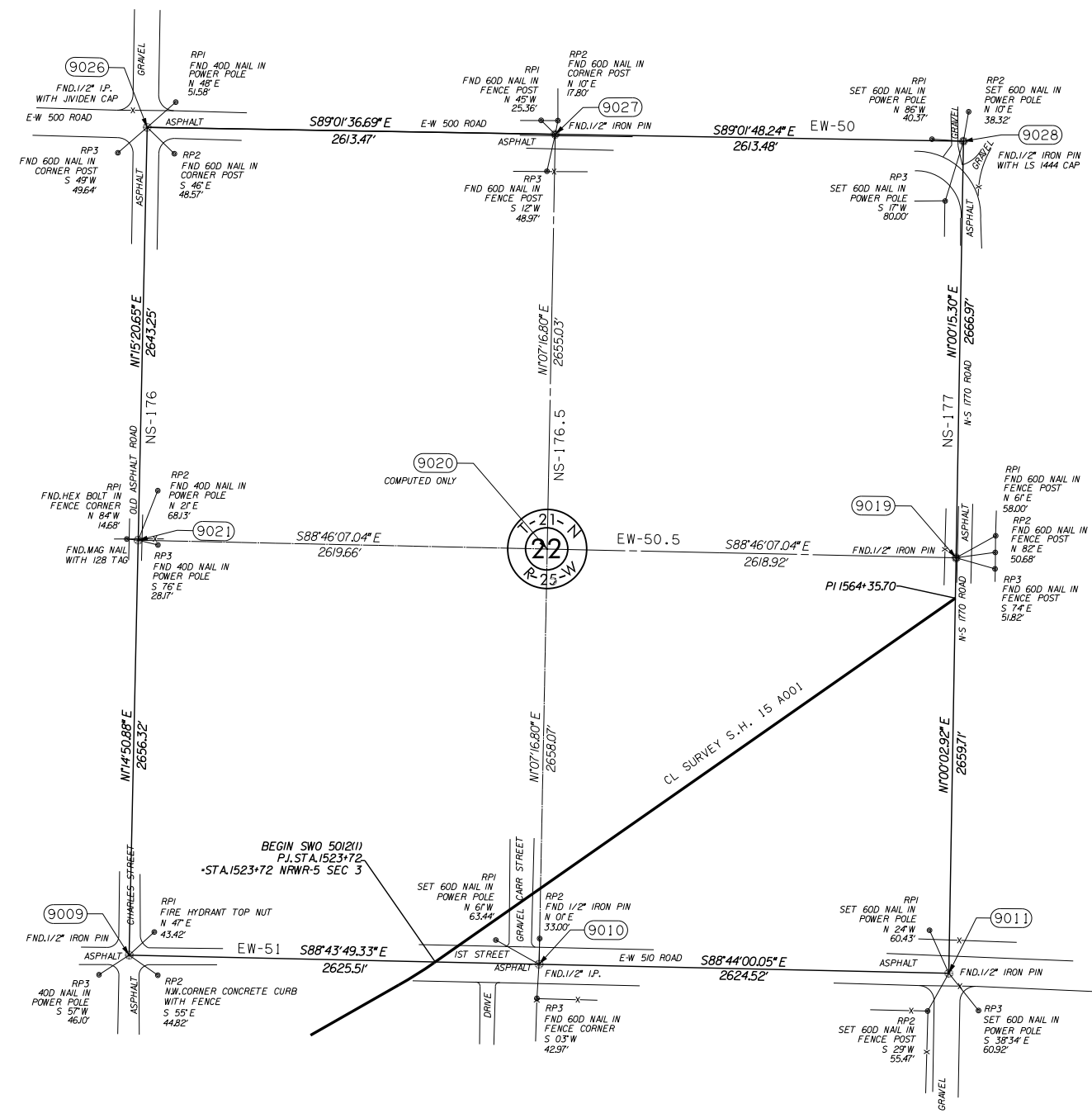
1/4 SECTION CORNER
FND. MAG NAIL
WITH 128 TAG
PER O.C.C.R. TIE BY
HUBERT DIVIDEN, PLS 128
DATED 12-12-1980
O.D.O.T. MON. NO. E-23-447
RESET ONE TIE

1/4 SECTION CORNER
FND. 1/2" IRON PIN
FITS LOCAL EVIDENCE
O.D.O.T. MON. NO. E-23-446
SET TIES

SECTION CORNER
FND. 1/2" IRON PIN
PER O.C.C.R. TIE BY
HUBERT DIVIDEN, PLS 128
DATED 12-12-1980
O.D.O.T. MON. NO. E-23-437

1/4 SECTION CORNER
FND. 1/2" I.P.
PER O.C.C.R. TIE BY
ROGER DIVIDEN, PLS 1083
DATED 9-20-1999
O.D.O.T. MON. NO. E-23-438
RESET ONE TIE

SECTION CORNER
FND. 1/2" I.P.
PER O.C.C.R. TIE BY
ROGER DIVIDEN, PLS 1083
DATED 1-14-1982
O.D.O.T. MON. NO. E-23-439
RESET TIES



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION	
PLS	
DRAWN	
CHECKED	
APPROVED	
CREW	
LAND TIE DATA SHEET	
Swo 5011 (1) PROJECT NO. 26497(04) SHEET NO. S17	

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS			DATE

SECTION CORNER
 FND. 1/2" IRON PIN
 WITH LS 1444 CAP
 PER O.C.C.R. TIE BY
 ROGER JIVIDEN, PLS 1083
 DATED 10-1-1986
O.D.O.T. MON. NO. E-23-453
 SET NEW TIES

1/4 SECTION CORNER
 SET 1/2" IRON PIN
 WITH CA6391 CAP
 SET AT MIDPOINT ON
 SECTION LINE &
 FITS LOCAL EVIDENCE
O.D.O.T. MON. NO. E-23-454
 SET TIES

SECTION CORNER
 FND. 3/8" IRON PIN
 PER O.C.C.R. TIE BY
 MIKE GOSSETT, PLS 1748
 DATED 8-13-2013
O.D.O.T. MON. NO. E-23-455

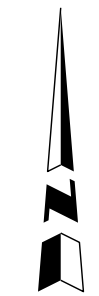
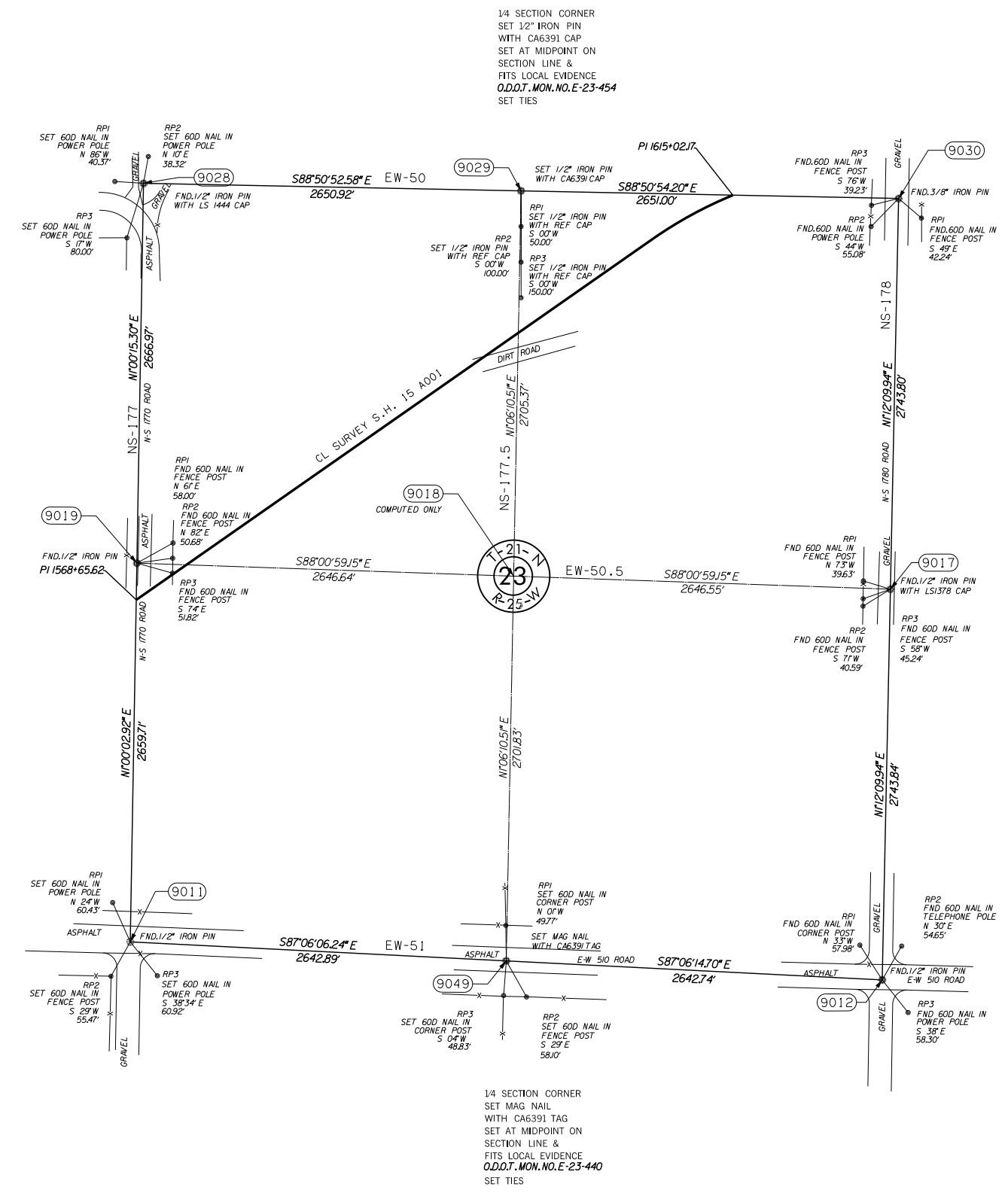
1/4 SECTION CORNER
 FND. 1/2" IRON PIN
 FITS LOCAL EVIDENCE
O.D.O.T. MON. NO. E-23-446
 SET TIES

1/4 SECTION CORNER
 FND. 1/2" I.P.
 WITH LS1378 CAP
 PER O.C.C.R. TIE BY
 VIRGIL ROGERS, PLS 569
 DATED 4-5-2011
O.D.O.T. MON. NO. E-23-445

SECTION CORNER
 FND. 1/2" I.P.
 PER O.C.C.R. TIE BY
 ROGER DIVIDEN, PLS 1083
 DATED 1-14-1982
O.D.O.T. MON. NO. E-23-439
 RESET TIES

1/4 SECTION CORNER
 SET MAG NAIL
 WITH CA6391 TAG
 SET AT MIDPOINT ON
 SECTION LINE &
 FITS LOCAL EVIDENCE
O.D.O.T. MON. NO. E-23-440
 SET TIES

SECTION CORNER
 FND. 1/2" I.P.
 PER O.C.C.R. TIE BY
 MIKE GOSSETT, PLS 1748
 DATED 8-13-2013
O.D.O.T. MON. NO. E-23-441



SCALE:
 1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS		OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN		SURVEY DIVISION	
CHECKED		LAND TIE DATA SHEET	
APPROVED			
CREW			
		SWO 5011 (1) PROJECT NO. 26497(04) SHEET NO. S18	

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

SECTION CORNER
 FND. 3/8" IRON PIN
 PER O.C.C.R. TIE BY
 MIKE GOSSETT, PLS 1748
 DATED 8-13-2013
 O.D.D.T. MON. NO. E-23-455

1/4 SECTION CORNER
 SET MAG NAIL
 WITH CA6391 TAG IN
 FENCE POST
 PER O.C.C.R. TIE BY
 MIKE GOSSETT, PLS 1748
 DATED 8-13-2013
 O.D.D.T. MON. NO. E-23-456
 SET 2 TIES

SECTION CORNER
 FND. 1/2" I.P.
 PER O.C.C.R. TIE BY
 MIKE GOSSETT, PLS 1748
 DATED 8-13-2013
 O.D.D.T. MON. NO. E-23-457

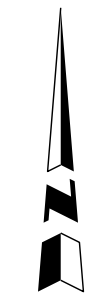
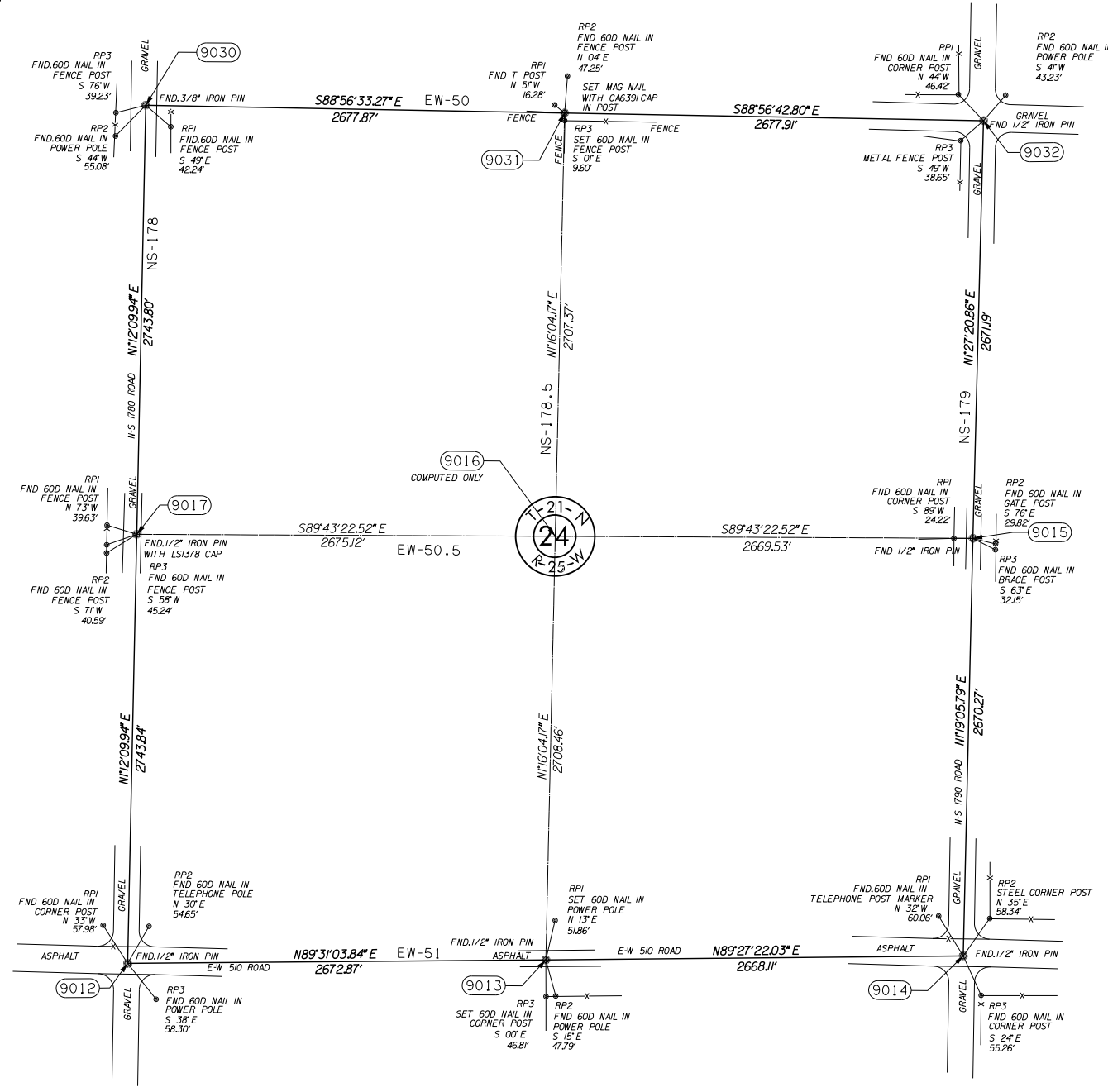
1/4 SECTION CORNER
 FND. 1/2" I.P.
 WITH LS1378 CAP
 PER O.C.C.R. TIE BY
 VIRGIL ROGERS, PLS 569
 DATED 4-5-2011
 O.D.D.T. MON. NO. E-23-445

1/4 SECTION CORNER
 FND. 1/2" I.P.
 PER O.C.C.R. TIE BY
 MIKE GOSSETT, PLS 1748
 DATED 8-13-2013
 O.D.D.T. MON. NO. E-23-444

SECTION CORNER
 FND. 1/2" I.P.
 PER O.C.C.R. TIE BY
 MIKE GOSSETT, PLS 1748
 DATED 8-13-2013
 O.D.D.T. MON. NO. E-23-441

1/4 SECTION CORNER
 FND. 1/2" I.P.
 PER O.C.C.R. TIE BY
 MIKE GOSSETT, PLS 1748
 DATED 8-13-2013
 O.D.D.T. MON. NO. E-23-442
 SET 2 TIES

SECTION CORNER
 FND. 1/2" I.P.
 PER O.C.C.R. TIE BY
 MIKE GOSSETT, PLS 1748
 DATED 8-13-2013
 O.D.D.T. MON. NO. E-23-443



SCALE:
 1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS		OKLAHOMA DEPARTMENT OF TRANSPORTATION
DRAWN		SURVEY DIVISION
CHECKED		LAND TIE DATA SHEET
APPROVED		
CREW		
		SWO 5011 (1) PROJECT NO. 26497(04) SHEET NO. S19

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

SECTION CORNER
FND. 1/2" IRON PIN
PER O.C.C.R. TIE BY
MIKE GOSSETT, PLS 1748
DATED 8-13-2013
O.D.D.T. MON. NO. E-23-467

1/4 SECTION CORNER
FND. 1/2" IRON PIN
WITH LS 1149 CAP
PER O.C.C.R. TIE BY
ROGER JIVIDEN, PLS 1083
DATED 12-17-1998
O.D.D.T. MON. NO. E-23-466

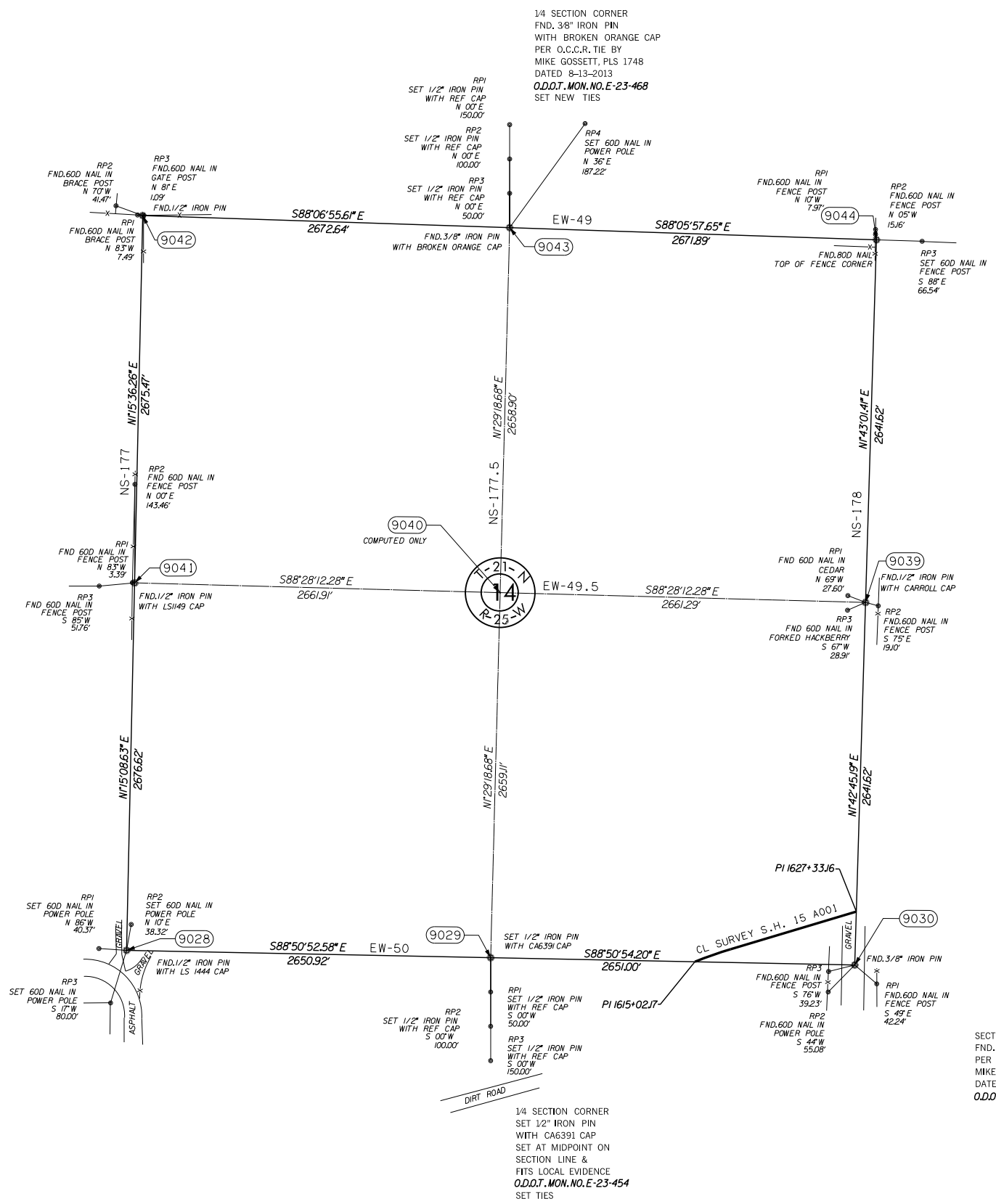
SECTION CORNER
FND. 1/2" IRON PIN
WITH LS 1444 CAP
PER O.C.C.R. TIE BY
ROGER JIVIDEN, PLS 1083
DATED 10-1-1986
O.D.D.T. MON. NO. E-23-453
SET NEW TIES

1/4 SECTION CORNER
FND. 3/8" IRON PIN
WITH BROKEN ORANGE CAP
PER O.C.C.R. TIE BY
MIKE GOSSETT, PLS 1748
DATED 8-13-2013
O.D.D.T. MON. NO. E-23-468
SET NEW TIES

SECTION CORNER
FND. 80D NAIL
IN TOP OF POST
PER O.C.C.R. TIE BY
JESSE L. CARROLL, PLS 1071
DATED 2-16-2004
O.D.D.T. MON. NO. E-23-469
SET NEW TIES

1/4 SECTION CORNER
FND. 1/2" IRON PIN
WITH CARROLL CAP
PER O.C.C.R. TIE BY
JESSE L. CARROLL, PLS 1071
DATED 2-16-2004
O.D.D.T. MON. NO. E-23-465

SECTION CORNER
FND. 3/8" IRON PIN
PER O.C.C.R. TIE BY
MIKE GOSSETT, PLS 1748
DATED 8-13-2013
O.D.D.T. MON. NO. E-23-455



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS		OKLAHOMA DEPARTMENT OF TRANSPORTATION
DRAWN		SURVEY DIVISION
CHECKED		LAND TIE DATA SHEET
APPROVED		
CREW		
SWO 5011 (1) PROJECT NO. 26497(04) SHEET NO. S20		

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

SECTION CORNER
FND. 80D NAIL
IN TOP OF POST
PER O.C.C.R. TIE BY
JESSE L. CARROLL, PLS 1071
DATED 2-16-2004
O.D.O.T. MON. NO. E-23-469
SET NEW TIES

1/4 SECTION CORNER
FND. 1/2" IRON PIN
WITH CARROLL CAP
PER O.C.C.R. TIE BY
JESSE L. CARROLL, PLS 1071
DATED 2-16-2014
O.D.O.T. MON. NO. E-23-402
SET 2 TIES

SECTION CORNER
FND. 60D NAIL IN
FENCE POST
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 11-22-2002
O.D.O.T. MON. NO. E-23-403

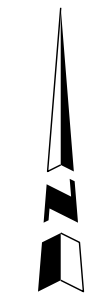
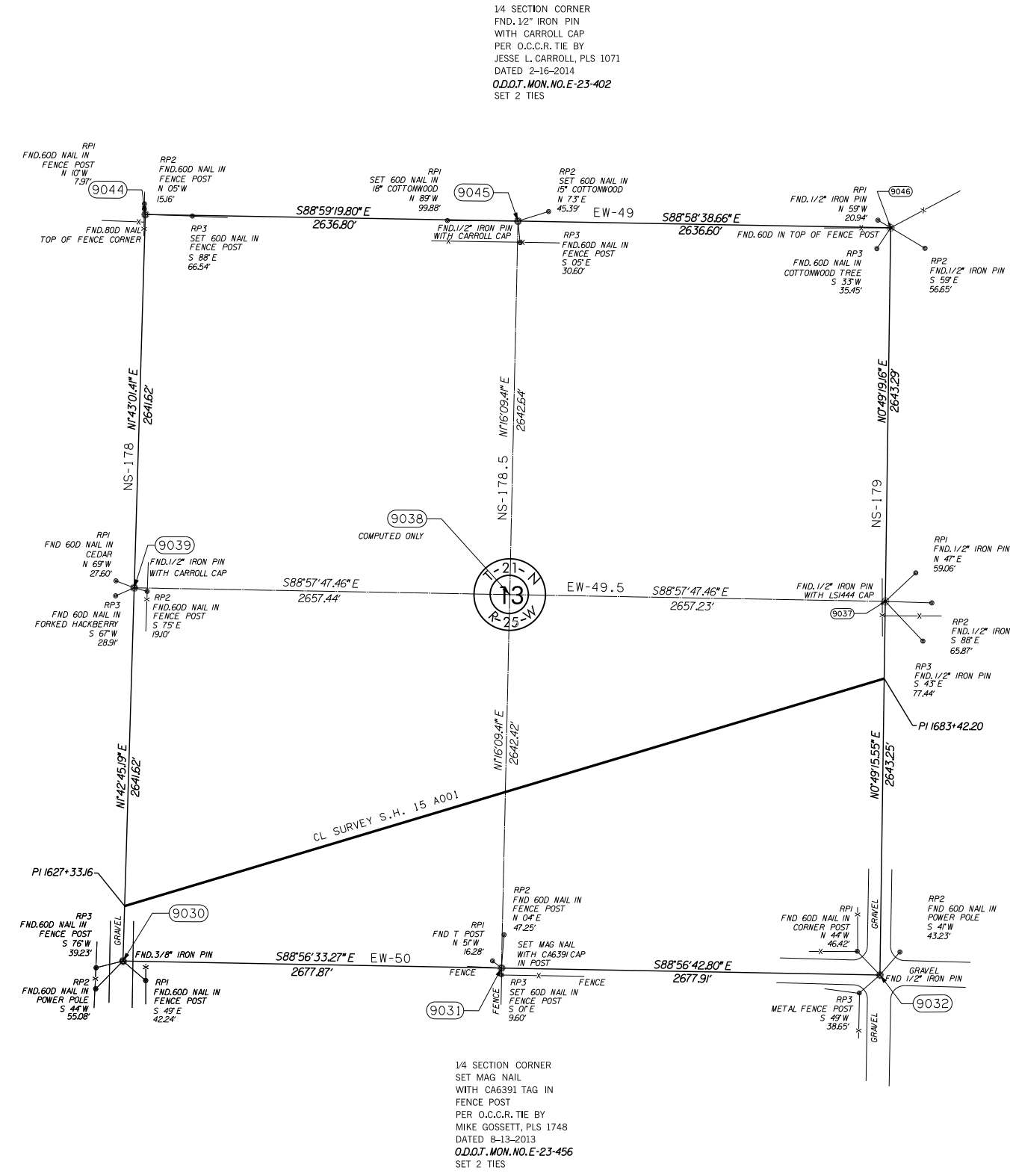
1/4 SECTION CORNER
FND. 1/2" IRON PIN
WITH CARROLL CAP
PER O.C.C.R. TIE BY
JESSE L. CARROLL, PLS 1071
DATED 2-16-2004
O.D.O.T. MON. NO. E-23-465

1/4 SECTION CORNER
FND. 1/2" I.P.
WITH LS1444 CAP
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 11-22-2002
O.D.O.T. MON. NO. E-23-464

SECTION CORNER
FND. 3/8" IRON PIN
PER O.C.C.R. TIE BY
MIKE GOSSETT, PLS 1748
DATED 8-13-2013
O.D.O.T. MON. NO. E-23-455

1/4 SECTION CORNER
SET MAG NAIL
WITH CA6391 TAG IN
FENCE POST
PER O.C.C.R. TIE BY
MIKE GOSSETT, PLS 1748
DATED 8-13-2013
O.D.O.T. MON. NO. E-23-456
SET 2 TIES

SECTION CORNER
FND. 1/2" I.P.
PER O.C.C.R. TIE BY
MIKE GOSSETT, PLS 1748
DATED 8-13-2013
O.D.O.T. MON. NO. E-23-457



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS		OKLAHOMA DEPARTMENT OF TRANSPORTATION
DRAWN		SURVEY DIVISION
CHECKED		LAND TIE DATA SHEET
APPROVED		
CREW		
		SWO 5011 (1) PROJECT NO. 26497(04) SHEET NO. S21

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

SECTION CORNER
FND. 1/2" I.P.
WITH LSI444 CAP
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 11-22-2002
O.D.D.T. MON. NO. E-23-403

1/4 SECTION CORNER
FND. 1/2" I.P.
WITH LSI444 CAP
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 11-22-2002
O.D.D.T. MON. NO. E-23-404

SECTION CORNER
FND. 1/2" I.P.
WITH LSI444 CAP
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 11-22-2002
O.D.D.T. MON. NO. E-23-405

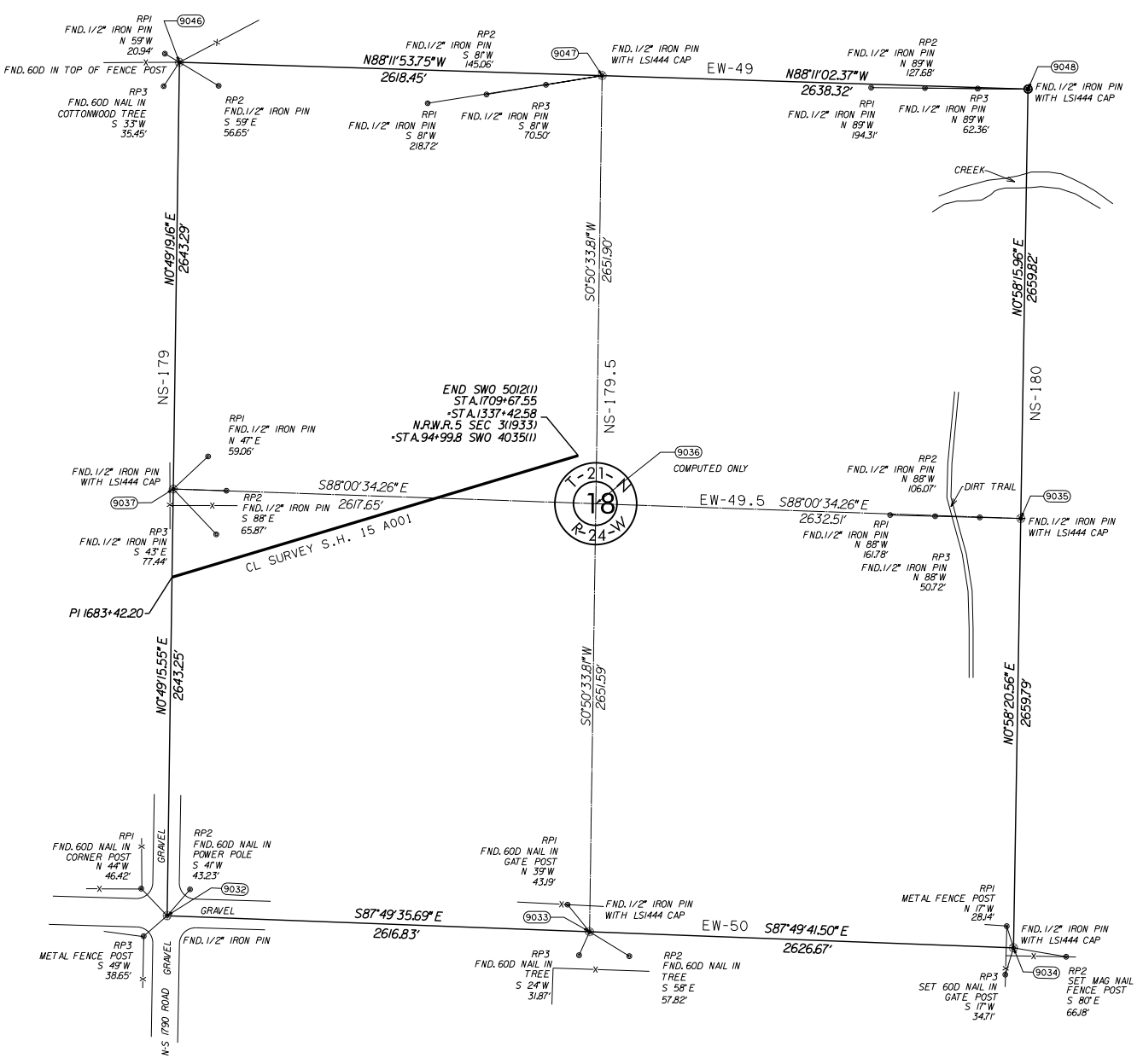
1/4 SECTION CORNER
FND. 1/2" I.P.
WITH LSI444 CAP
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 11-22-2002
O.D.D.T. MON. NO. E-23-464

1/4 SECTION CORNER
FND. 1/2" I.P.
WITH LSI444 CAP
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 11-22-2002
O.D.D.T. MON. NO. E-23-463

SECTION CORNER
FND. 1/2" I.P.
PER O.C.C.R. TIE BY
MIKE GOSSETT, PLS 1748
DATED 8-13-2013
O.D.D.T. MON. NO. E-23-457

1/4 SECTION CORNER
FND. 1/2" I.P.
WITH LSI444 CAP
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 11-22-2002
O.D.D.T. MON. NO. E-23-458

SECTION CORNER
FND. 1/2" I.P.
WITH LSI444 CAP
PER O.C.C.R. TIE BY
DARYL WILLIAMS, PLS 1444
DATED 11-22-2002
SET NEW TIES
O.D.D.T. MON. NO. E-23-459



SCALE:
1" = 500'

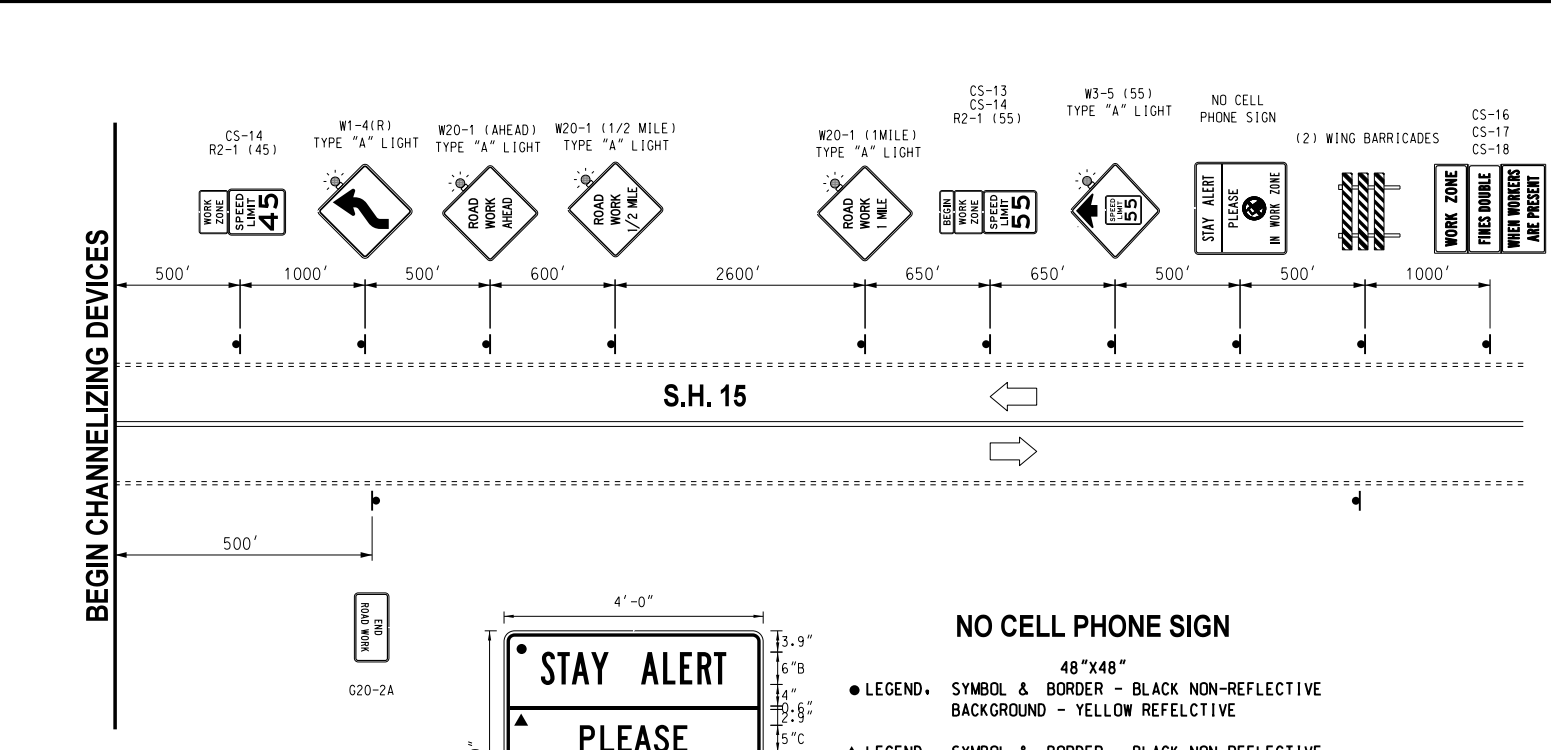
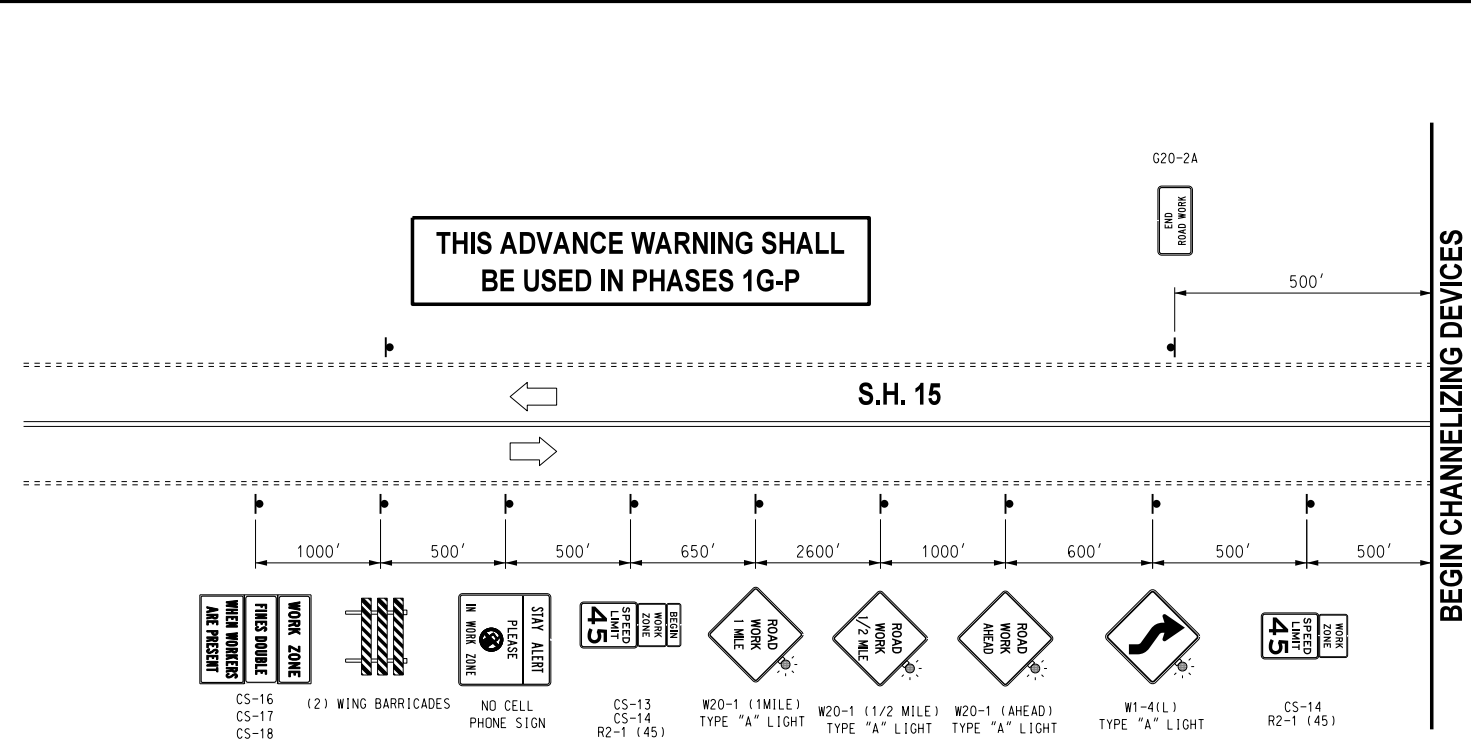
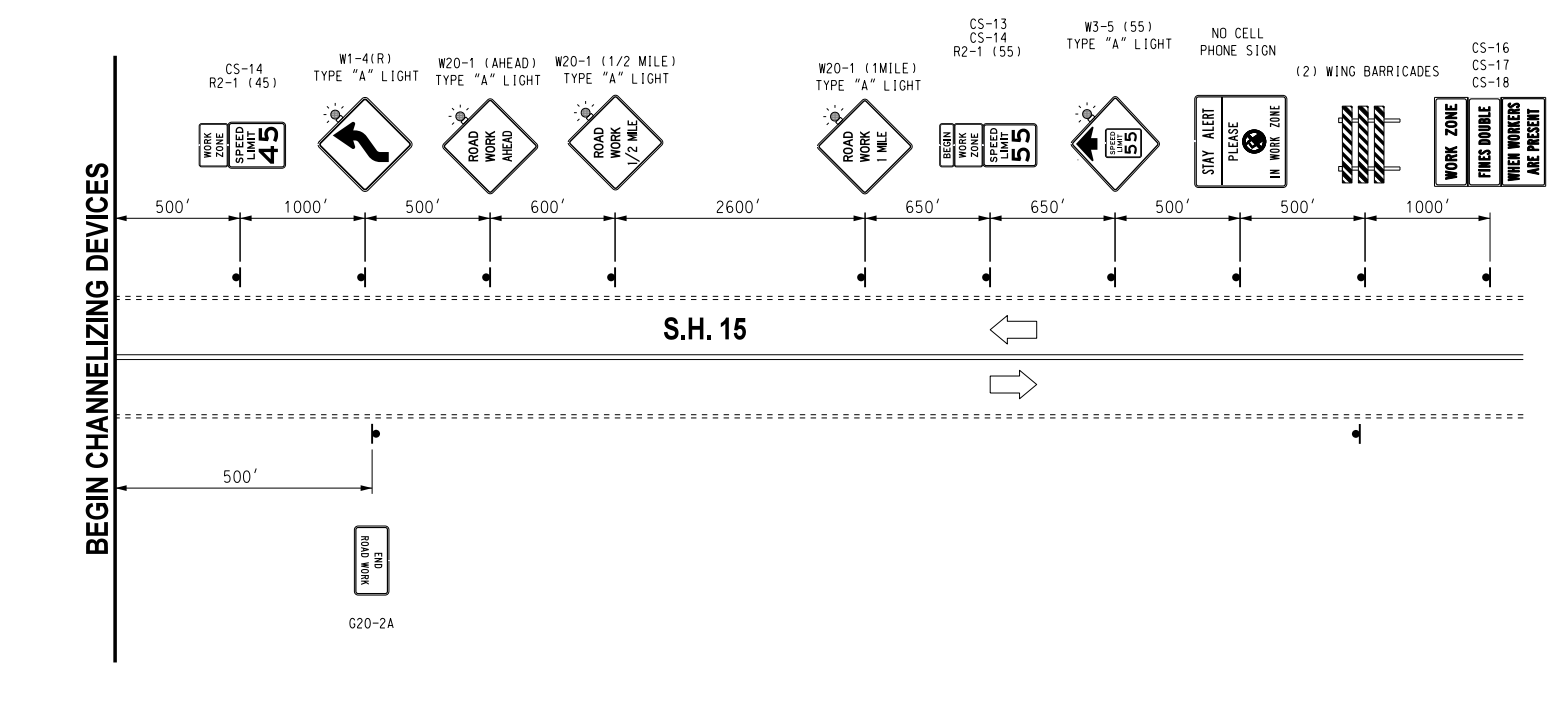
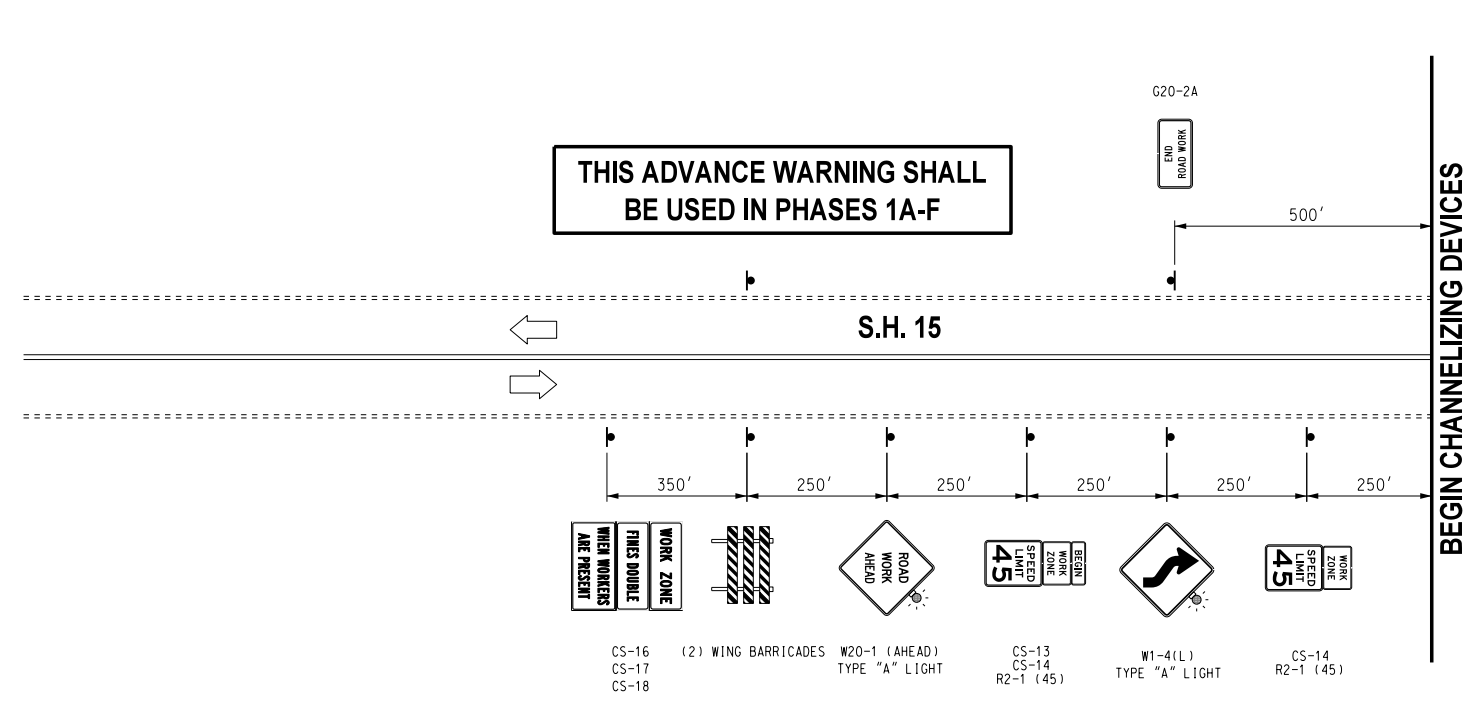
NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION	
PLS	RAM
DRAWN	RDJ
CHECKED	CLT
APPROVED	RAM
CREW	GUY

LAND TIE DATA SHEET

SWO 5011 (1) PROJECT NO. 26497(04) SHEET NO. S22

REVISIONS		
NO.	DESCRIPTION	DATE



NO CELL PHONE SIGN

48"x48"

● LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE
 BACKGROUND - YELLOW REFLECTIVE

▲ LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE
 BACKGROUND - ORANGE REFLECTIVE

DRAWING NOT TO SCALE

Design	RWR	05/12/20
Drawn	CCC	05/12/20



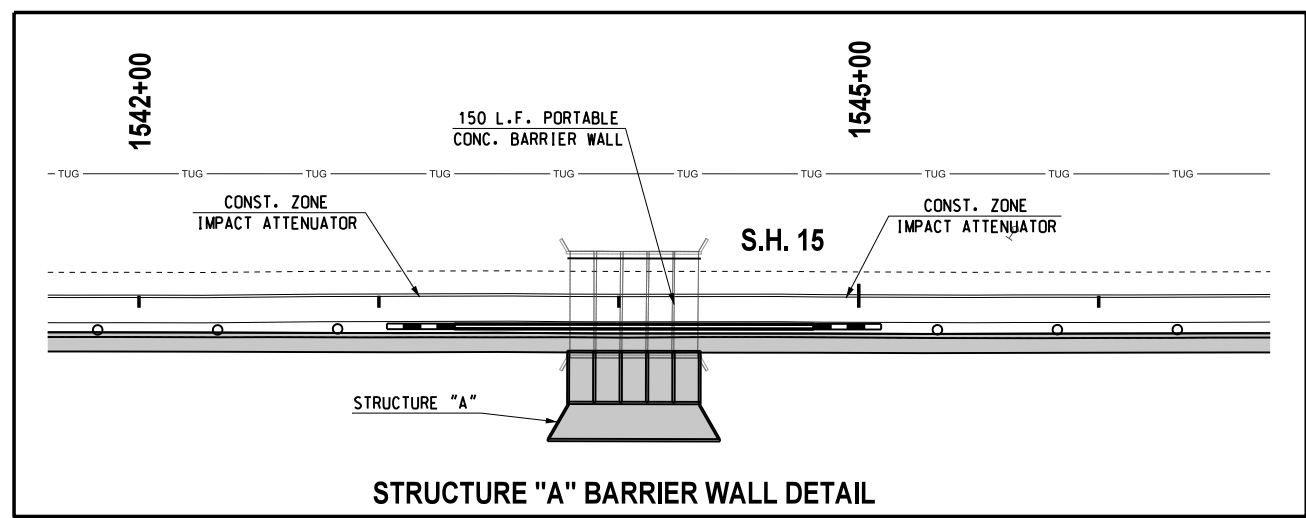
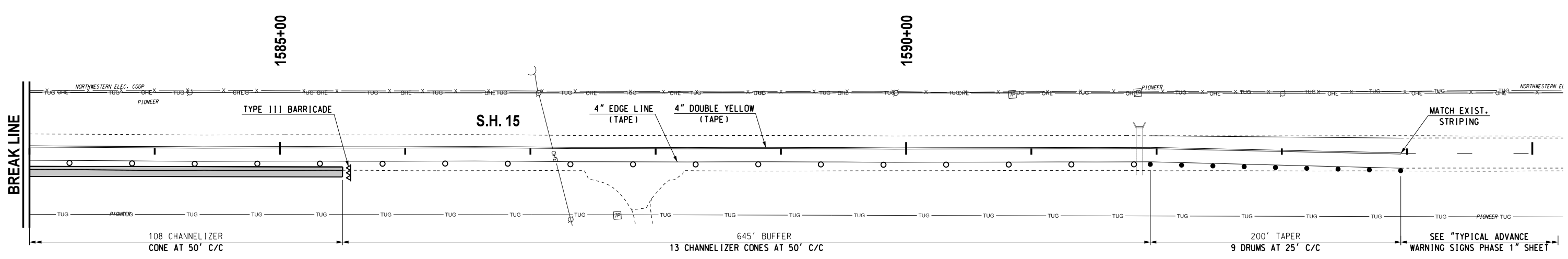
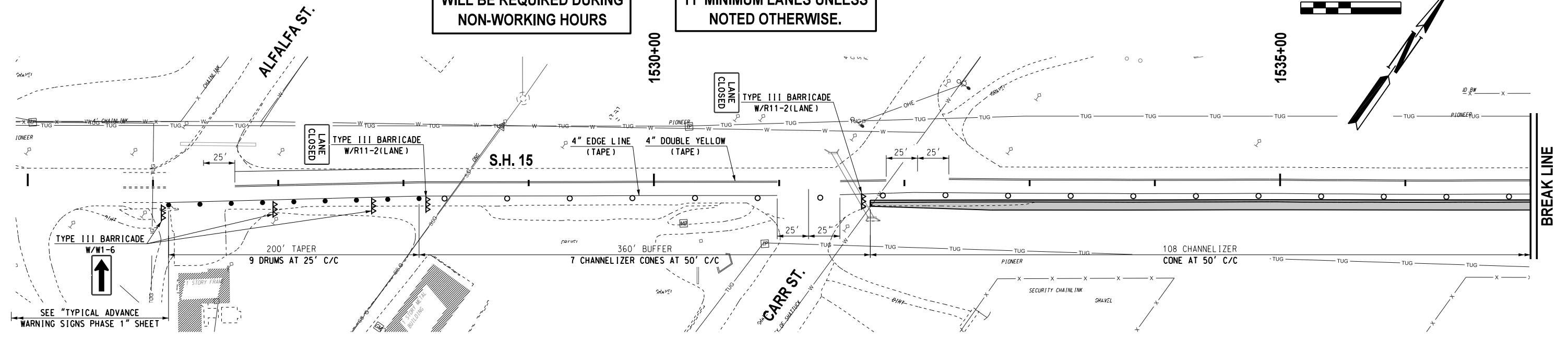
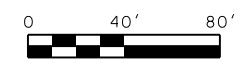
TYPICAL ADVANCE WARNING SIGNS PHASE 1

State Job No. 29674(04) Sheet No. T001

REVISIONS		
NO.	DESCRIPTION	DATE

**DROP OFF TREATMENT 3
WILL BE REQUIRED DURING
NON-WORKING HOURS**

**CONTRACTOR SHALL KEEP
11' MINIMUM LANES UNLESS
NOTED OTHERWISE.**



LEGEND	
	- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
	- VERTICAL PANEL
	- DRUM
	- CHANNELIZER CONE
	- PORTABLE CONC. BARRIER WALL
	- CONSTRUCTION ZONE IMPACT ATTENUATOR
	- WORK AREA

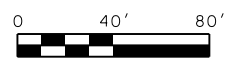
Design	RWR	05/12/20
Drawn	CCC	05/12/20

TRAFFIC CONTROL
PHASES 1A-F
STA. 1531+72.76 TO 1585+50
State Job No. 29674(04) Sheet No. T002

05/12/20 G:\00\Projects\1-2335 SH 15, East of Shattuck\CAD\T002-2967404-TC PHASE 1A-F.dgn

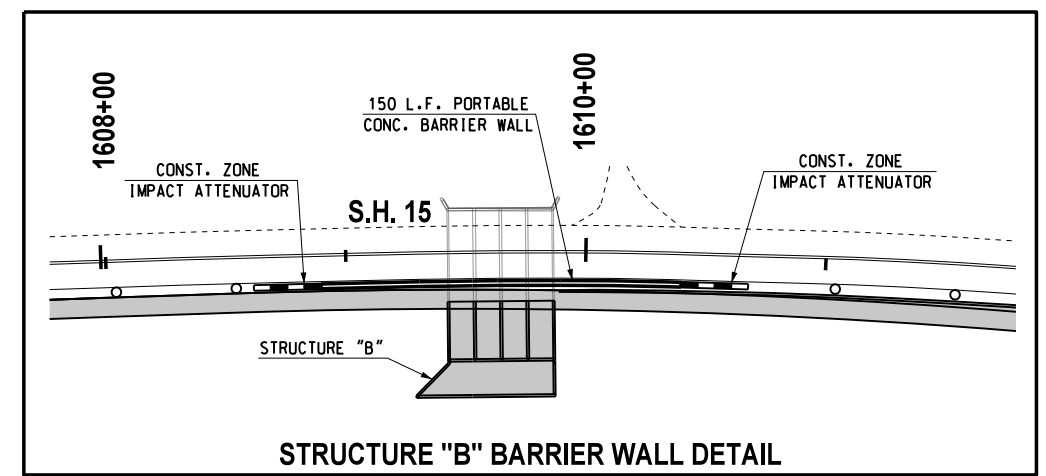
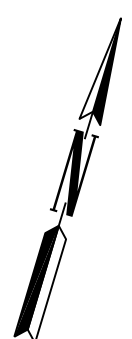
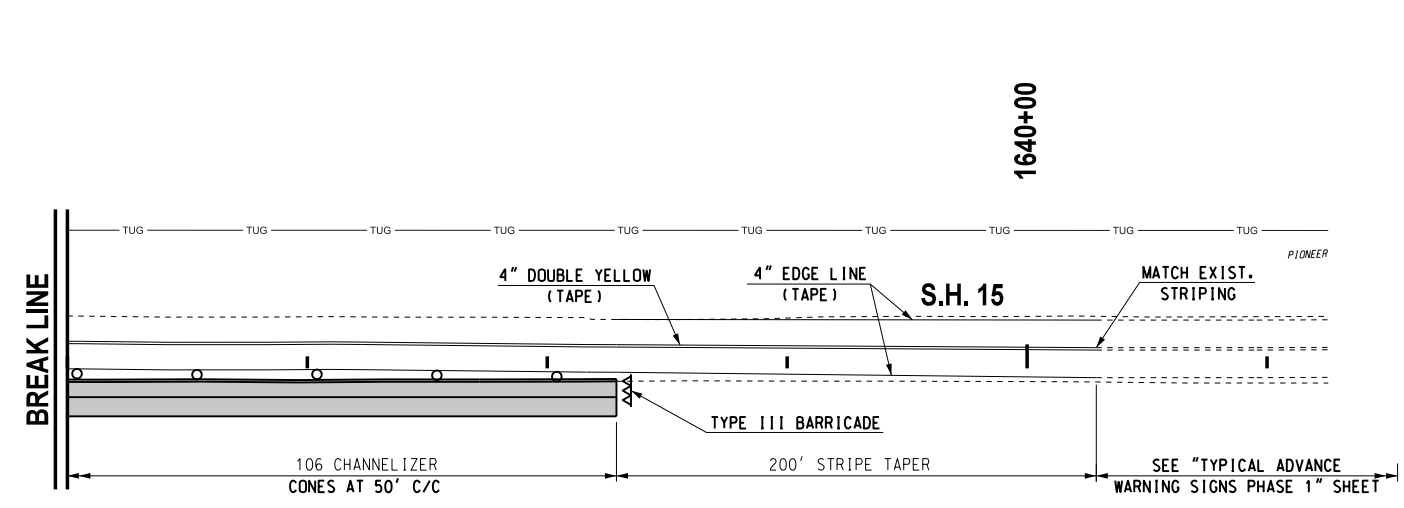
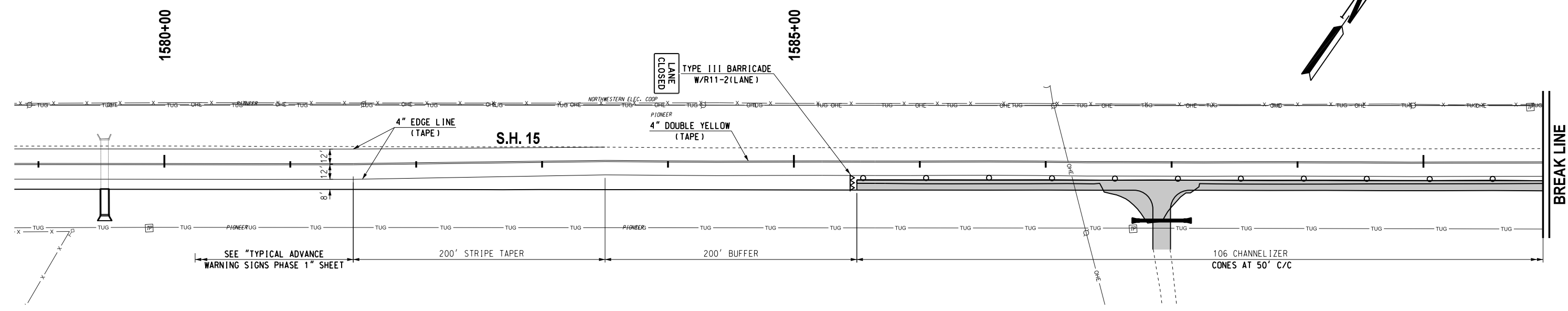
S.H. 15 ELLIS COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE



**DROP OFF TREATMENT 3
WILL BE REQUIRED DURING
NON-WORKING HOURS**

**CONTRACTOR SHALL KEEP
11' MINIMUM LANES UNLESS
NOTED OTHERWISE.**



LEGEND	
	- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
	- VERTICAL PANEL
	- DRUM
	- CHANNELIZER CONE
	- PORTABLE CONC. BARRIER WALL
	- CONSTRUCTION ZONE IMPACT ATTENUATOR
	- WORK AREA

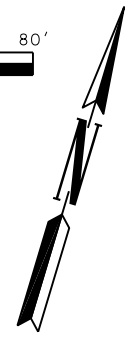
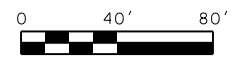
Design	RWR	05/12/20
Drawn	CCC	05/12/20
TEC A CLEAR DIRECTION		

TRAFFIC CONTROL
PHASES 1G-K
STA. 1585+50 TO 1638+30
State Job No. 29674(04) Sheet No. T003

05/12/20 G:\QIP\Projects\1-2335 SH 15, East of Shattuck\CAD\T003-2967404-TC PHASE 1G-K.dgn

S.H. 15 ELLIS COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE

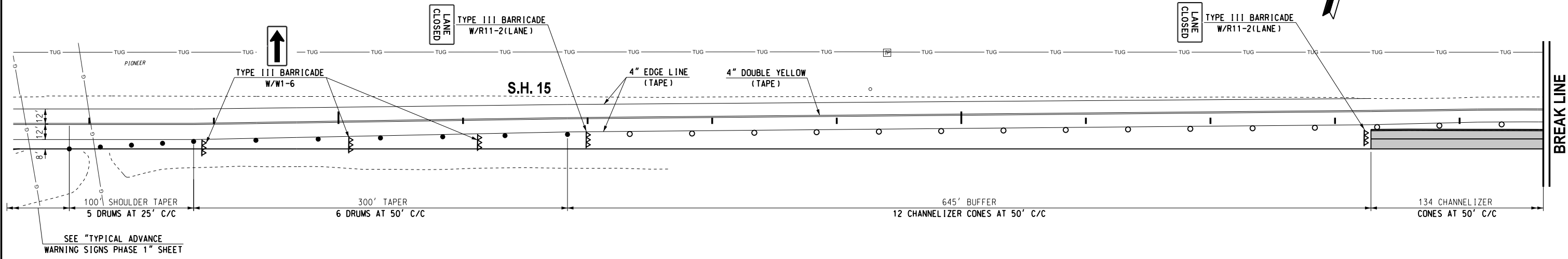


**DROP OFF TREATMENT 3
WILL BE REQUIRED DURING
NON-WORKING HOURS**

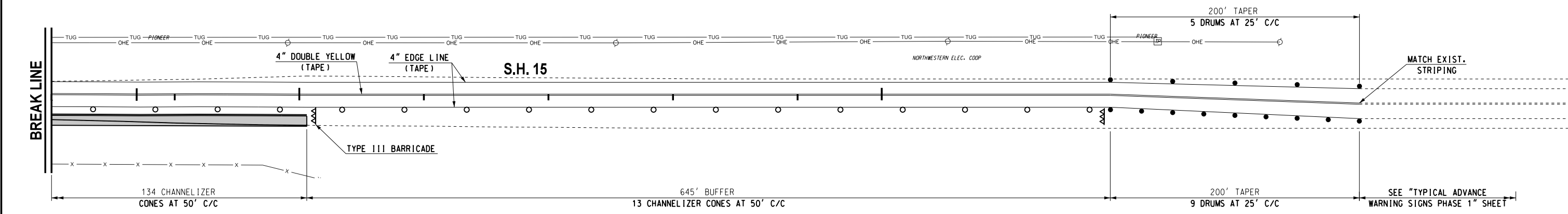
**CONTRACTOR SHALL KEEP
11' MINIMUM LANES UNLESS
NOTED OTHERWISE.**

1630+00

1635+00



1705+00



LEGEND	
	- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
	- VERTICAL PANEL
	- DRUM
	- CHANNELIZER CONE
	- PORTABLE CONC. BARRIER WALL
	- CONSTRUCTION ZONE IMPACT ATTENUATOR
	- WORK AREA

Design	RWR	05/12/20
Drawn	CCC	05/12/20

TRAFFIC CONTROL
PHASES 1L-P
STA. 1638+30 TO 1705+06
State Job No. 29674(04) Sheet No. T004

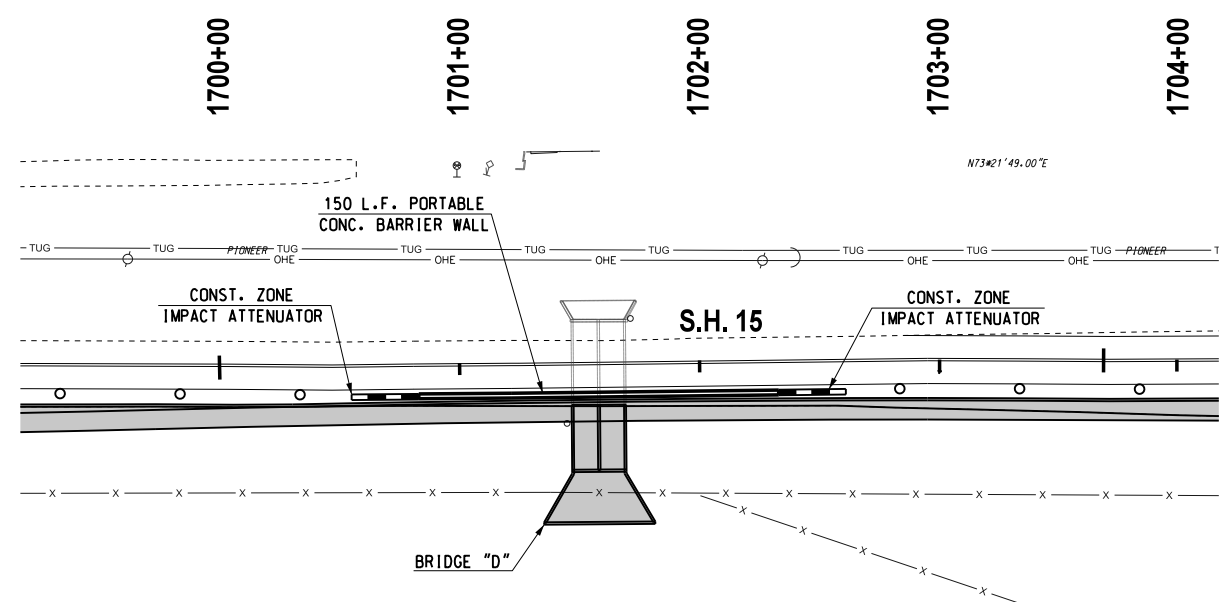
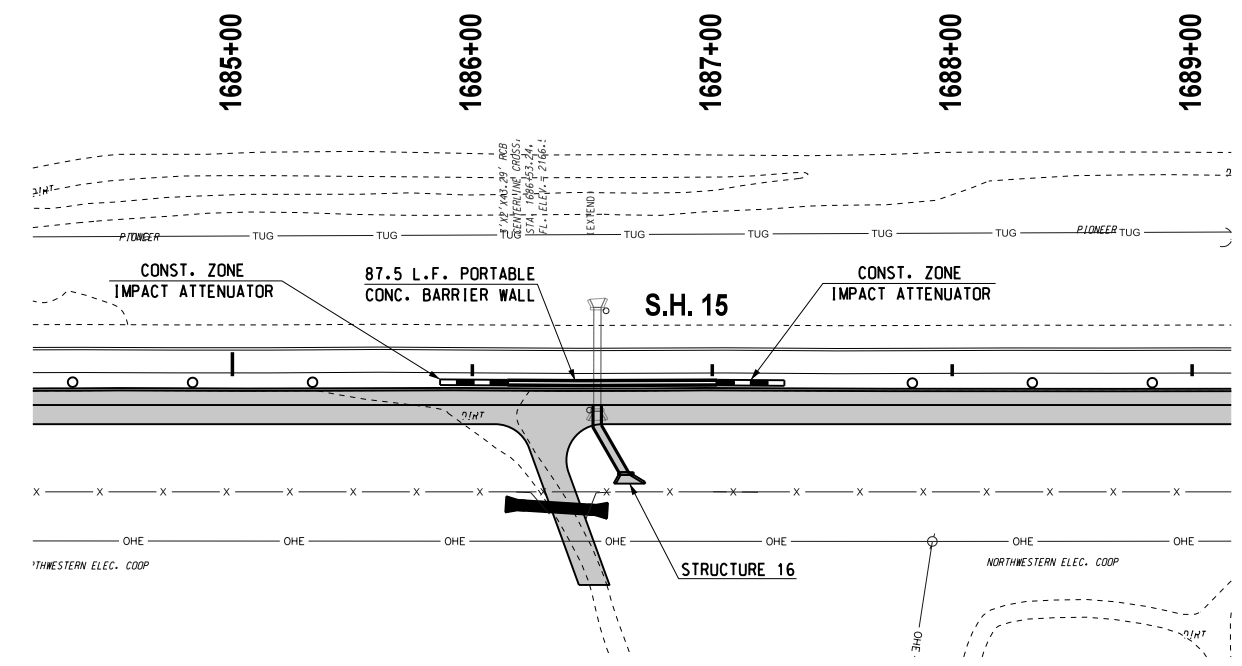
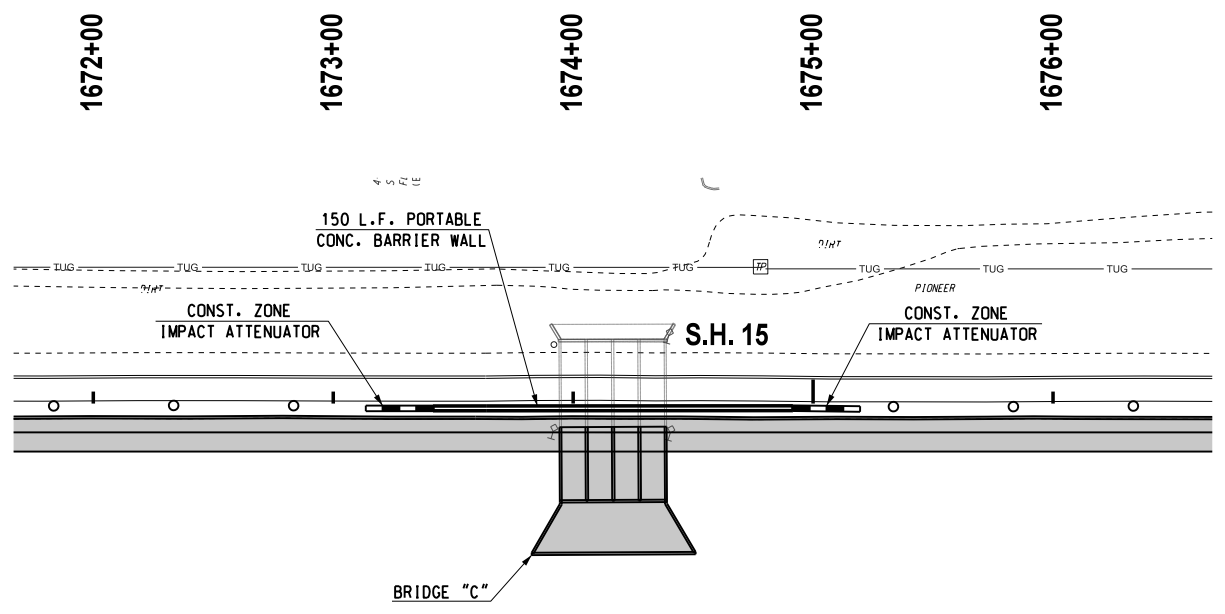
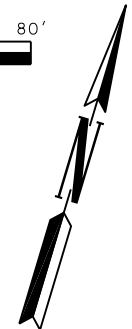
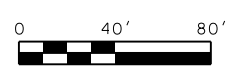
05/12/20 G:\00\Projects\T-2335 SH 15, East of Shattuck\CAD\T004-2967404-TC PHASE 1L-P.dgn

S.H. 15 ELLIS COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE

**DROP OFF TREATMENT 3
WILL BE REQUIRED DURING
NON-WORKING HOURS**

**CONTRACTOR SHALL KEEP
11' MINIMUM LANES UNLESS
NOTED OTHERWISE.**



LEGEND	
	- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
	- VERTICAL PANEL
	- DRUM
	- CHANNELIZER CONE
	- PORTABLE CONC. BARRIER WALL
	- CONSTRUCTION ZONE IMPACT ATTENUATOR
	- WORK AREA

Design	RWR	05/12/20
Drawn	CCC	05/12/20

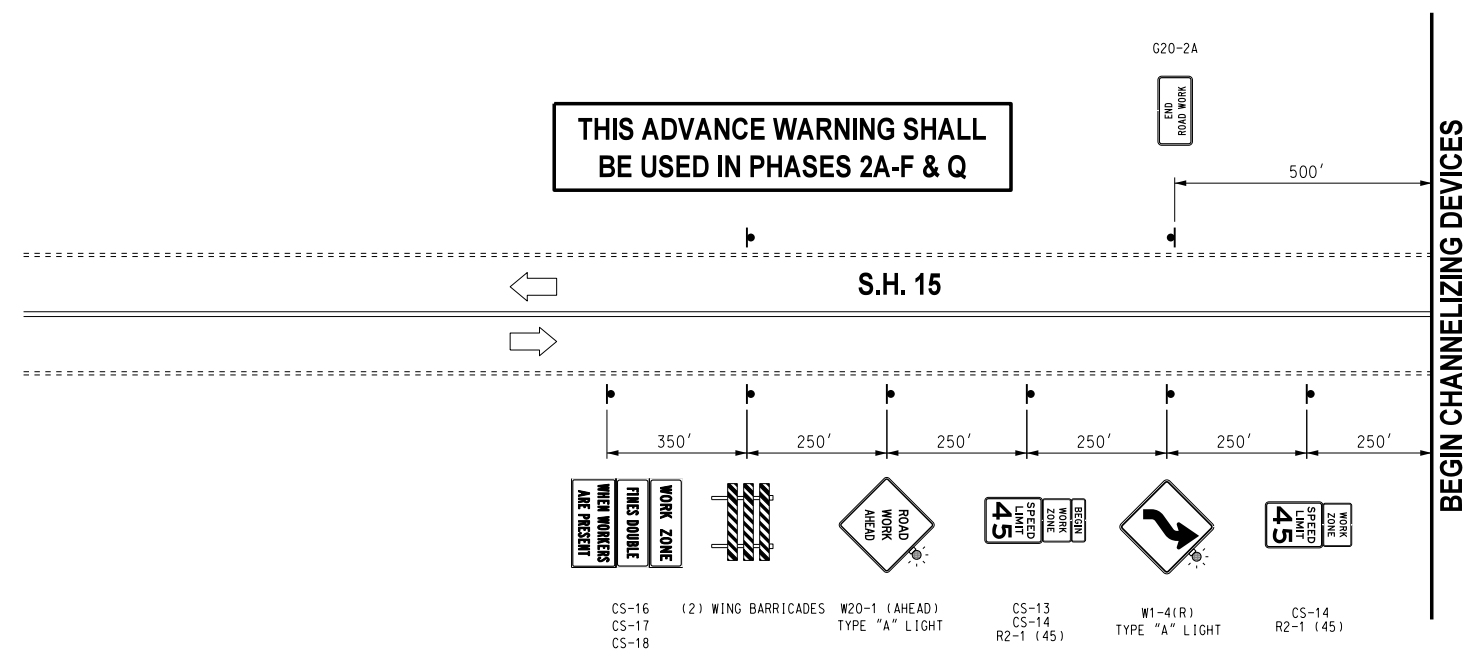
**TRAFFIC CONTROL
PHASES 1L-P DRAINAGE
STRUCTURES "C", "D" & 16**
State Job No. 29674(04) Sheet No. T005

05/12/20 G:\00\Projects\T-2335 SH 15, East of Sherburne\CAD\T005-2967404-TC PHASE 1L-P.dgn

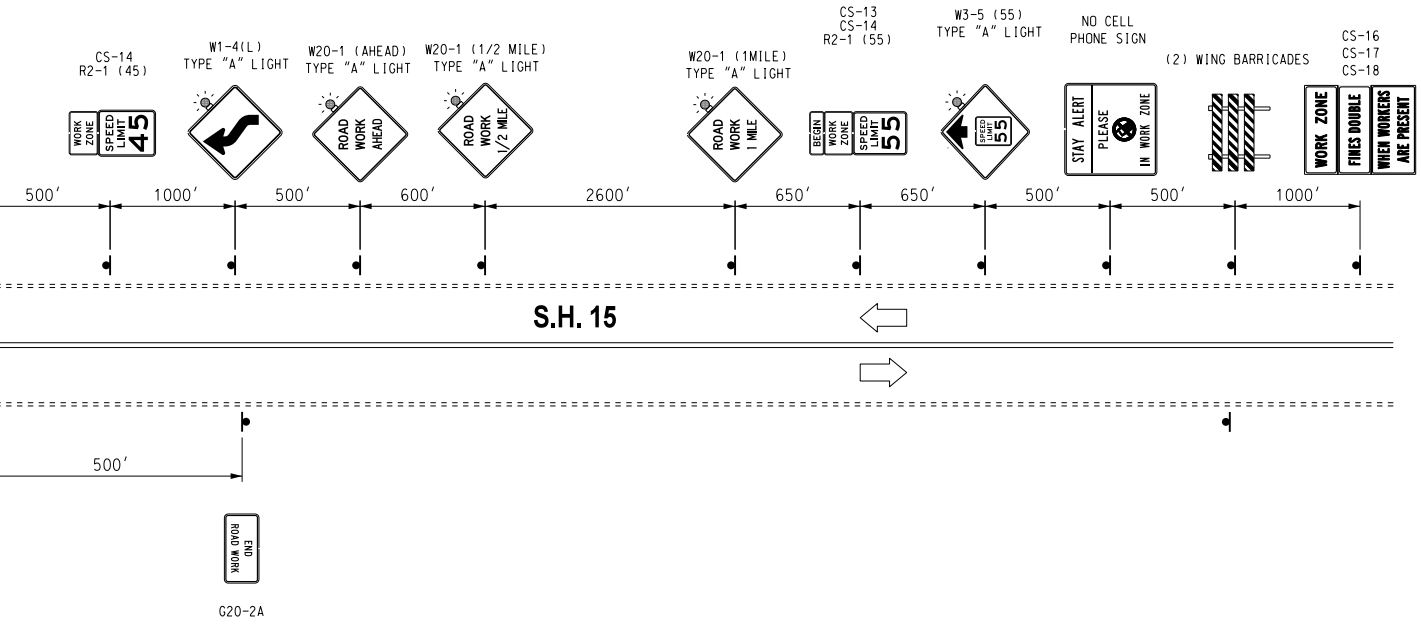
ELLIS COUNTY S.H. 15

REVISIONS		
NO.	DESCRIPTION	DATE

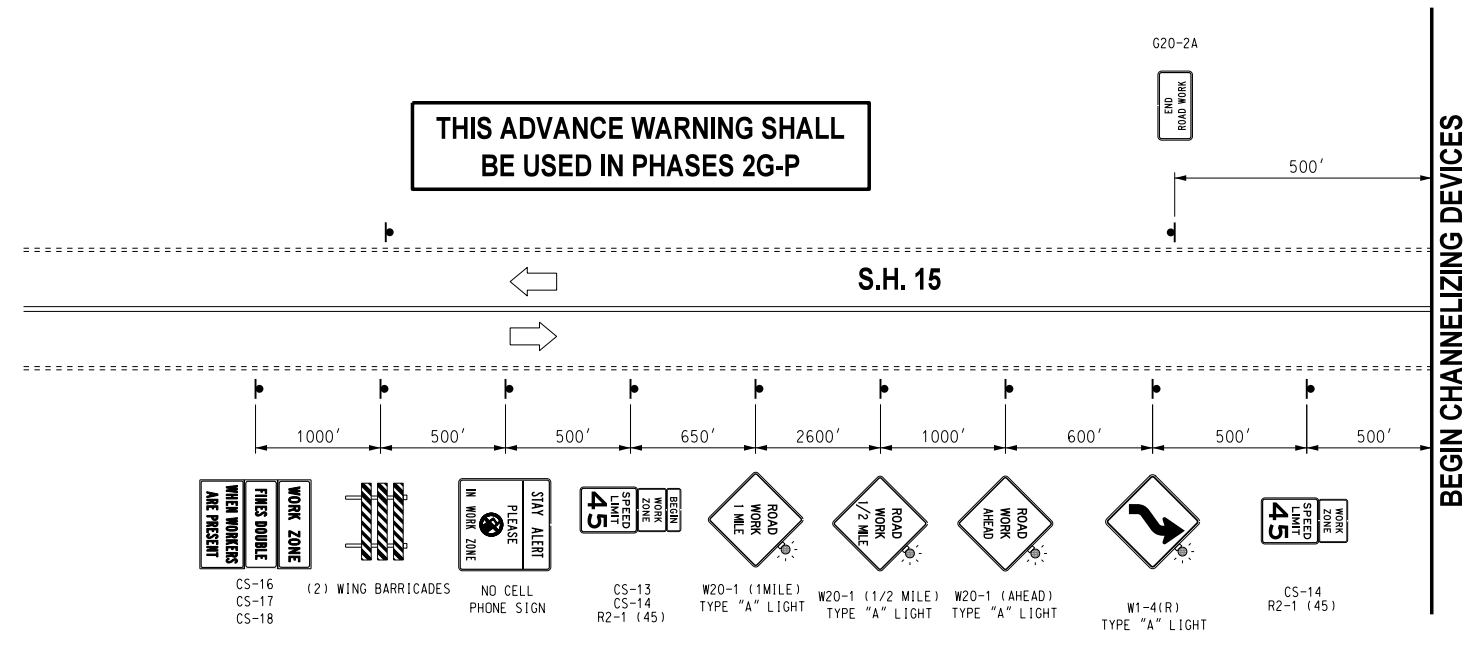
THIS ADVANCE WARNING SHALL BE USED IN PHASES 2A-F & Q



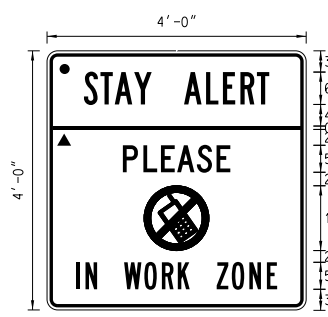
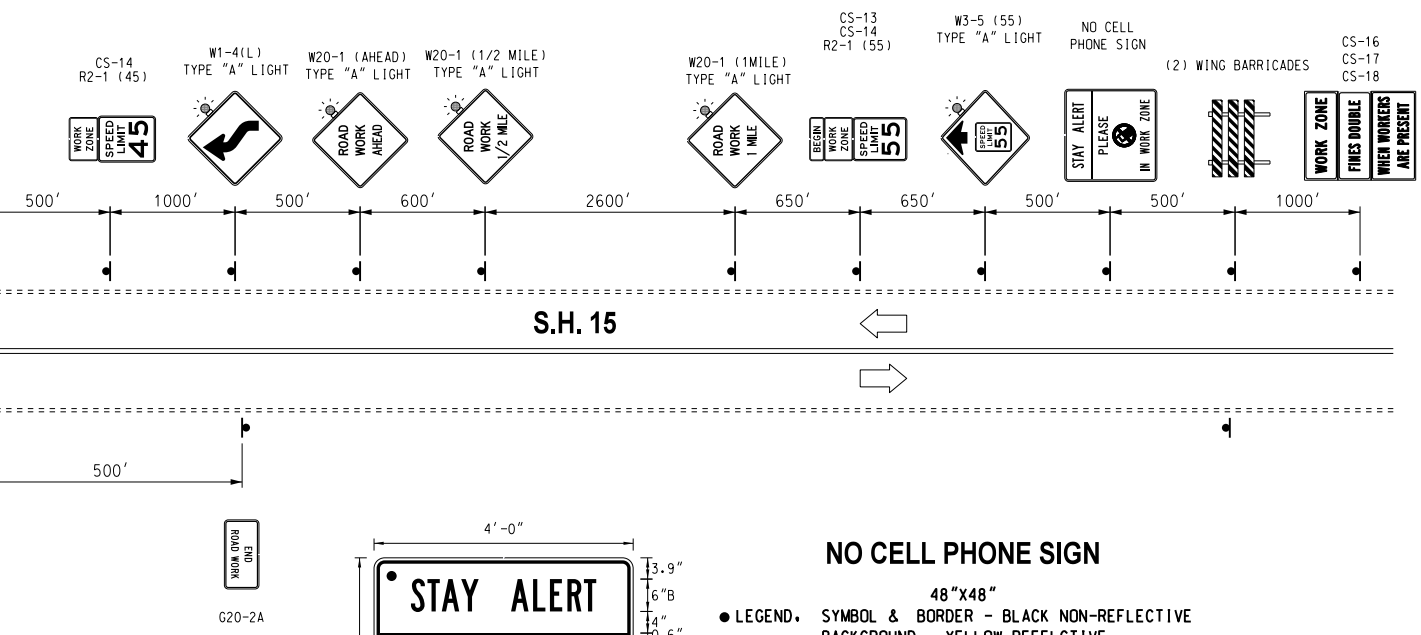
BEGIN CHANNELIZING DEVICES



THIS ADVANCE WARNING SHALL BE USED IN PHASES 2G-P



BEGIN CHANNELIZING DEVICES



NO CELL PHONE SIGN

- LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE BACKGROUND - YELLOW REFLECTIVE
- ▲ LEGEND. SYMBOL & BORDER - BLACK NON-REFLECTIVE BACKGROUND - ORANGE REFLECTIVE

DRAWING NOT TO SCALE

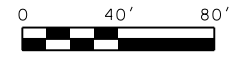
Design	RWR	05/12/20
Drawn	CCC	05/12/20



TYPICAL ADVANCE WARNING SIGNS PHASE 2

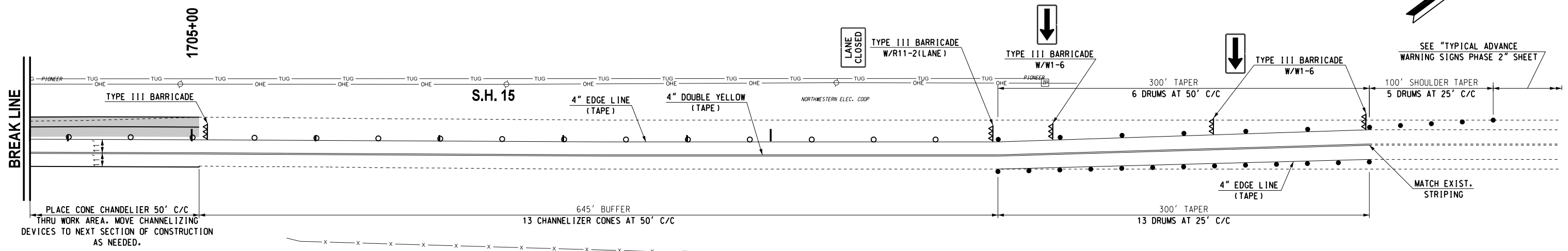
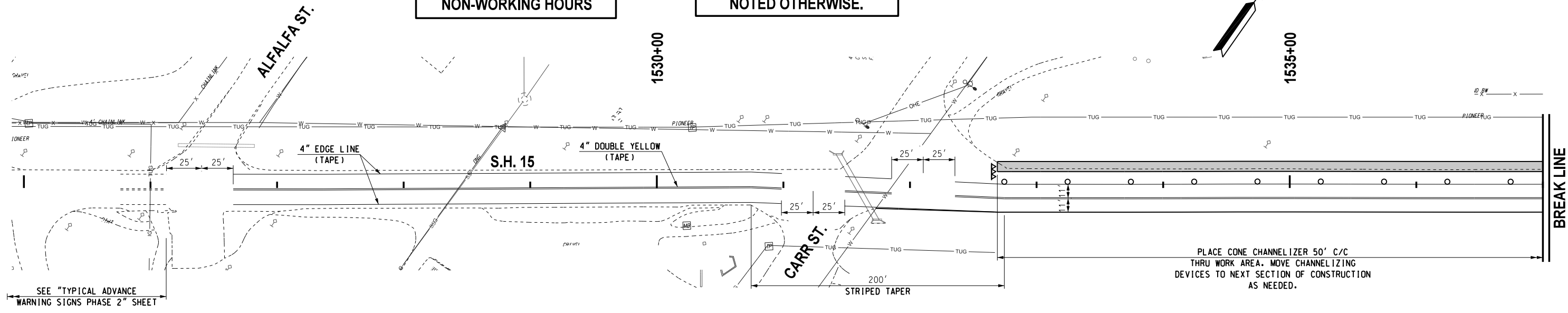
State Job No. 29674(04) Sheet No. T006

REVISIONS		
NO.	DESCRIPTION	DATE



**DROP OFF TREATMENT 4
WILL BE REQUIRED DURING
NON-WORKING HOURS**

**CONTRACTOR SHALL KEEP
11' MINIMUM LANES UNLESS
NOTED OTHERWISE.**



LEGEND	
	- TYPE III BARRICADE W/ TWO TYPE "A" LIGHTS
	- VERTICAL PANEL
	- DRUM
	- CHANNELIZER CONE
	- PORTABLE CONC. BARRIER WALL
	- CONSTRUCTION ZONE IMPACT ATTENUATOR
	- WORK AREA

Design	RWR	05/12/20
Drawn	CCC	05/12/20

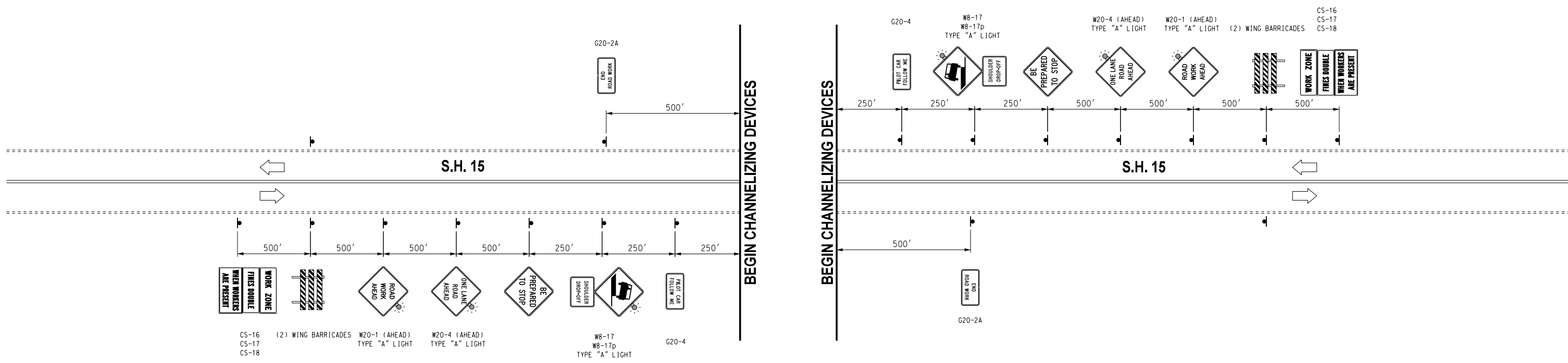
**TRAFFIC CONTROL
PHASES 2**
 STA. 1531+72.76 TO 1705+06
 State Job No. 29674(04) Sheet No. T007

05/12/20 GA:\09\Projects\1-2335 SH 15, East of Shorttuck.CAD\T007-29674(04)-TC PHASE 2-1.dgn

S.H. 15 ELLIS COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE

**DROP OFF TREATMENT 3
OR 4 WILL BE REQUIRED
DURING NON-WORKING HOURS**



05/12/20 G:\Projects\T-2335 SH 15, East of Sherhuck\CAD\T008-2967404-TC ADVANCE WARNING PHASE 3.dgn

DRAWING NOT TO SCALE

Design	RWR	05/12/20
Drawn	CCC	05/12/20

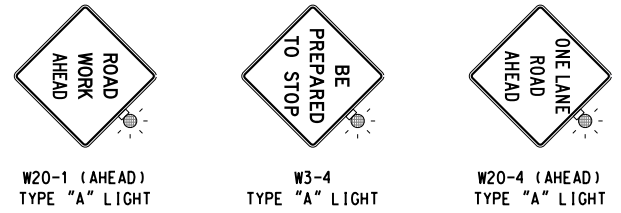
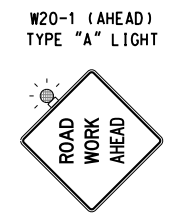
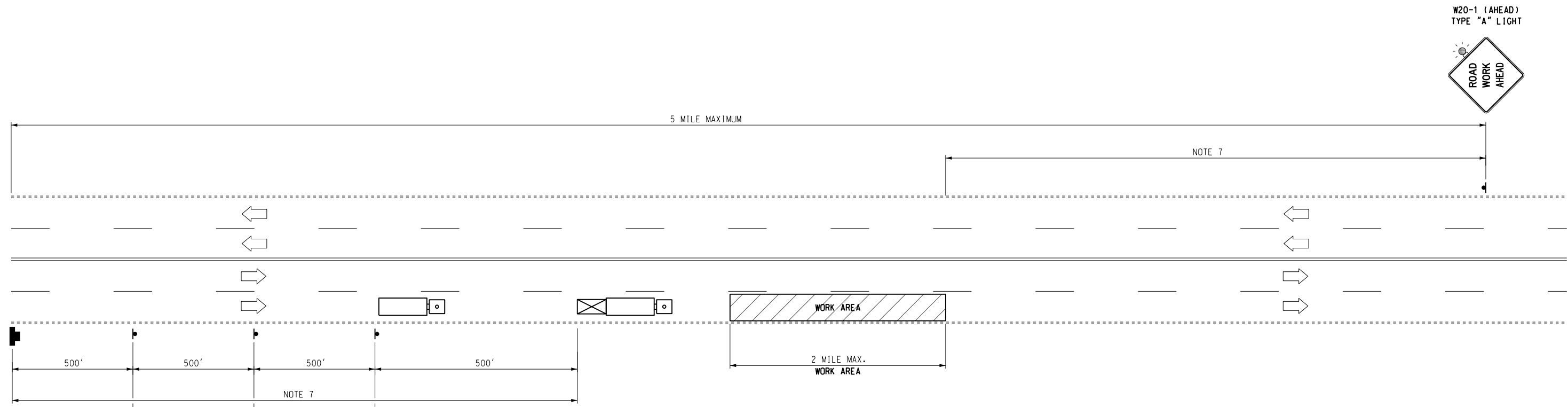


**TYPICAL ADVANCE
WARNING SIGNS
PHASE 3**

State Job No. 29674(04) Sheet No. T008

S.H. 15
ELLIS COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE



NOTE 1
ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

NOTE 2
EACH VEHICLE SHALL HAVE TWO-WAY RADIO COMMUNICATION CAPABILITY.

NOTE 3
ON TWO LANE TWO-WAY ROADWAYS, THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW MOTOR VEHICLE TRAFFIC TO PASS. IF THE WORK AND SHADOW VEHICLES CANNOT PULL OVER TO ALLOW VEHICULAR TRAFFIC TO PASS FREQUENTLY, A DO NOT PASS SIGN MAY BE PLACED ON THE REAR OF THE VEHICLE BLOCKING THE LANE.

NOTE 4
A LONGITUDINAL BUFFER AREA, TO ALLOW WORKERS TIME TO EVACUATE THE WORK AREA, SHOULD BE PROVIDED. FOR GUIDELINES ON SETTING THE LENGTH OF THIS BUFFER, SEE STANDARD DRAWING TCS2-1 (LATEST REVISION). ACTUAL LENGTH SHALL BE DETERMINED BY FIELD CONDITIONS AND THE JUDGEMENT OF THE ENGINEER.

NOTE 5
THE SHADOW VEHICLE SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE WHENEVER WORKERS ARE IN THE WORK AREA. THIS VEHICLE SHALL BE REMOVED FROM THE ROADWAY WHENEVER WORKERS ARE NOT IN THE WORK AREA. THIS VEHICLE SHALL BE EQUIPPED WITH AN ACTUATED FLASHING OR REVOLVING YELLOW LIGHT, AND A TYPE "B" ARROW DISPLAY.

NOTE 6
TRAFFIC CONTROL OVER ANY EXISTING BRIDGES SHALL BE MODIFIED TO MAINTAIN THE FLOW OF TRAFFIC. AT NO TIME WILL TWO TRAFFIC LANES ON THE SAME BRIDGE BE CLOSED TO TRAFFIC.

NOTE 7
IN THOSE SITUATIONS WHERE MULTIPLE WORK LOCATIONS WITHIN A LIMITED DISTANCE MAKE IT PRACTICAL TO PLACE STATIONARY SIGNS, THE DISTANCE BETWEEN THE ADVANCE WARNING SIGN AND THE WORK SHOULD NOT EXCEED 2 MILES.

LEGEND	
	- SIGN
	- WORK AREA
	- SHADOW VEHICLE
	- TRUCK MOUNTED ATTENUATOR

DRAWING NOT TO SCALE

Design	RWR	05/12/20
Drawn	CCC	05/12/20



TYPICAL MOVING OPERATION
TRAFFIC CONTROL DETAIL
PHASE 3

State Job No. 29674(04) Sheet No. T009

05/12/20 G:\Projects\T-2335 SH 15 East of Shattuck\CAD\T009-2967404-TC MOVING OPERATION PHASE 3.dgn

S.H. 15 ELLIS COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE

SIGN SUMMARY

SHEET NO.	ITEM NO.	LOCATION		SIGN TYPE	POSTS			FOOTINGS			SIGN AREA			REMARKS	
					TYPE	A L.F.	B L.F.	SPACING	DESIGN NO.	CONCRETE C.Y.	STEEL LBS.	SHEET S.F.	PANEL S.F.		PANEL OVERHEAD S.F.
101	1	1532+80	(SH 15)	SPECIAL SIGN NO. 1	2-1/4" SQ. TUBE POST	13.0	14.0	3'-10"				13.00			
101	2	1537+45	(SH 15)	R2-1(45)	2-1/4" SQ. TUBE POST	13.5						5.00			
101	3	1537+45	(SH 15)	R2-1(55)	2-1/4" SQ. TUBE POST	13.5						5.00			
101	4	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
101	5	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
101	6	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
101	7	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
101	8	1547+80	(SH 15)	R2-1(55)	2-1/4" SQ. TUBE POST	13.5						5.00			
101	9	1547+80	(SH 15)	R2-1(65)	2-1/4" SQ. TUBE POST	13.5						5.00			
101	10	1559+00	(SH 15)	W3-5(55)	2-1/4" SQ. TUBE POST	16.0						9.00			
102	11	1564+98	(SH 15)	R1-1	2-1/4" SQ. TUBE POST	14.0						5.18			
104	12	1605+00	(SH 15)	W1-2(R)	2-1/4" SQ. TUBE POST	15.0						6.25			
104	13	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
104	14	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
104	15	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
104	16	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
104	17	1612+50	(SH 15)	TWO W1-8 SIGNS BACK TO BACK	2-1/4" SQ. TUBE POST	11.0						6.00			
105	18	1615+50	(SH 15)	TWO W1-8 SIGNS BACK TO BACK	2-1/4" SQ. TUBE POST	11.0						6.00			
105	19	1618+50	(SH 15)	TWO W1-8 SIGNS BACK TO BACK	2-1/4" SQ. TUBE POST	11.0						6.00			
105	20	1623+00	(SH 15)	W1-2(L)	2-1/4" SQ. TUBE POST	15.0						6.25			
105	21	1627+27	(SH 15)	R1-1	2-1/4" SQ. TUBE POST	14.0						5.18			
106	22	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
106	23	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
107	24	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
107	25	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
107	26	1683+26	(SH 15)	R1-1	2-1/4" SQ. TUBE POST	14.0						5.18			
107	27	1683+53	(SH 15)	R1-1	2-1/4" SQ. TUBE POST	14.0						5.18			
108	28	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
108	29	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
108	30	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
108	31	AS SHOWN	(SH 15)	OM-3	2-1/4" SQ. TUBE POST	11.0						3.00			
TOTALS					2-1/4" SQ. TUBE POST	392.0						141.22			

05/12/20 G:\Projects\T-2335 SH 15 East of Sherhuck\CAD\T00-2967404-SIGN SUMMARY.dgn

Design	RWR	05/12/20
Drawn	GDB	05/12/20

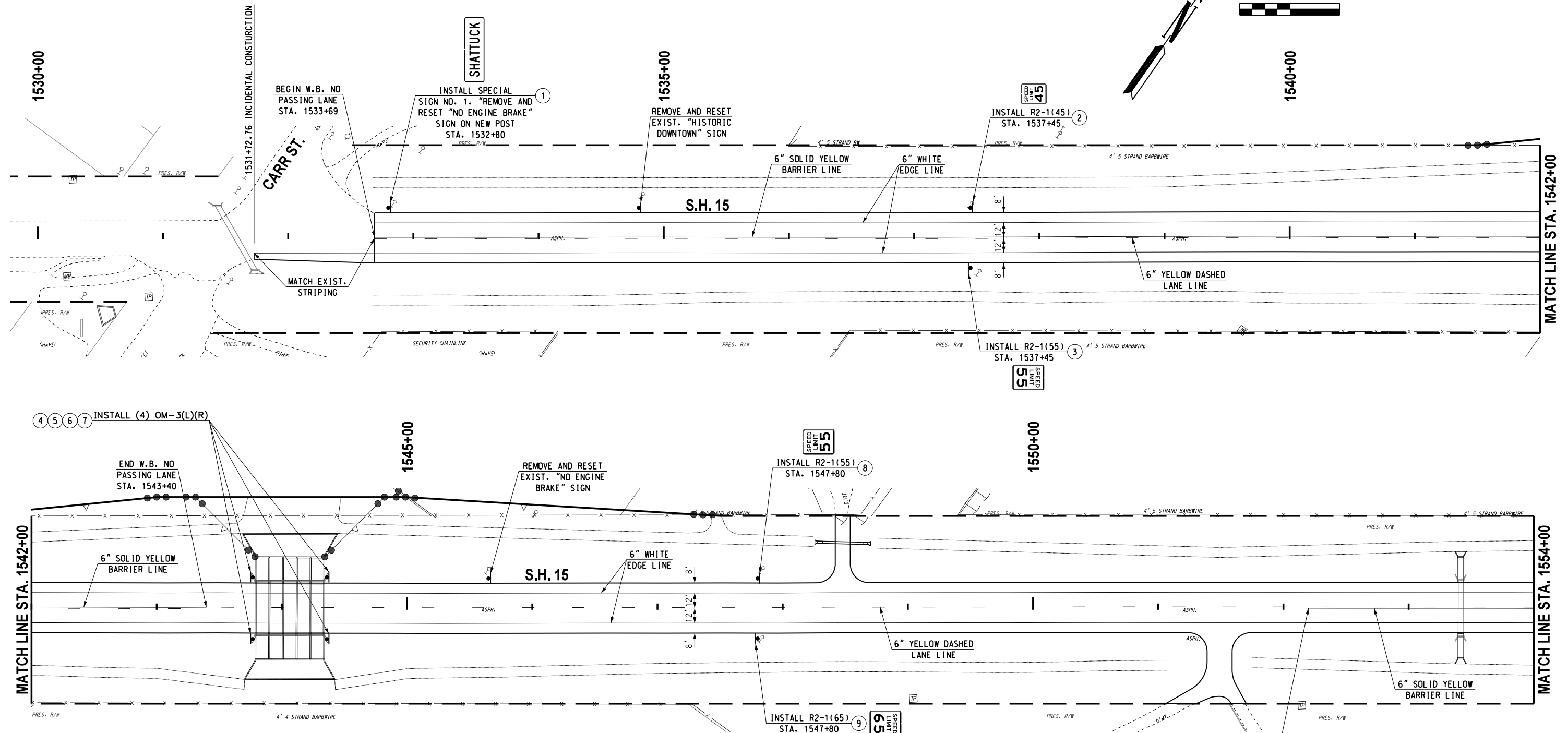
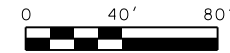


SIGN SUMMARY

State Job No. 29674(04) Sheet No. T010

S.H. 15 ELLIS COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE



4 5 6 7 INSTALL (4) OM-3(L)(R)

END W.B. NO PASSING LANE STA. 1543+40

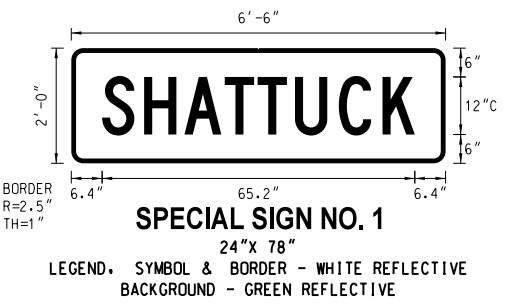
REMOVE AND RESET EXIST. "NO ENGINE BRAKE" SIGN

INSTALL R2-1(55) STA. 1547+80

INSTALL R2-1(65) STA. 1547+80

BEGIN E.B. NO PASSING LANE STA. 1552+20

MULTI. POLY. STRIPING SUM. TABLE		
DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (MULTI. POLY.) 4" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 4" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 6" WHITE	L.F.	4359
TRAFFIC STRIPE (MULTI. POLY.) 6" YELLOW	L.F.	1847
TRAFFIC STRIPE (MULTI. POLY.) 6" BLACK	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 24" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) ARROWS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) WORDS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) SYMBOLS	EA.	0



Design RWR 05/12/20
 Drawn CCC 05/12/20

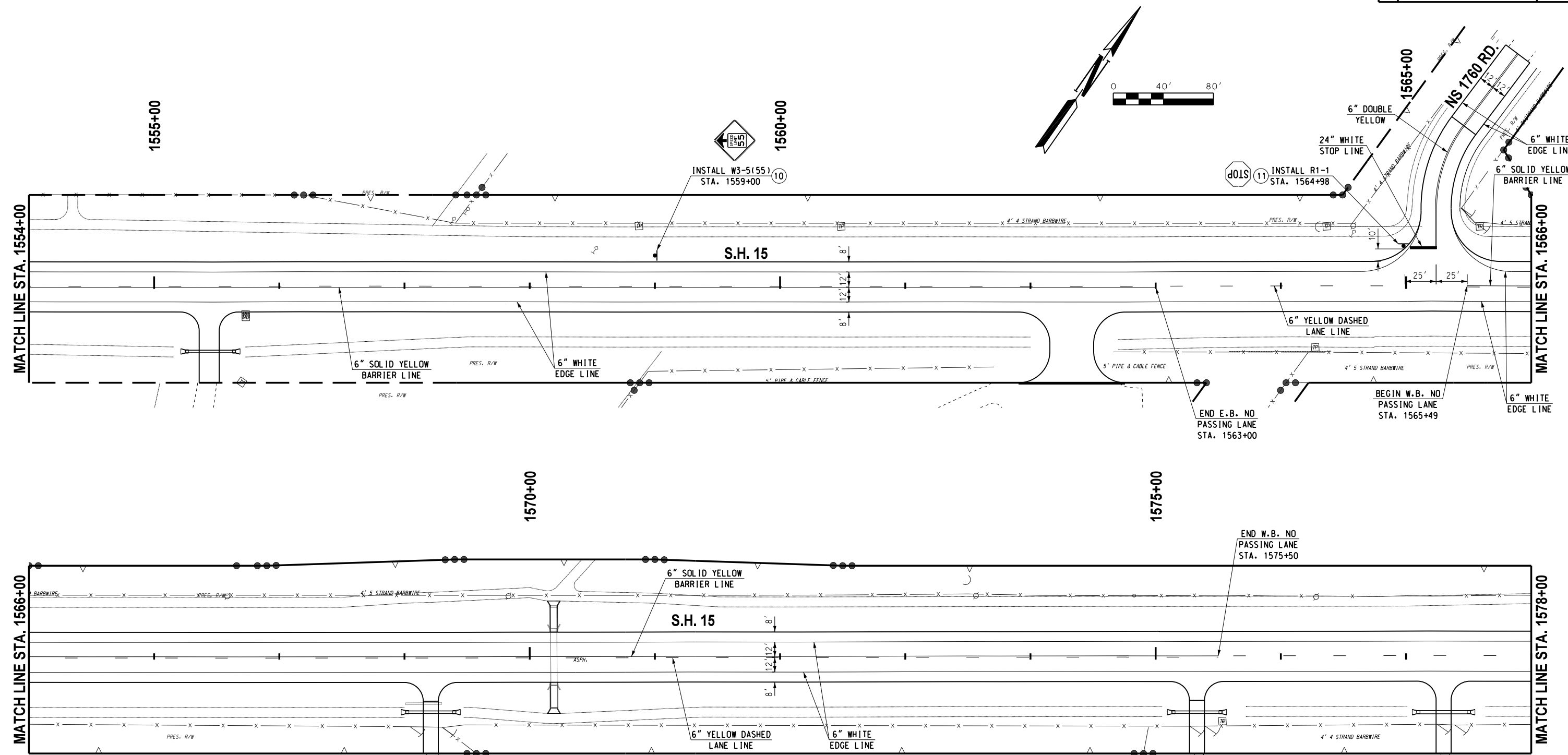
SIGNING & STRIPING PLAN
 STA. 1530+00 TO 1554+00
 (SHEET 1 OF 8)

State Job No. 29674(04) Sheet No. T011

05/12/20 G:\00\projects\1-2335 SH 15, East of Shattuck.CAD\T011-29674(04)-STRIPING.dgn

S.H. 15 ELLIS COUNTY


REVISIONS		
NO.	DESCRIPTION	DATE



MULTI. POLY. STRIPING SUM. TABLE

DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (MULTI. POLY.) 4" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 4" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 6" WHITE	L.F.	5130
TRAFFIC STRIPE (MULTI. POLY.) 6" YELLOW	L.F.	2883
TRAFFIC STRIPE (MULTI. POLY.) 6" BLACK	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 24" WHITE	L.F.	22
TRAFFIC STRIPE (MULTI. POLY.) ARROWS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) WORDS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) SYMBOLS	EA.	0

Design	RWR	05/12/20
Drawn	CCC	05/12/20



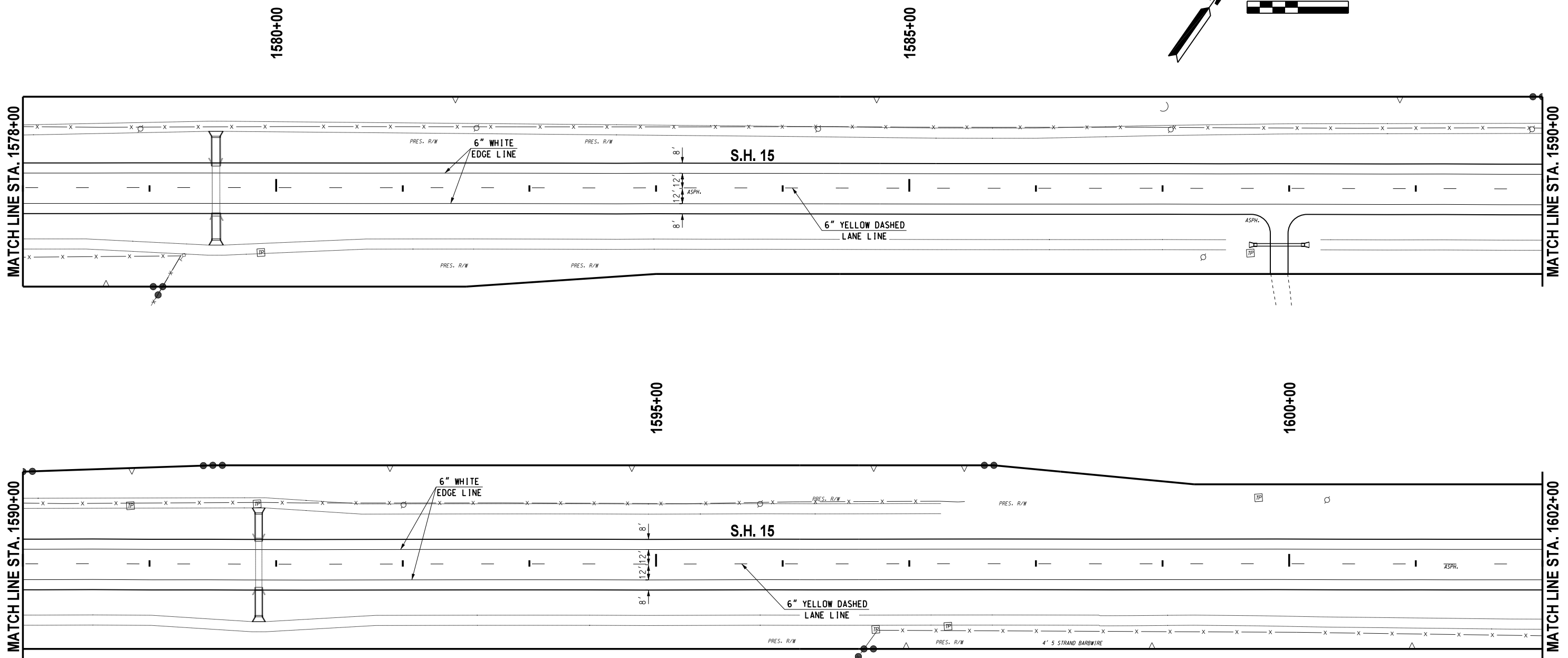
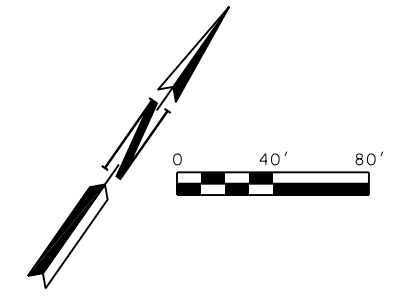
SIGNING & STRIPING PLAN
 STA. 1554+00 TO 1578+00
 (SHEET 2 OF 8)

State Job No. 29674(04) Sheet No. T012

05/12/20 G:\0\Projects\1-2335 SH 15 East of Shattuck\CAD\T02-2967404-STRIPING.dgn

S.H. 15 ELLIS COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE



DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (MULTI. POLY.) 4" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 4" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 6" WHITE	L.F.	4800
TRAFFIC STRIPE (MULTI. POLY.) 6" YELLOW	L.F.	636
TRAFFIC STRIPE (MULTI. POLY.) 6" BLACK	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 24" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) ARROWS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) WORDS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) SYMBOLS	EA.	0

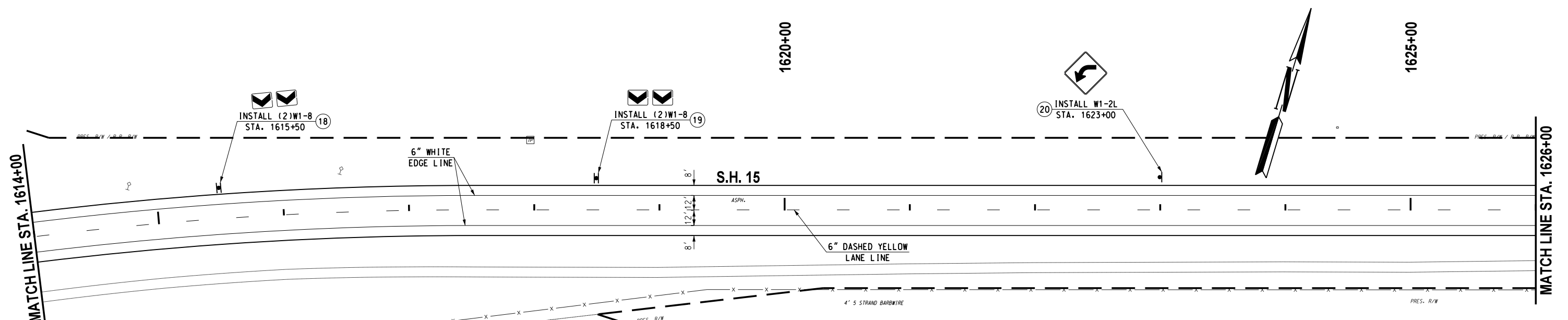
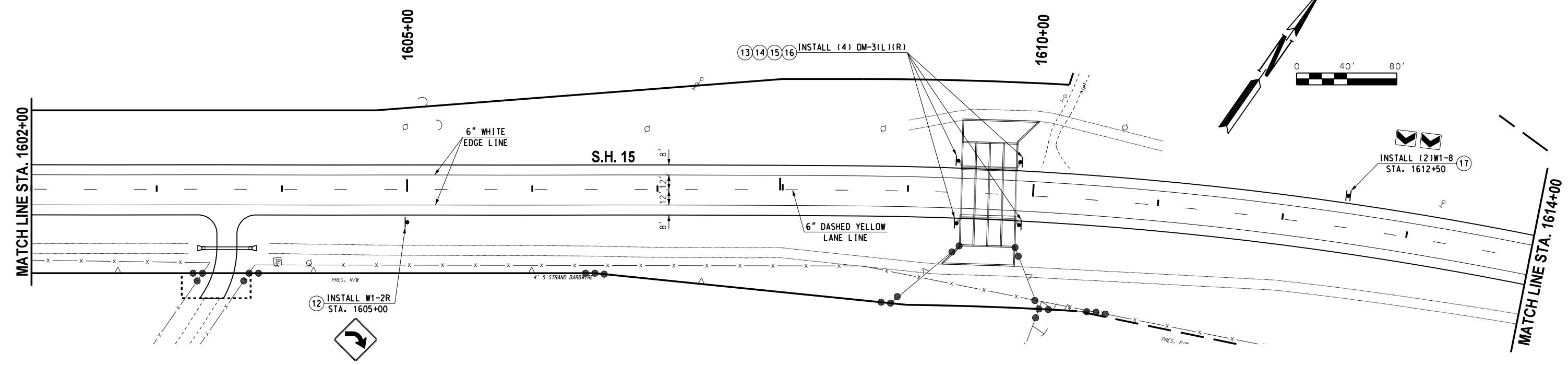
Design	RWR	05/12/20
Drawn	CCC	05/12/20

SIGNING & STRIPING PLAN
 STA. 1578+00 TO 1602+00
 (SHEET 3 OF 8)
 State Job No. 29674(04) Sheet No. T013

05/12/20 G:\0\Projects\1-2335 SH 15, East of Sherbuck\CAD\T013-2967404-STRIPING_3.dgn

ELLIS COUNTY S.H. 15

REVISIONS		
NO.	DESCRIPTION	DATE



MULTI. POLY. STRIPING SUM. TABLE

DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (MULTI. POLY.) 4" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 4" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 6" WHITE	L.F.	4800
TRAFFIC STRIPE (MULTI. POLY.) 6" YELLOW	L.F.	636
TRAFFIC STRIPE (MULTI. POLY.) 6" BLACK	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 24" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) ARROWS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) WORDS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) SYMBOLS	EA.	0

Design RWR 05/12/20
 Drawn CCC 05/12/20

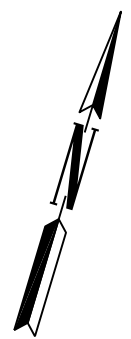
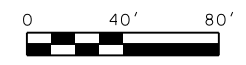
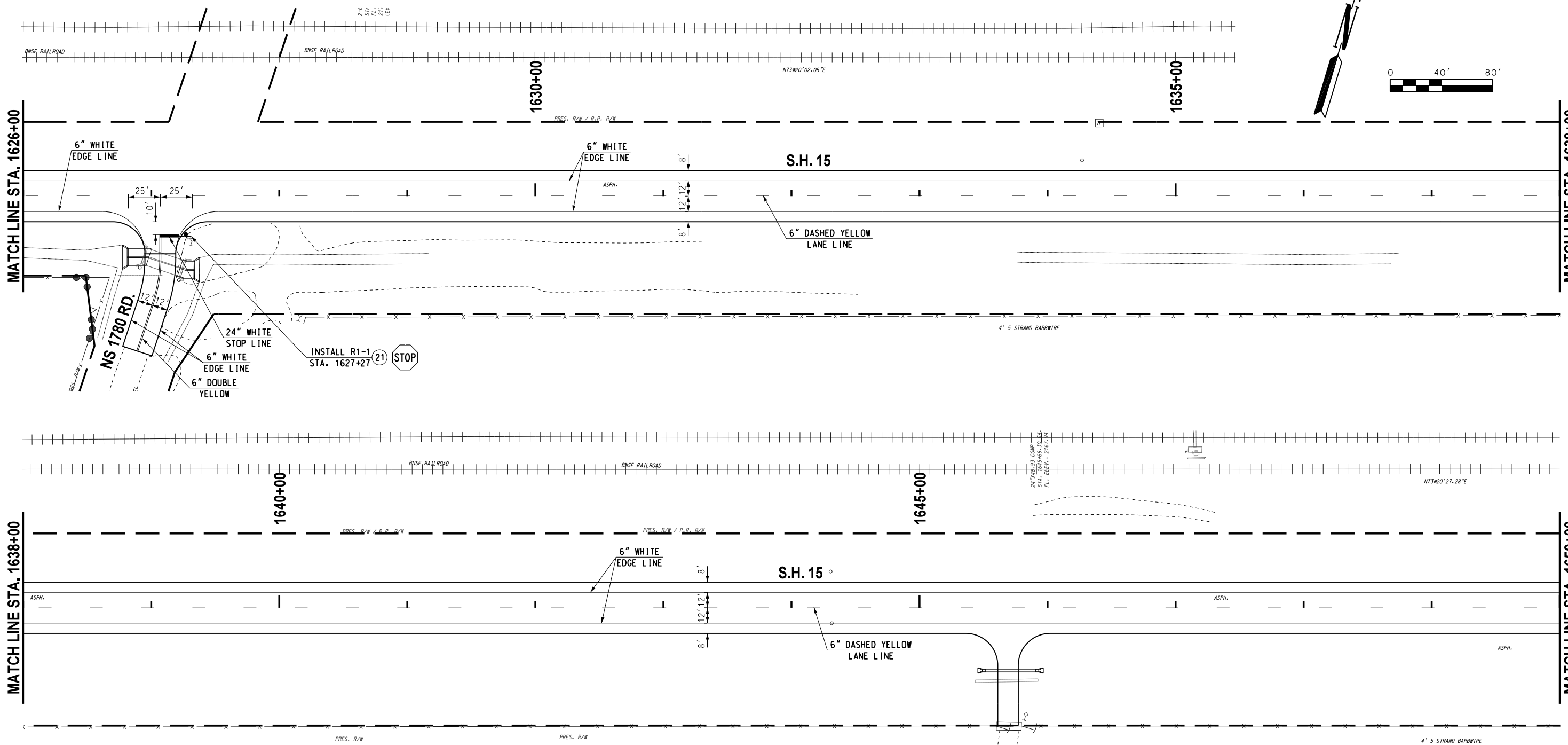
SIGNING & STRIPING PLAN
 STA. 1602+00 TO 1626+00
 (SHEET 4 OF 8)

State Job No. 29674(04) Sheet No. T014

05/12/20 G:\00\Projects\1-2335 SH 15, East of Shorttuck\CAD\T04-2967404-STRIPING_4.dgn


ELLIS COUNTY S.H. 15

REVISIONS		
NO.	DESCRIPTION	DATE



MULTI. POLY. STRIPING SUM. TABLE		
DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (MULTI. POLY.) 4" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 4" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 6" WHITE	L.F.	4975
TRAFFIC STRIPE (MULTI. POLY.) 6" YELLOW	L.F.	820
TRAFFIC STRIPE (MULTI. POLY.) 6" BLACK	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 24" WHITE	L.F.	15
TRAFFIC STRIPE (MULTI. POLY.) ARROWS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) WORDS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) SYMBOLS	EA.	0

Design	RWR	05/12/20
Drawn	CCC	05/12/20



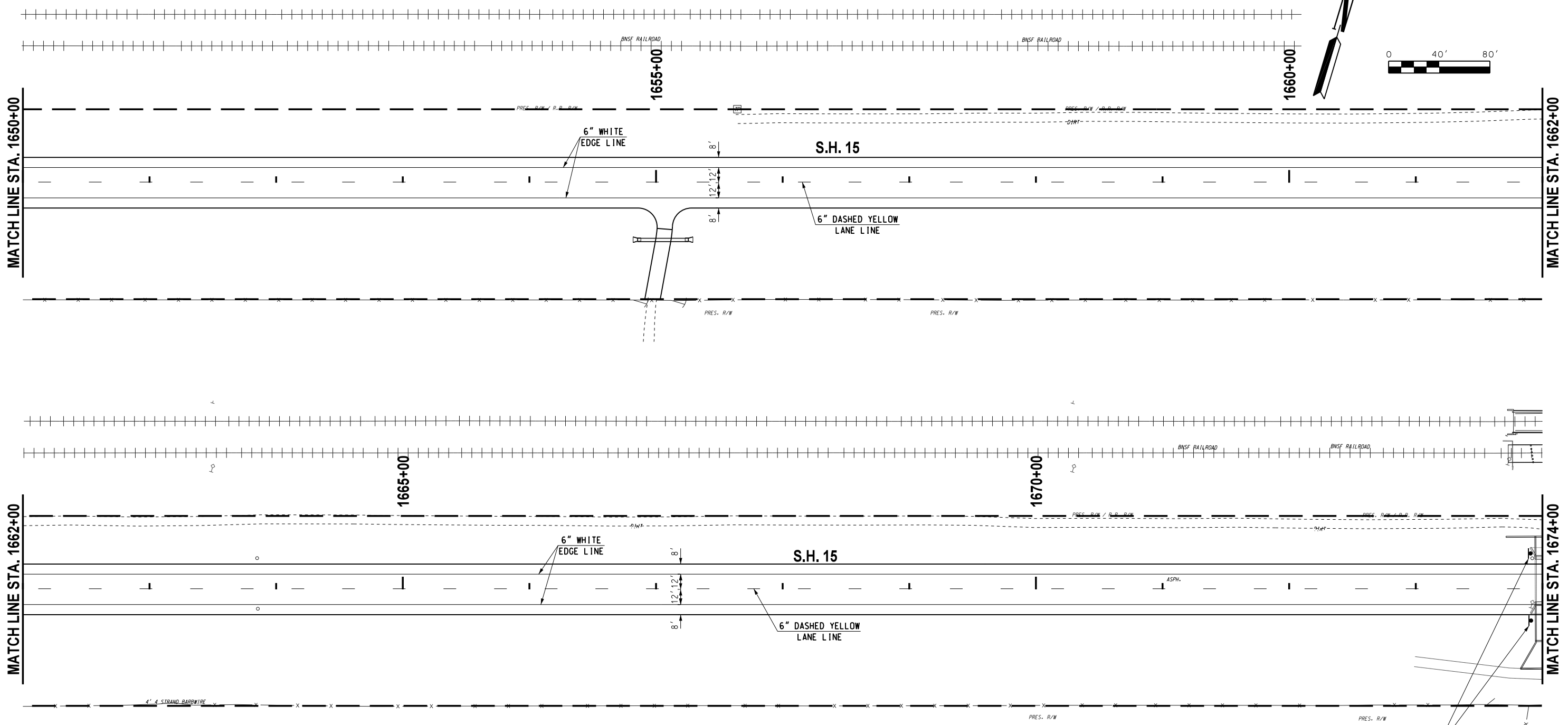
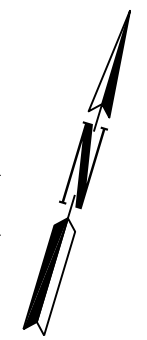
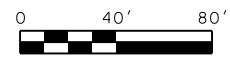
SIGNING & STRIPING PLAN
 STA. 1626+00 TO 1650+00
 (SHEET 5 OF 8)

State Job No. 29674(04) Sheet No. T015

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ELLIS COUNTY S.H. 15

REVISIONS		
NO.	DESCRIPTION	DATE



DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (MULTI. POLY.) 4" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 4" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 6" WHITE	L.F.	4800
TRAFFIC STRIPE (MULTI. POLY.) 6" YELLOW	L.F.	636
TRAFFIC STRIPE (MULTI. POLY.) 6" BLACK	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 24" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) ARROWS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) WORDS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) SYMBOLS	EA.	0

22 23 INSTALL (2) OM-3(L)(R)

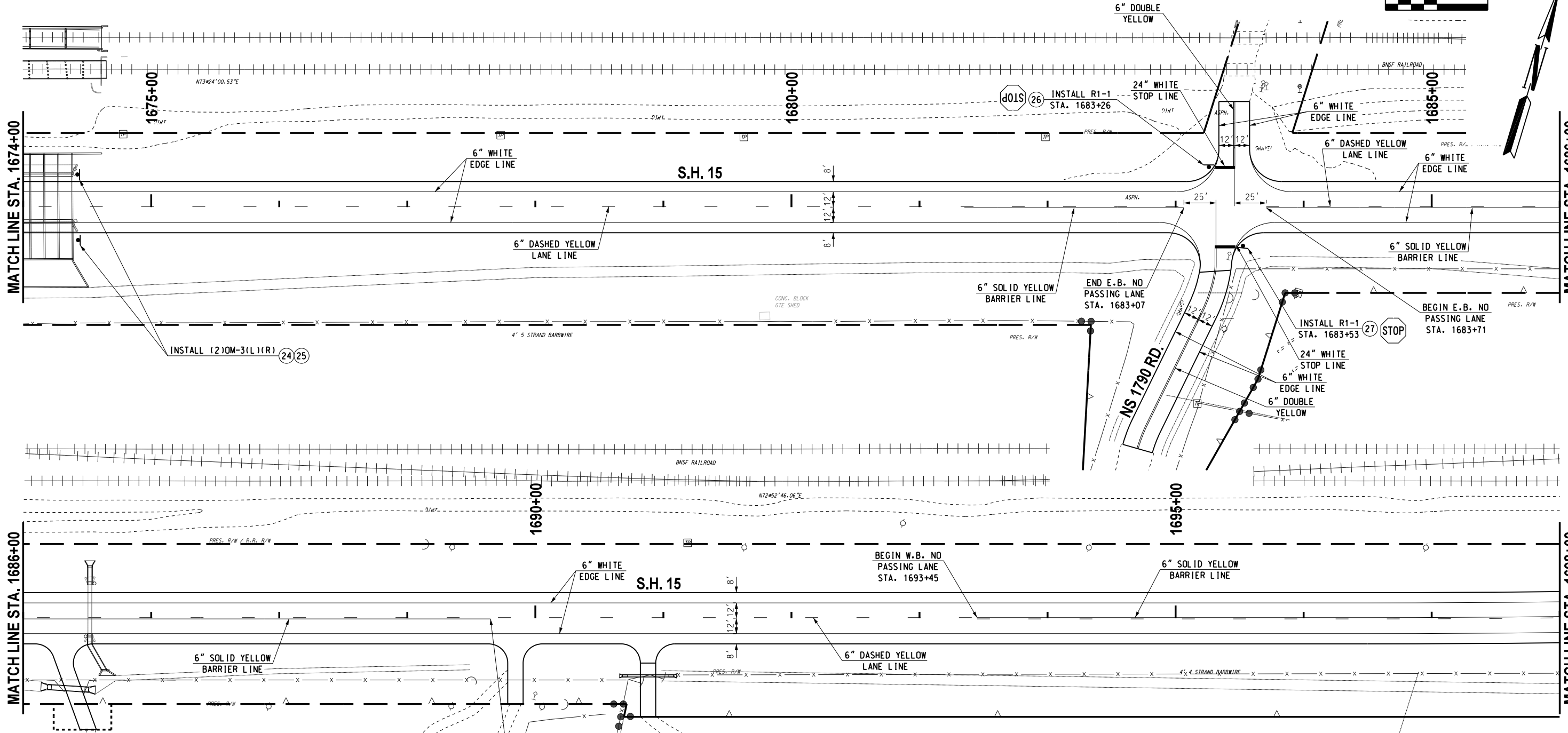
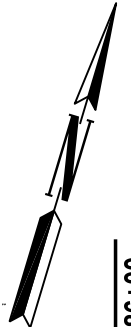
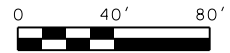
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Design	RWR	05/12/20
Drawn	CCC	05/12/20

SIGNING & STRIPING PLAN
 STA. 1650+00 TO 1674+00
 (SHEET 6 OF 8)
 State Job No. 29674(04) Sheet No. T016

ELLIS COUNTY S.H. 15

REVISIONS		
NO.	DESCRIPTION	DATE



MULTI. POLY. STRIPING SUM. TABLE		
DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (MULTI. POLY.) 4" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 4" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 6" WHITE	L.F.	5200
TRAFFIC STRIPE (MULTI. POLY.) 6" YELLOW	L.F.	2077
TRAFFIC STRIPE (MULTI. POLY.) 6" BLACK	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 24" WHITE	L.F.	31
TRAFFIC STRIPE (MULTI. POLY.) ARROWS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) WORDS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) SYMBOLS	EA.	0

Design RWR 05/12/20
 Drawn GDB 05/12/20

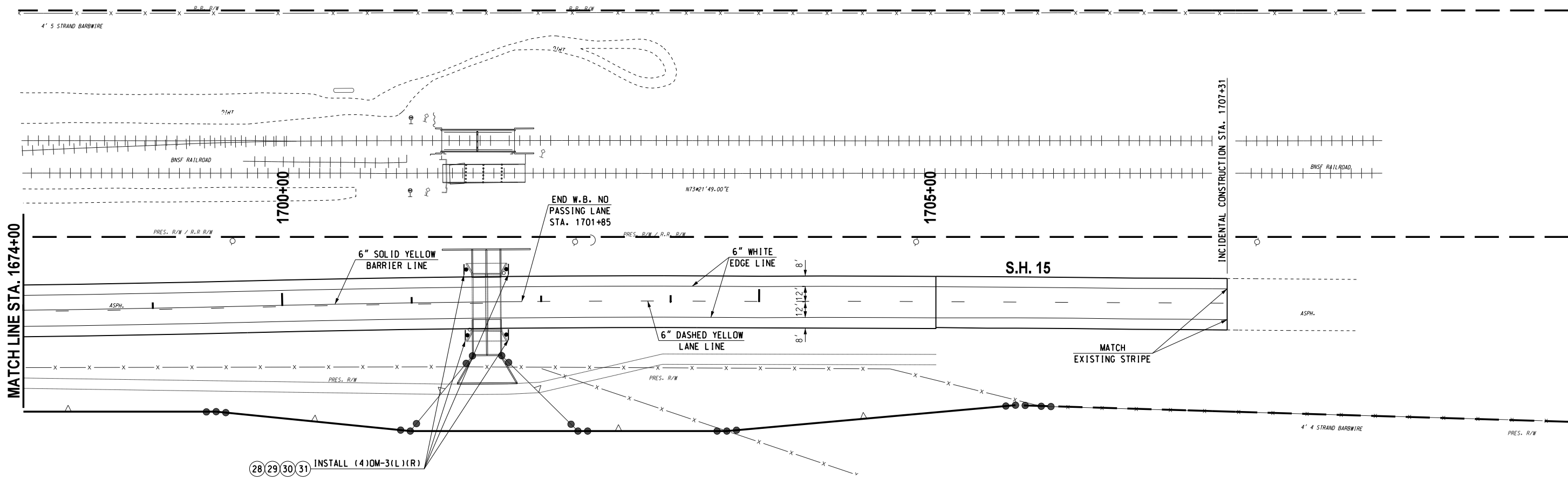
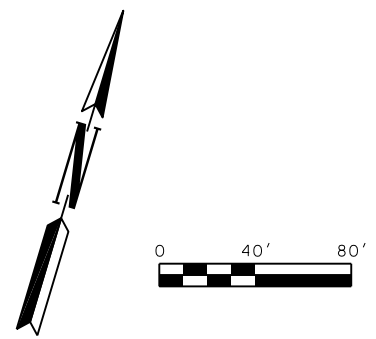
SIGNING & STRIPING PLAN
 STA. 1674+00 TO 1698+00
 (SHEET 7 OF 8)

State Job No. 29674(04) Sheet No. T017

05/12/20 G:\00\Projects\T-2335 SH 15, East of Startuck CAD\T017-2967404-STRIPING.dgn

S.H. 15 ELLIS COUNTY

REVISIONS		
NO.	DESCRIPTION	DATE



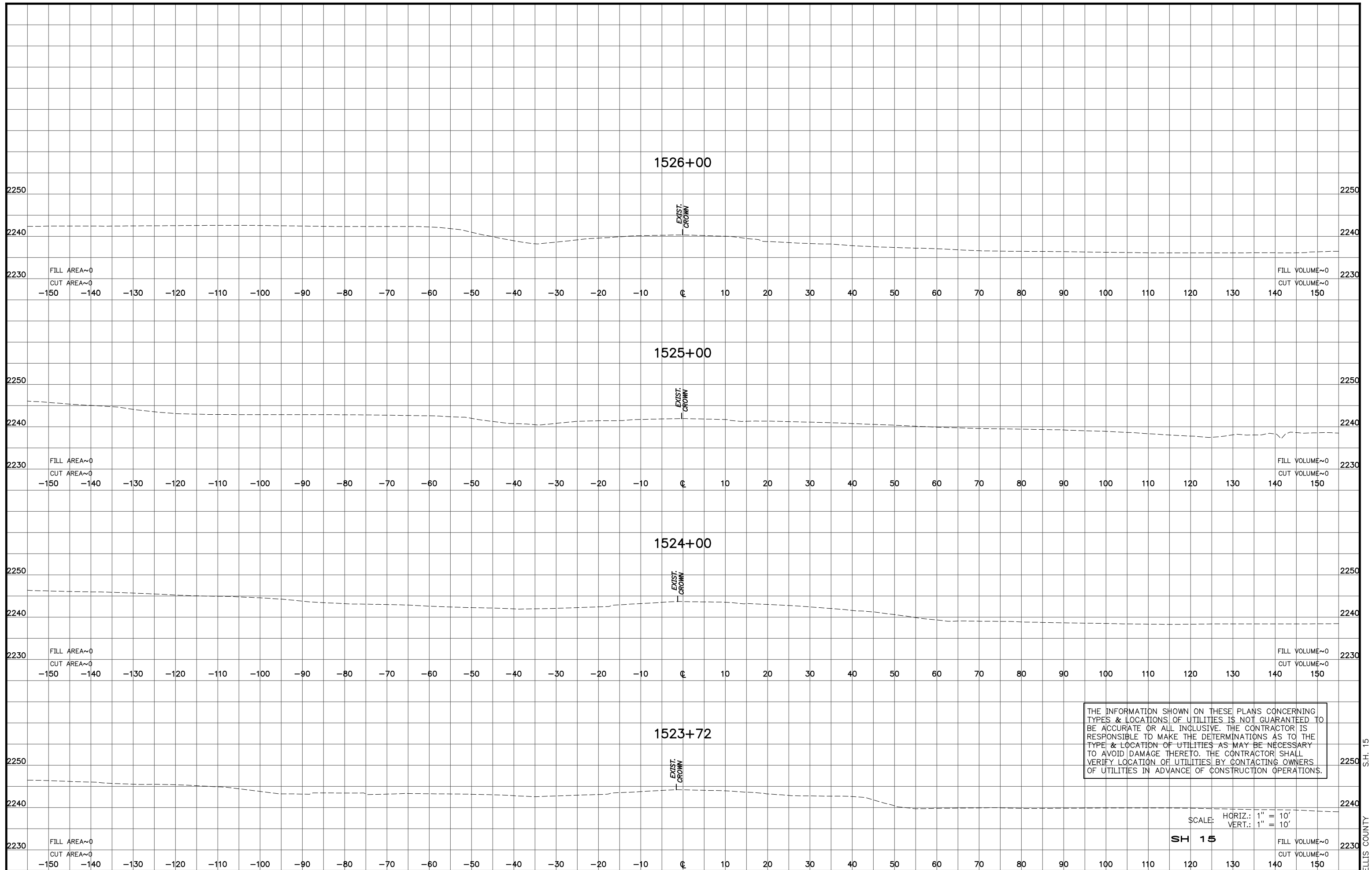
MULTI. POLY. STRIPING SUM. TABLE		
DESCRIPTION	UNIT	TOTALS
TRAFFIC STRIPE (MULTI. POLY.) 4" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 4" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 6" WHITE	L.F.	1858
TRAFFIC STRIPE (MULTI. POLY.) 6" YELLOW	L.F.	677
TRAFFIC STRIPE (MULTI. POLY.) 6" BLACK	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 8" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 12" YELLOW	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) 24" WHITE	L.F.	0
TRAFFIC STRIPE (MULTI. POLY.) ARROWS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) WORDS	EA.	0
TRAFFIC STRIPE (MULTI. POLY.) SYMBOLS	EA.	0

Design	RWR	05/12/20
Drawn	GDB	05/12/20

SIGNING & STRIPING PLAN
 STA. 1698+00 TO 1705+00
 (SHEET 8 OF 8)
 State Job No. 29674(04) Sheet No. T018

05/12/20 G:\0\Projects\1-2335 SH 15, East of Shattuck\CAD\106-2967404-STRIPING.dgn

ELLIS COUNTY S.H. 15



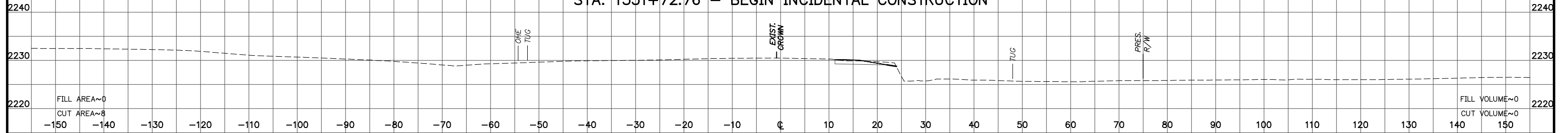
THE INFORMATION SHOWN ON THESE PLANS CONCERNING TYPES & LOCATIONS OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE TO MAKE THE DETERMINATIONS AS TO THE TYPE & LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES BY CONTACTING OWNERS OF UTILITIES IN ADVANCE OF CONSTRUCTION OPERATIONS.

SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

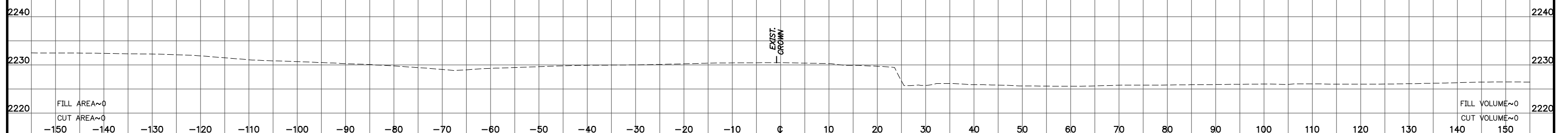
SH 15

FILL VOLUME~0
CUT VOLUME~0

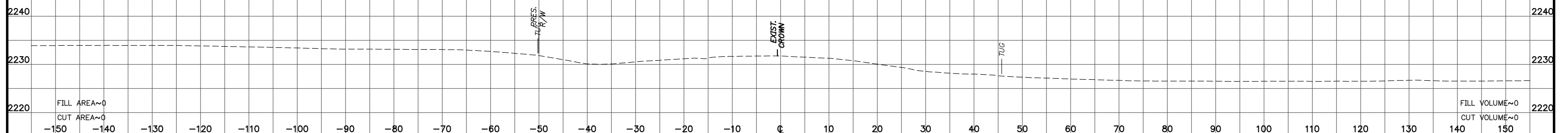
1531+72.76
 STA. 1531+72.76 – BEGIN INCIDENTAL CONSTRUCTION



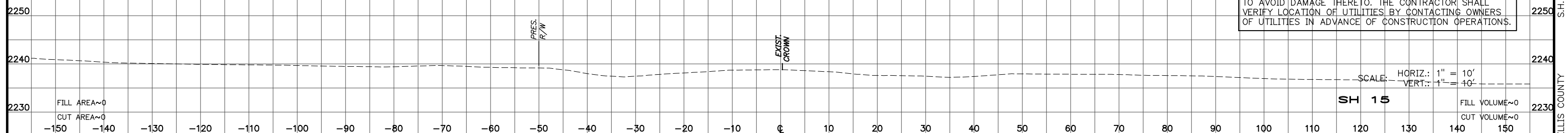
1531+72.75



1531+00



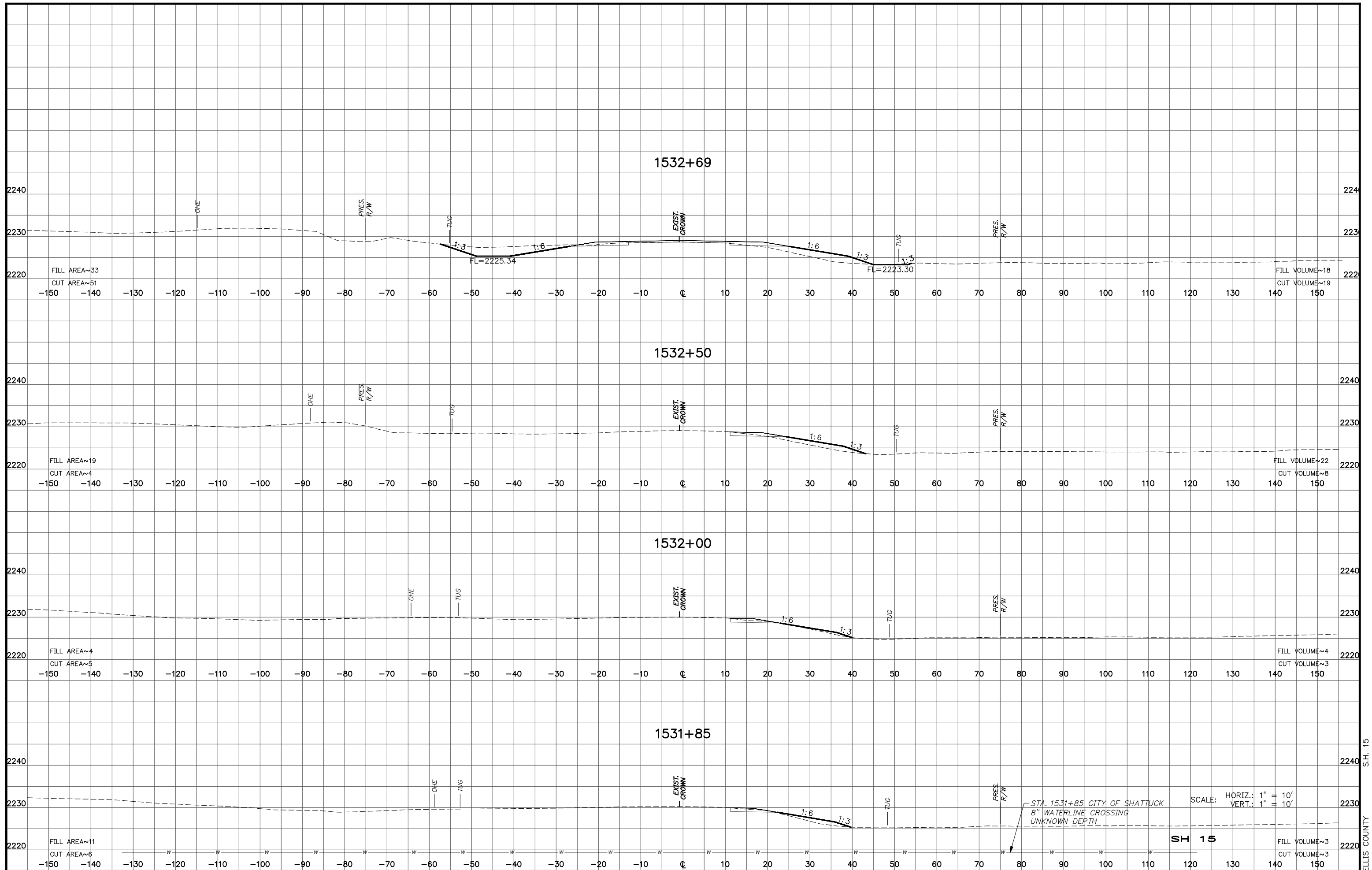
1527+00

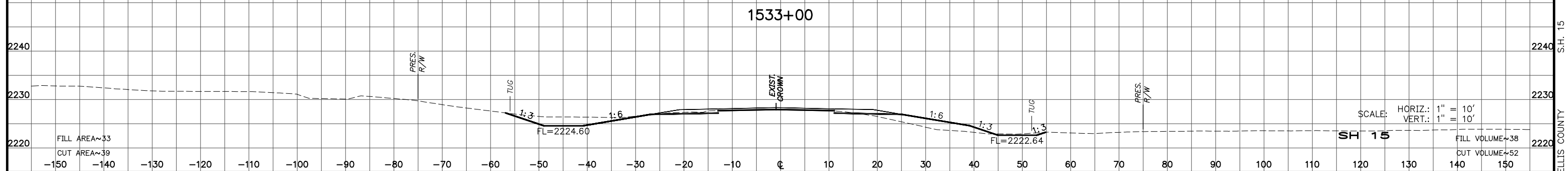
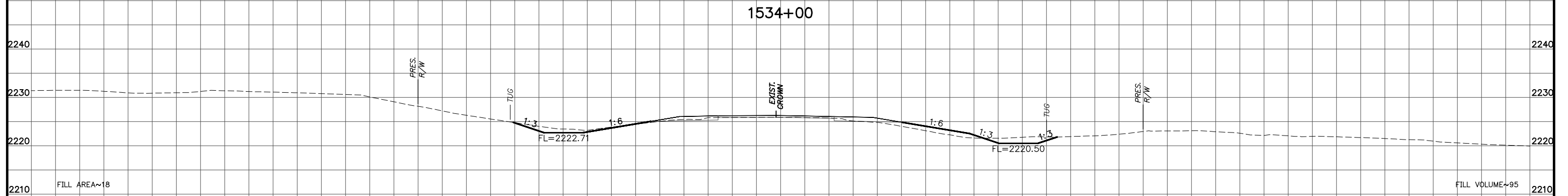
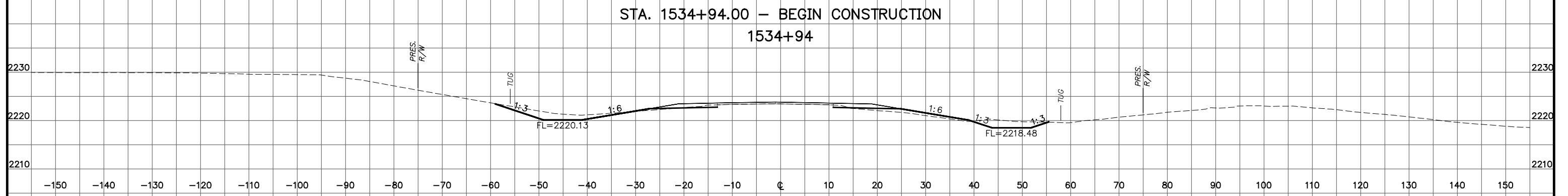
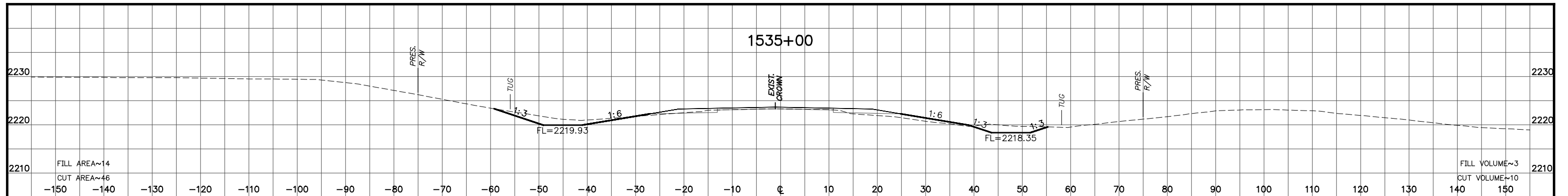


THE INFORMATION SHOWN ON THESE PLANS CONCERNING TYPES & LOCATIONS OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE TO MAKE THE DETERMINATIONS AS TO THE TYPE & LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES BY CONTACTING OWNERS OF UTILITIES IN ADVANCE OF CONSTRUCTION OPERATIONS.

SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 40'

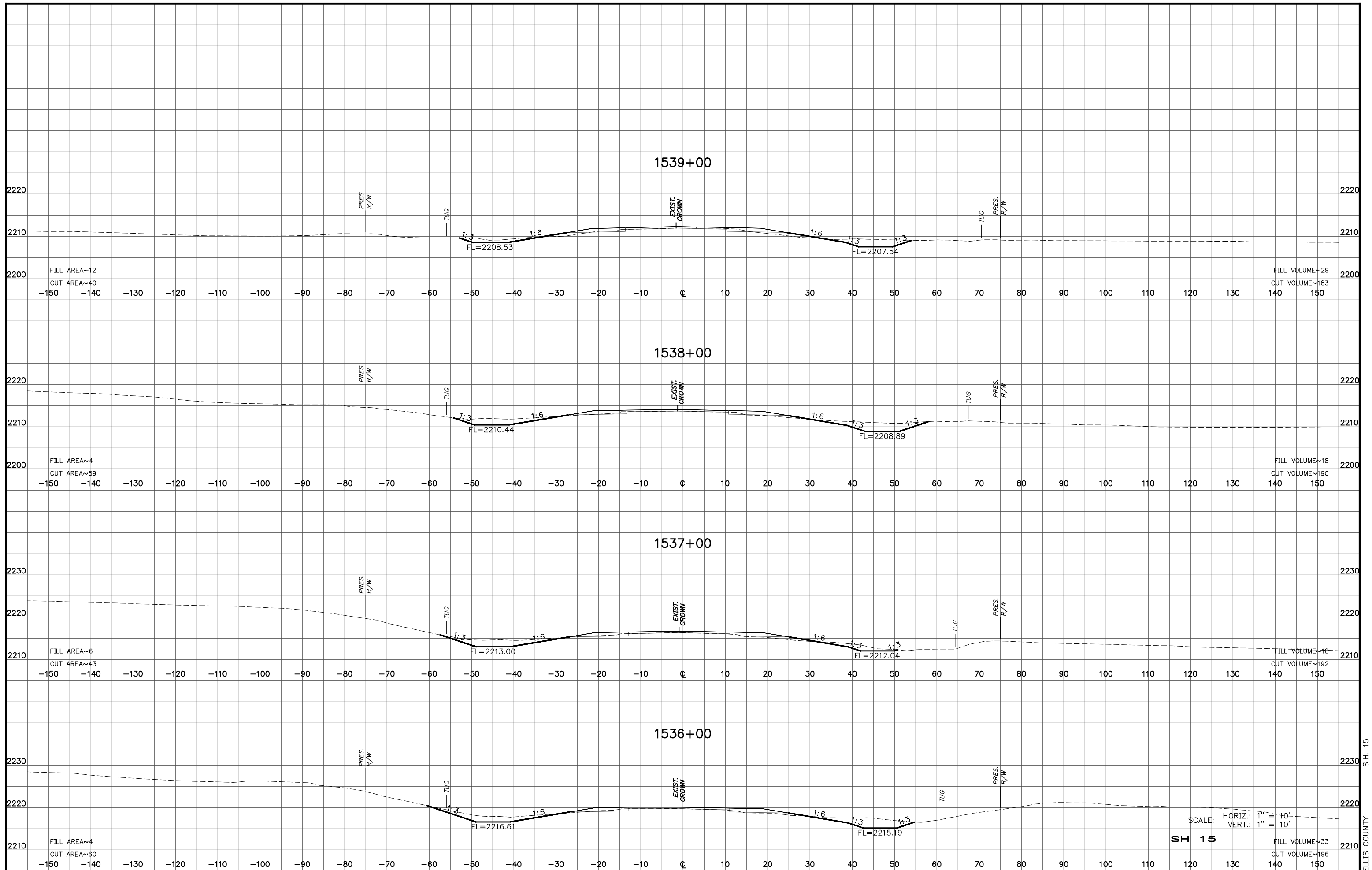
SH 15

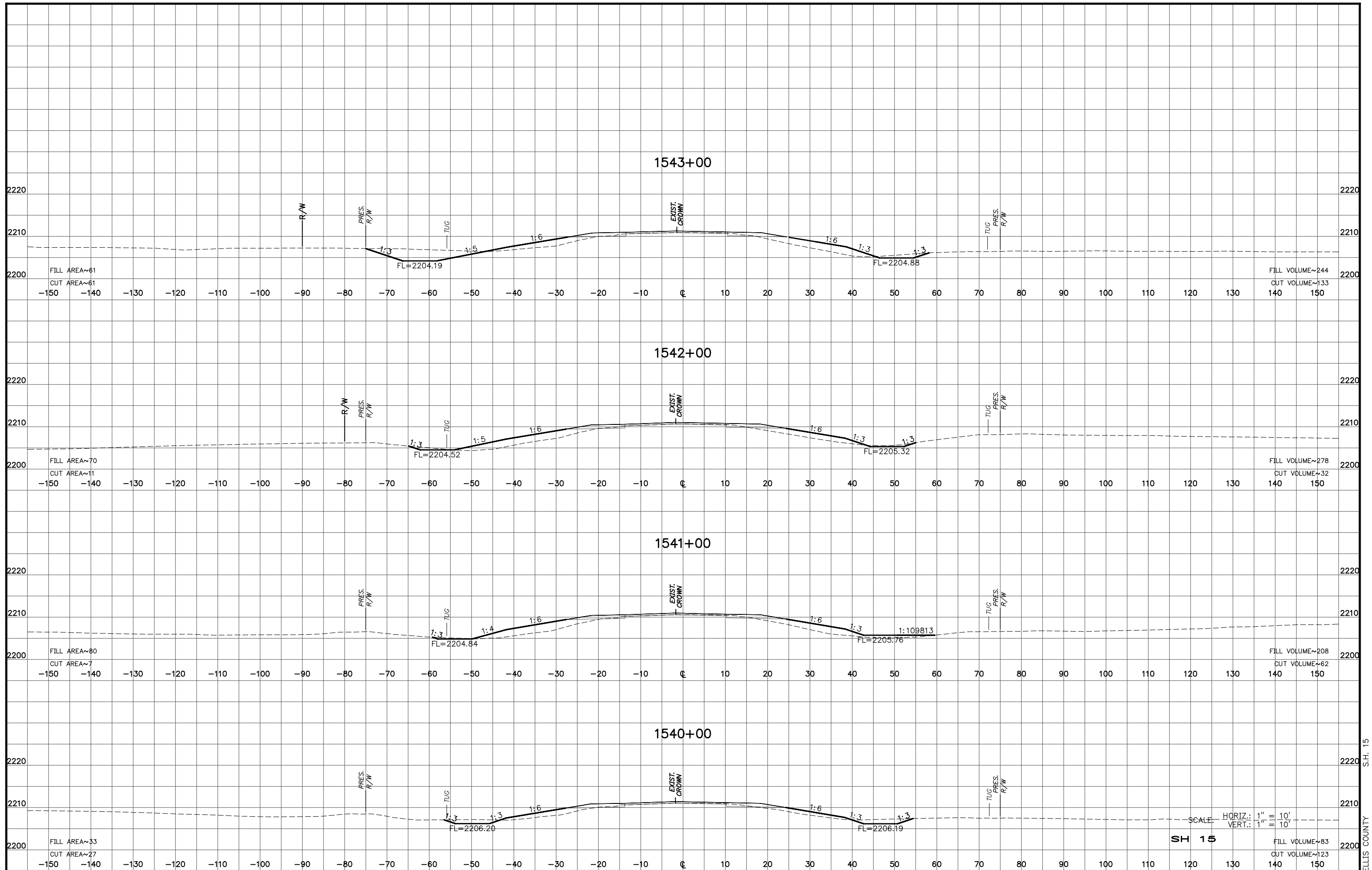




SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15

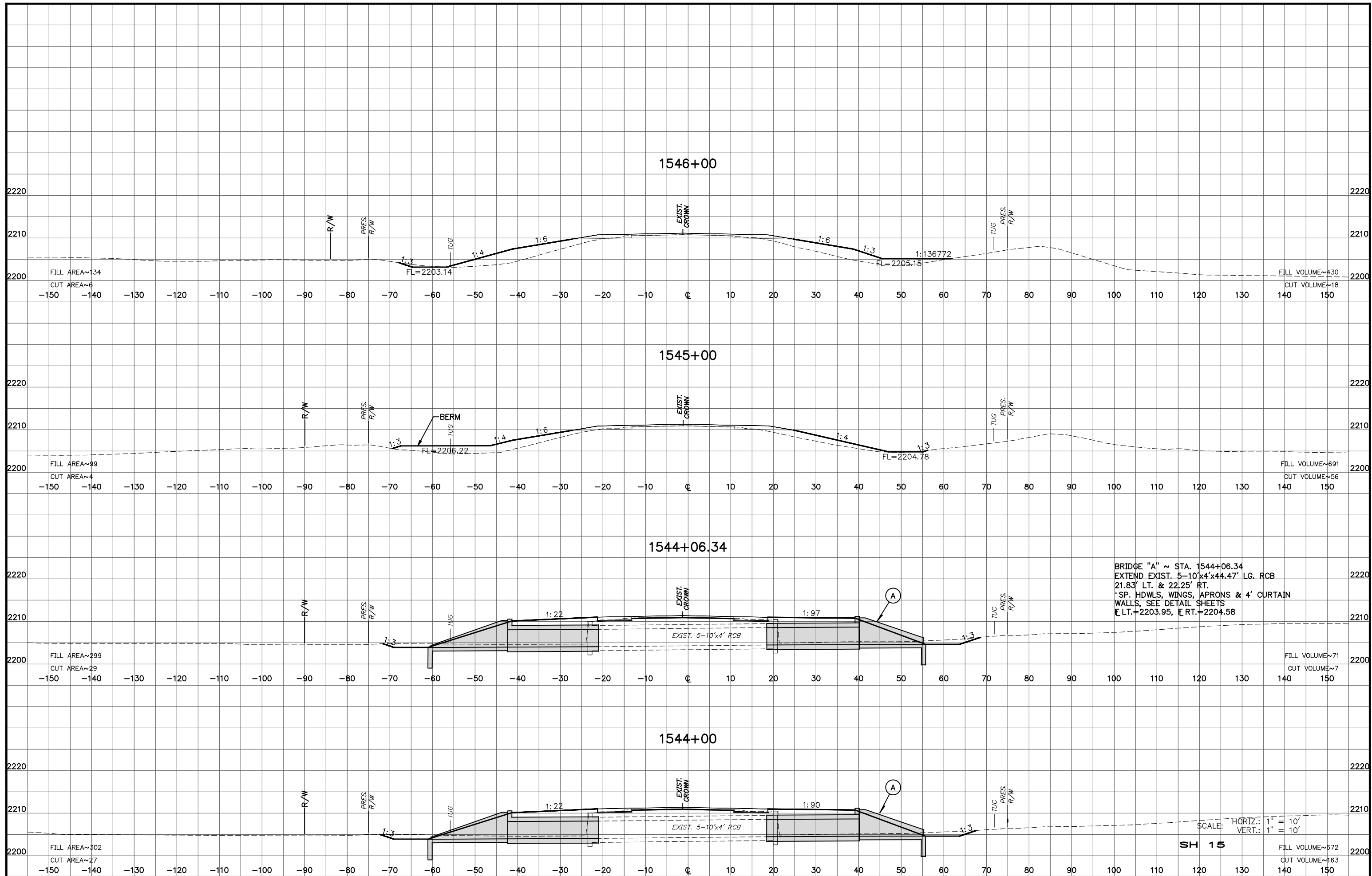




SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15

FILL VOLUME~83
 CUT VOLUME~123



1546+00

1545+00

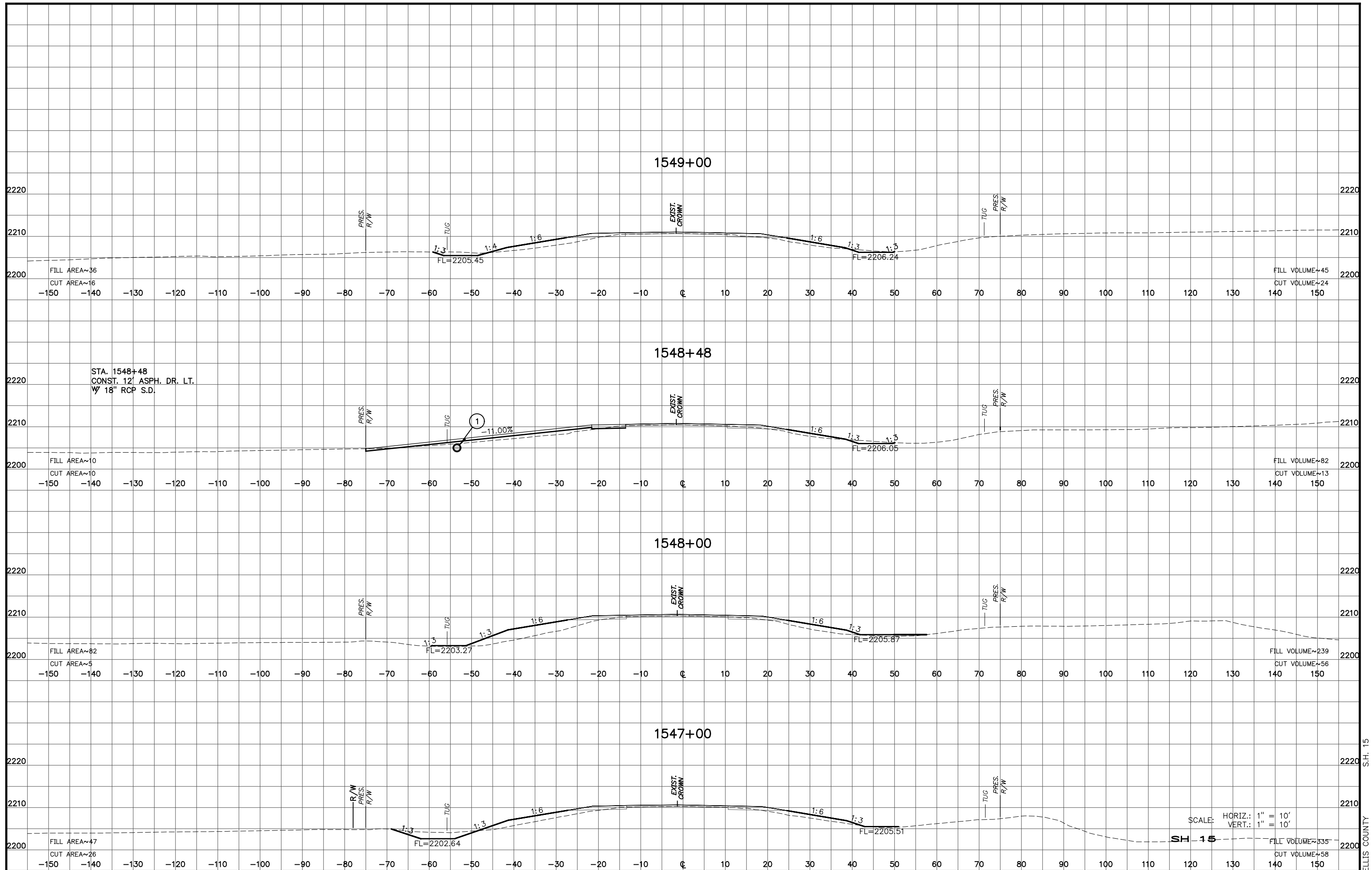
1544+06.34

1544+00

BRIDGE "A" ~ STA. 1544+06.34
 EXTEND EXIST. 5-10'x4'x44.47' LG. RCB
 21.83' LT. & 22.25' RT.
 "SP. HDWLS, WINGS, APRONS & 4' CURTAIN
 WALLS, SEE DETAIL SHEETS
 E LT.=2203.95, E RT.=2204.58

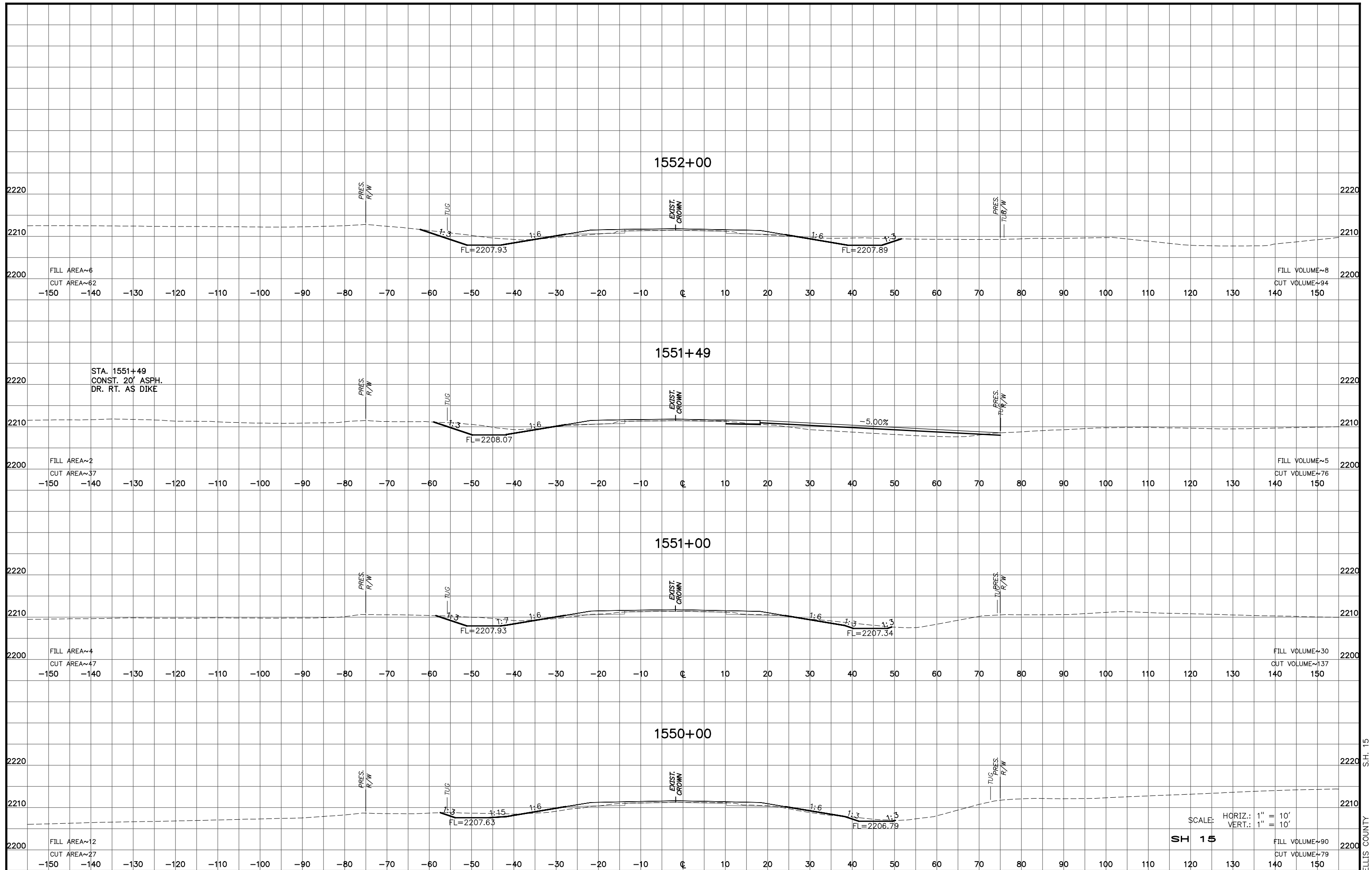
SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15



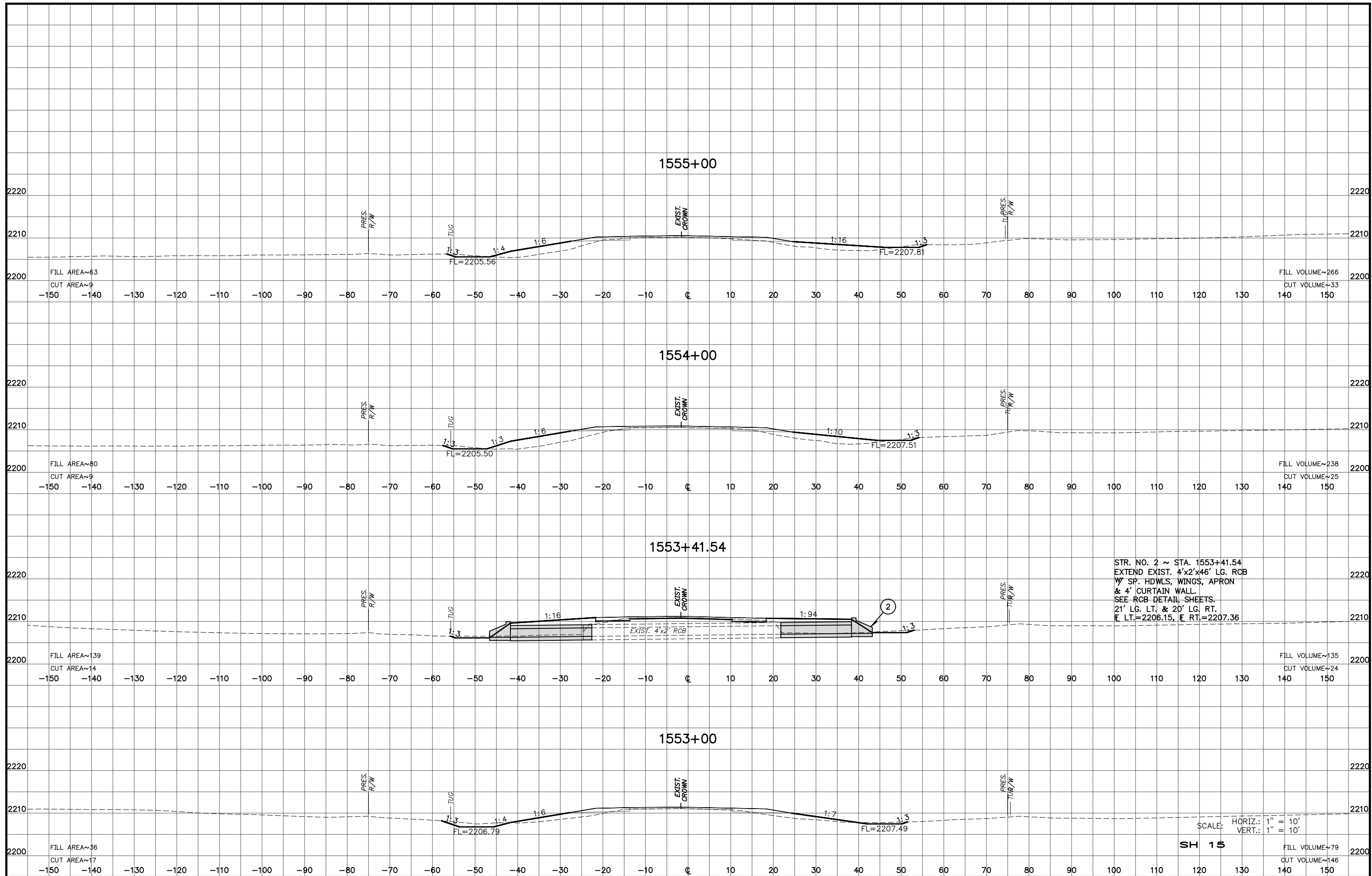
SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

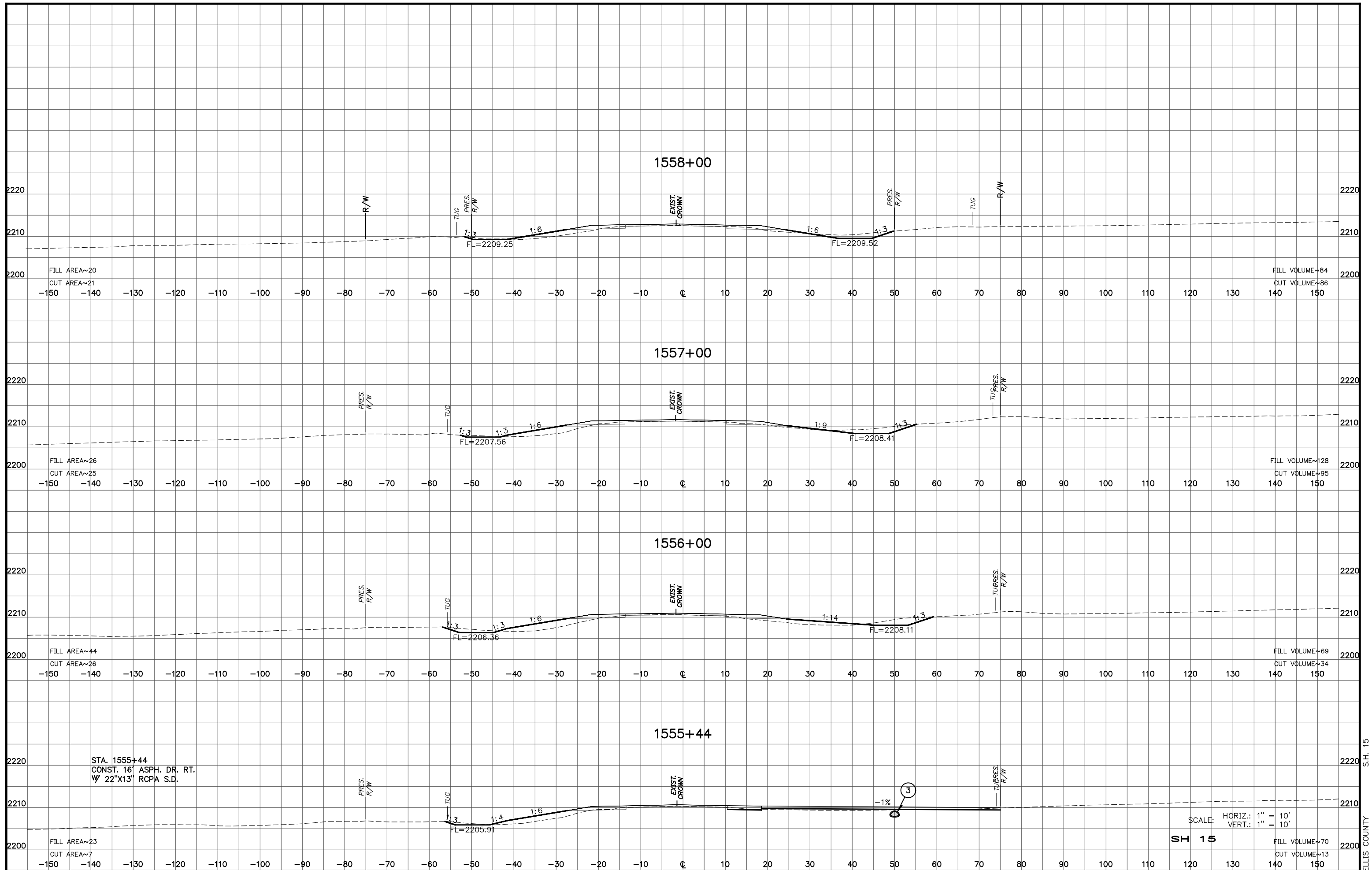
SH-15



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15

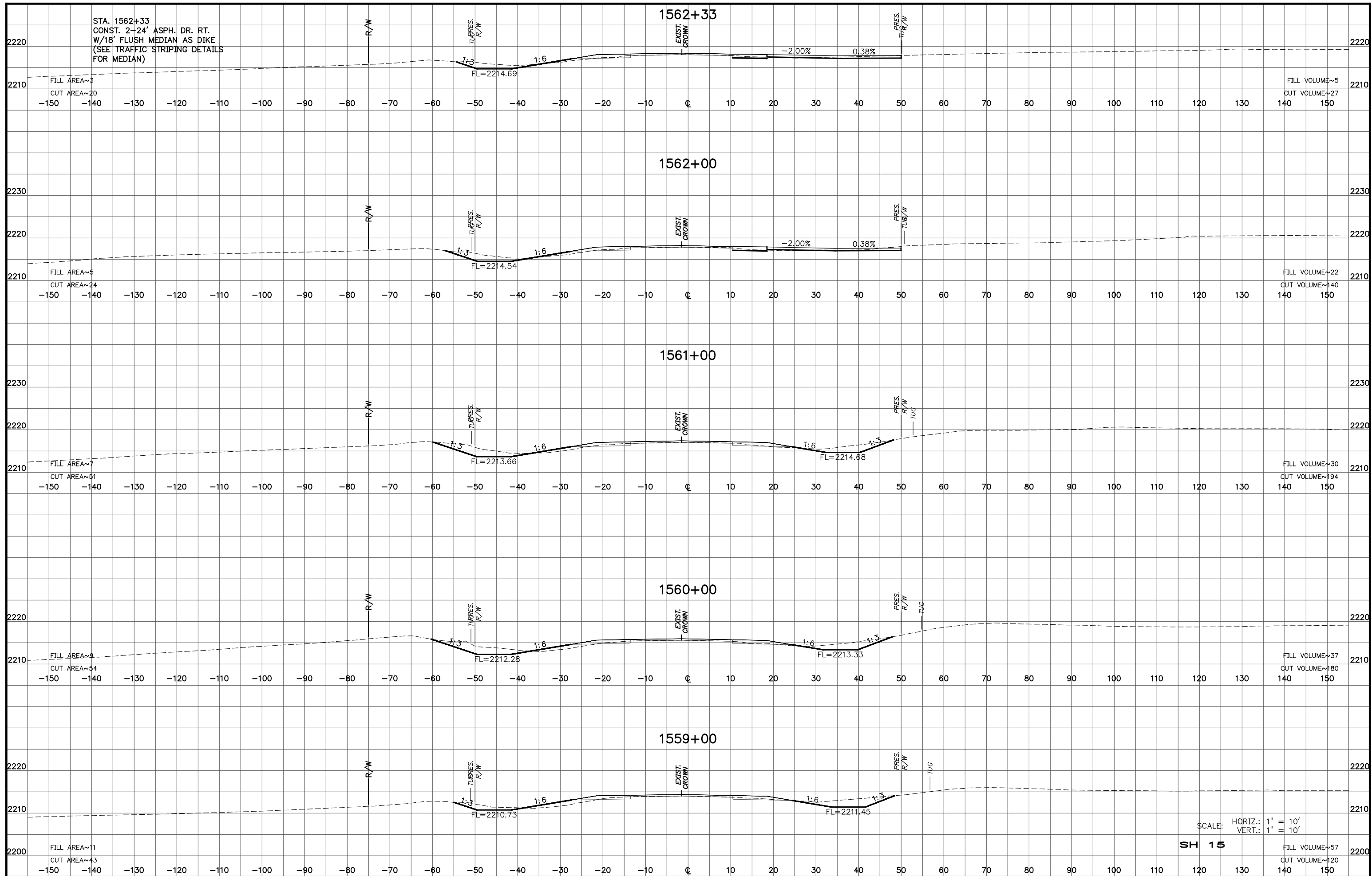




S.H. 15
ELLIS COUNTY

SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15



STA. 1562+33
 CONST. 2-24' ASPH. DR. RT.
 W/18' FLUSH MEDIAN AS DIKE
 (SEE TRAFFIC STRIPING DETAILS
 FOR MEDIAN)

FILL AREA~3
 CUT AREA~20

FILL VOLUME~5
 CUT VOLUME~27

FILL AREA~5
 CUT AREA~24

FILL VOLUME~22
 CUT VOLUME~140

FILL AREA~7
 CUT AREA~51

FILL VOLUME~30
 CUT VOLUME~194

FILL AREA~9
 CUT AREA~54

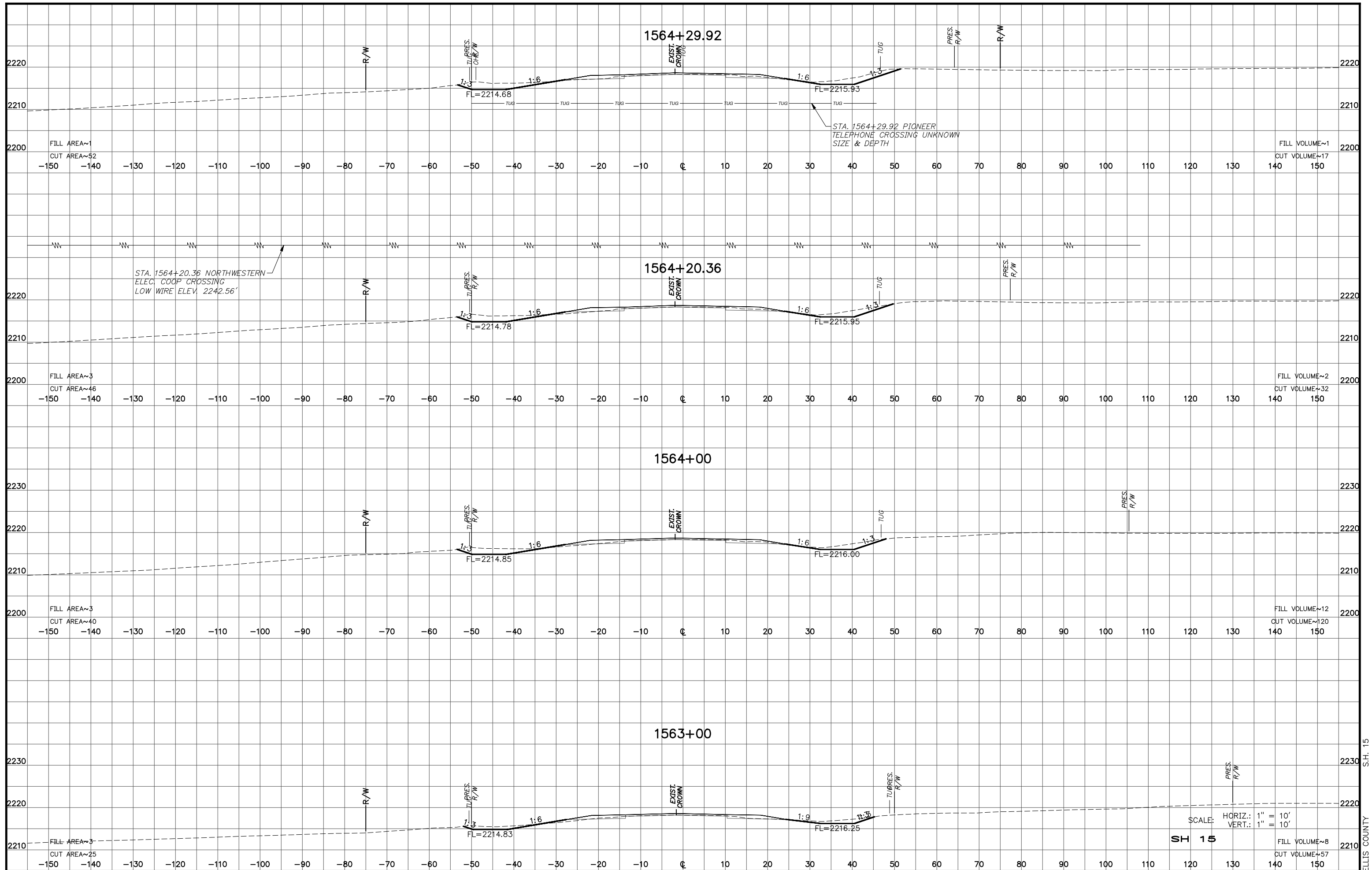
FILL VOLUME~37
 CUT VOLUME~180

FILL AREA~11
 CUT AREA~43

FILL VOLUME~57
 CUT VOLUME~120

SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

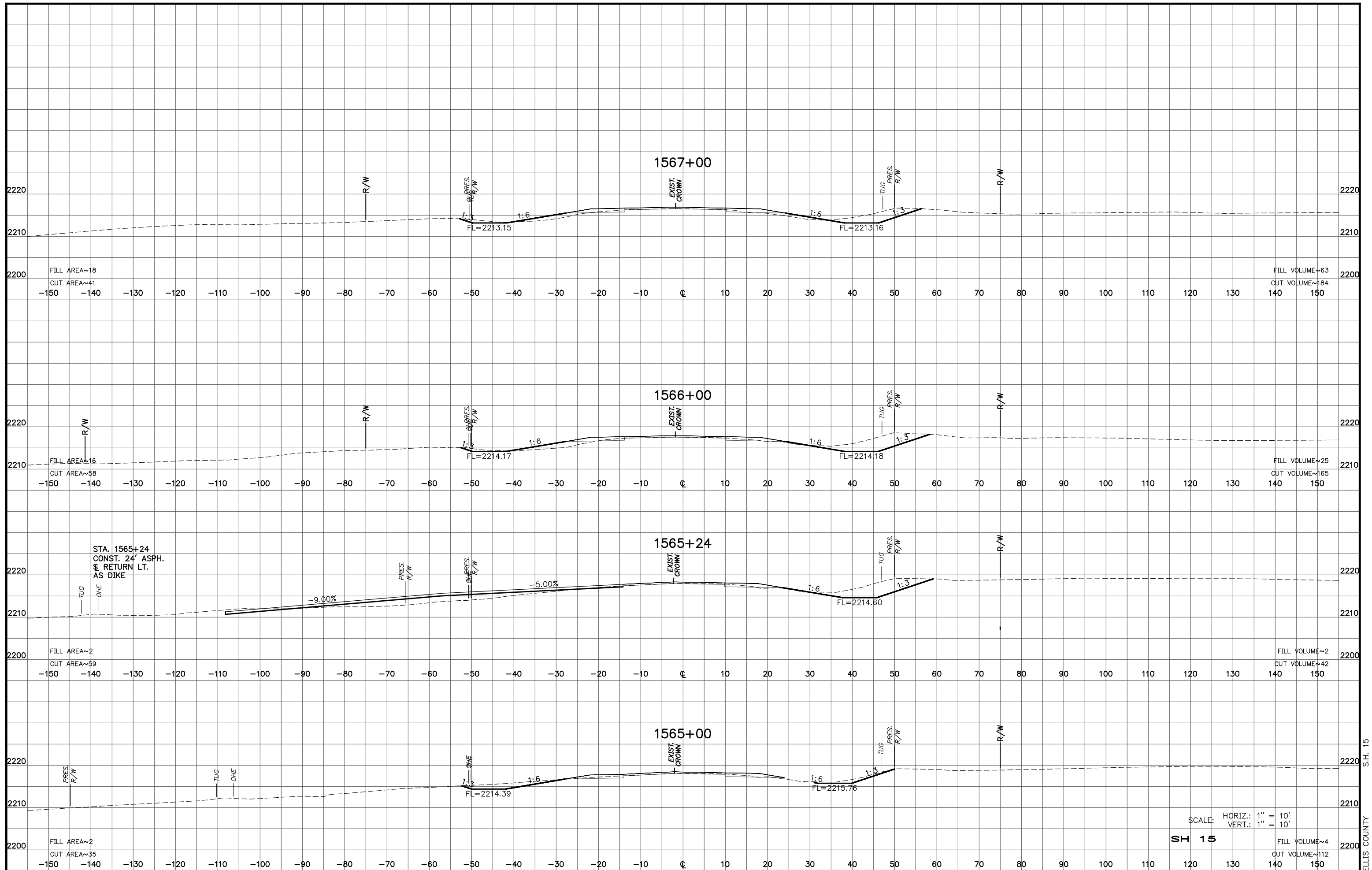
SH 15



SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15

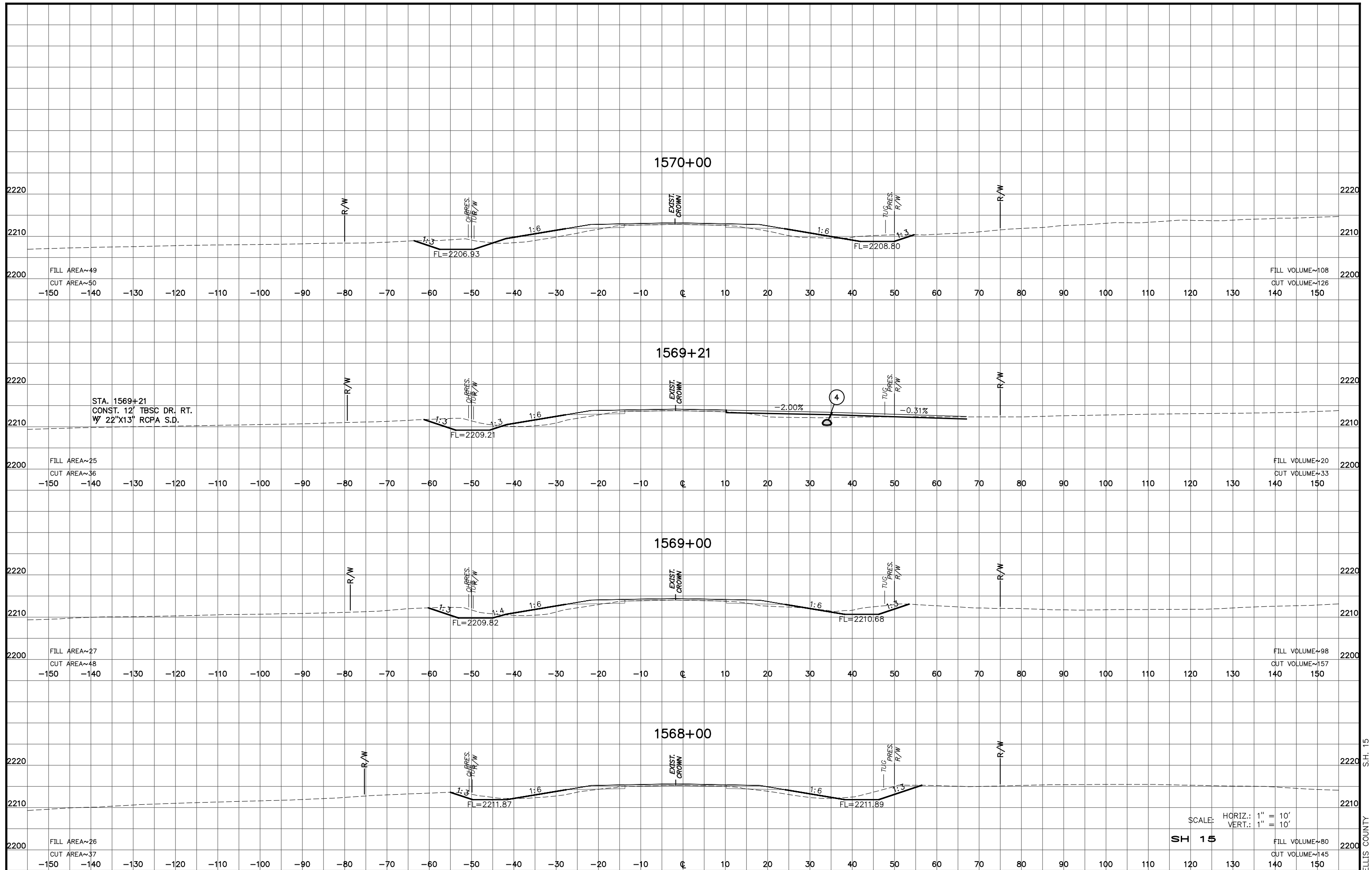
FILL VOLUME~8
 CUT VOLUME~57



SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

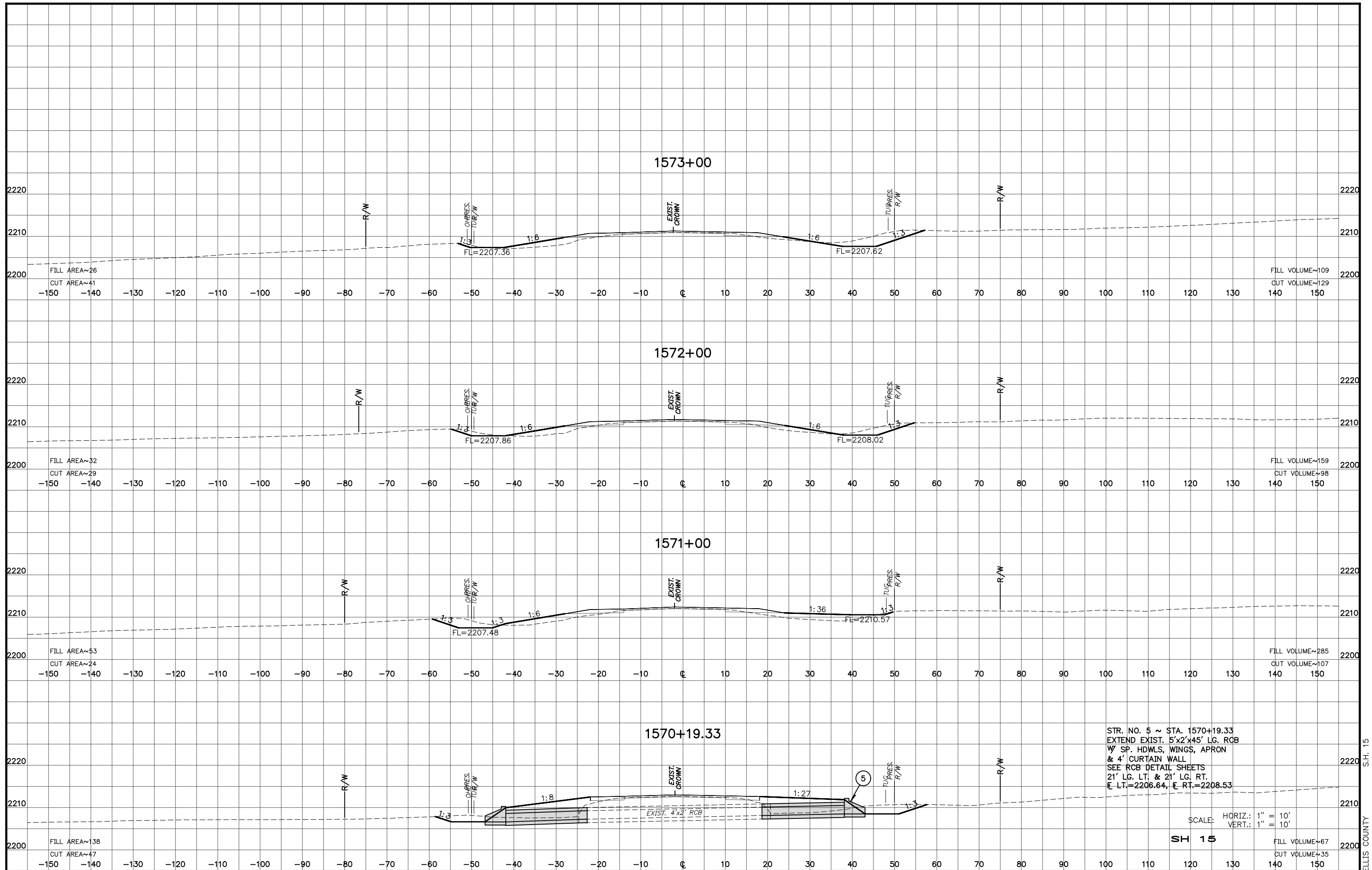
SH 15

FILL VOLUME~4
 CUT VOLUME~112



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

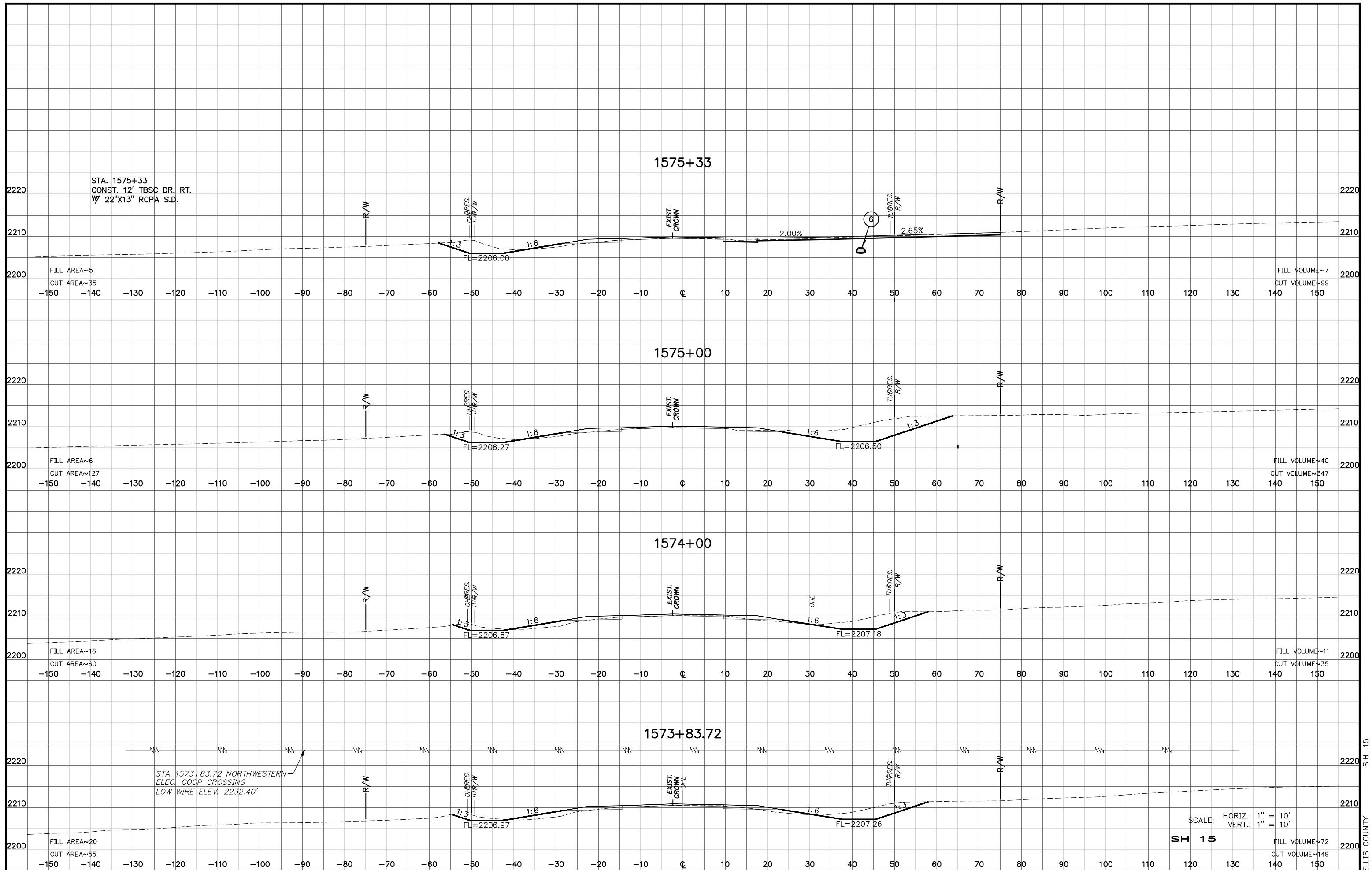
SH 15



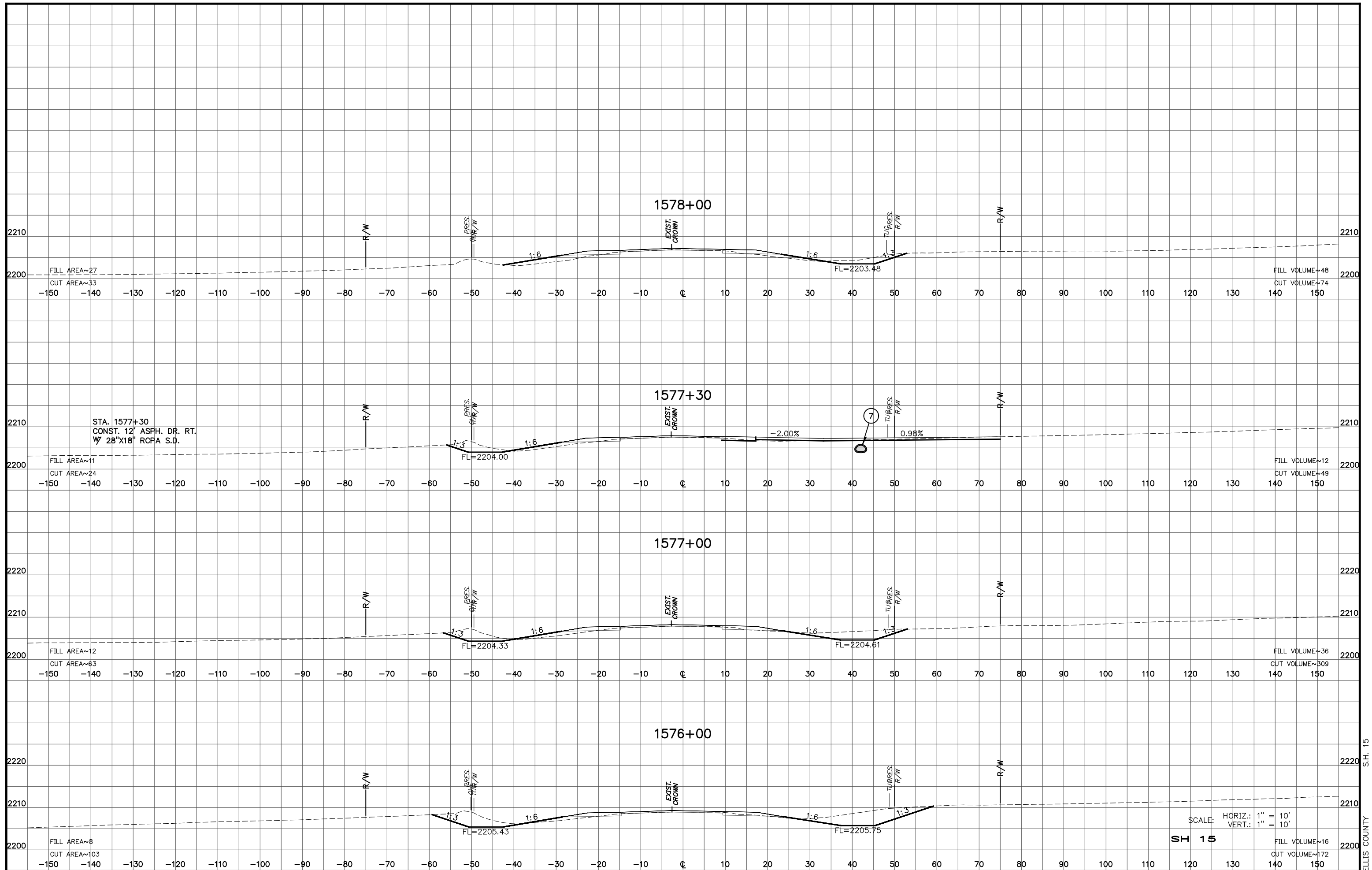
STR. NO. 5 ~ STA. 1570+19.33
 EXTEND EXIST. 5'x2'x45' LG. RCB
 W/ SP. HDWLS, WINGS, APRON
 & 4' CURTAIN WALL
 SEE RCB DETAIL SHEETS
 21' LG. LT. & 21' LG. RT.
 E LT.=2206.64, E RT.=2208.53

SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15

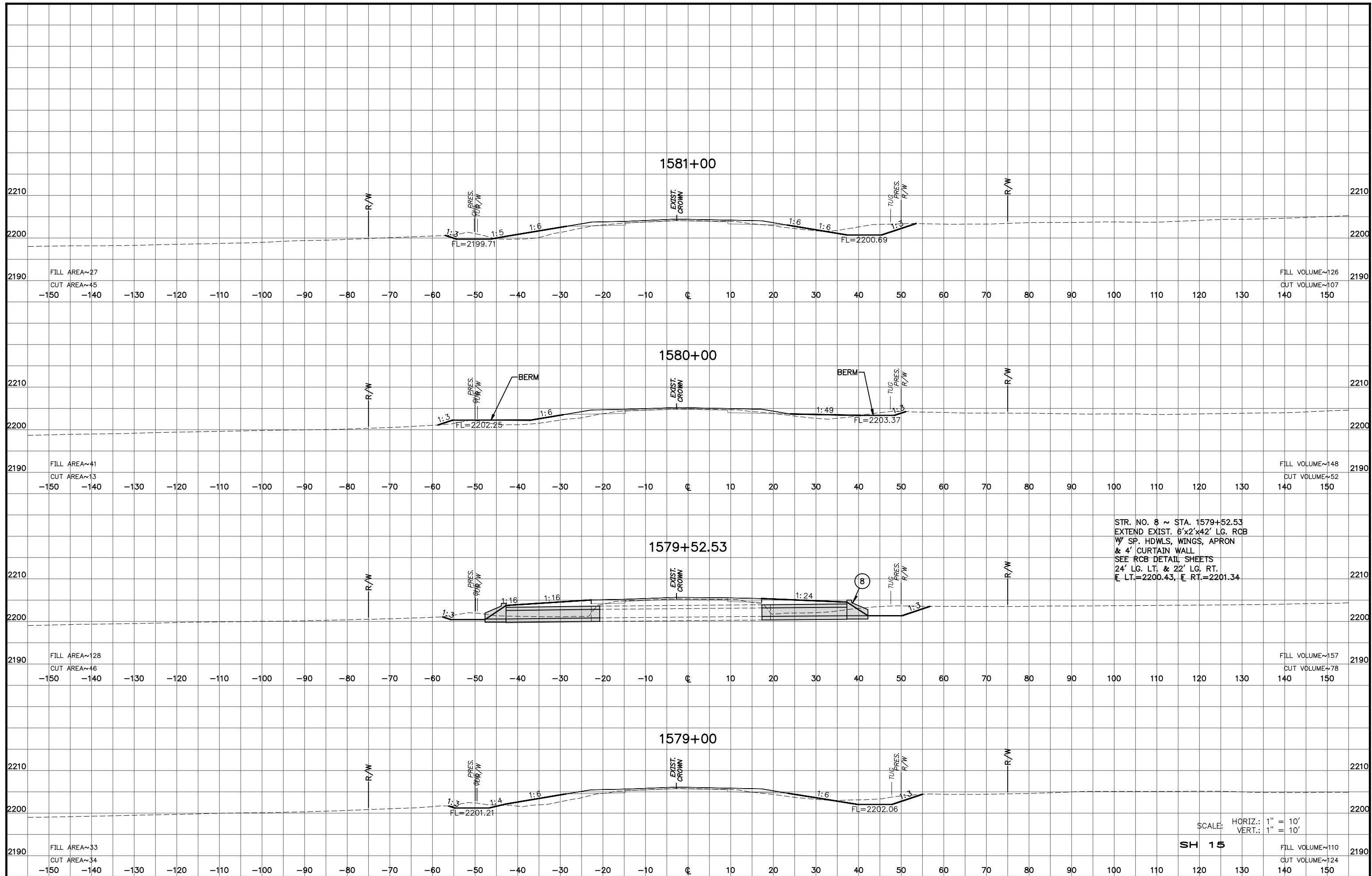


SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

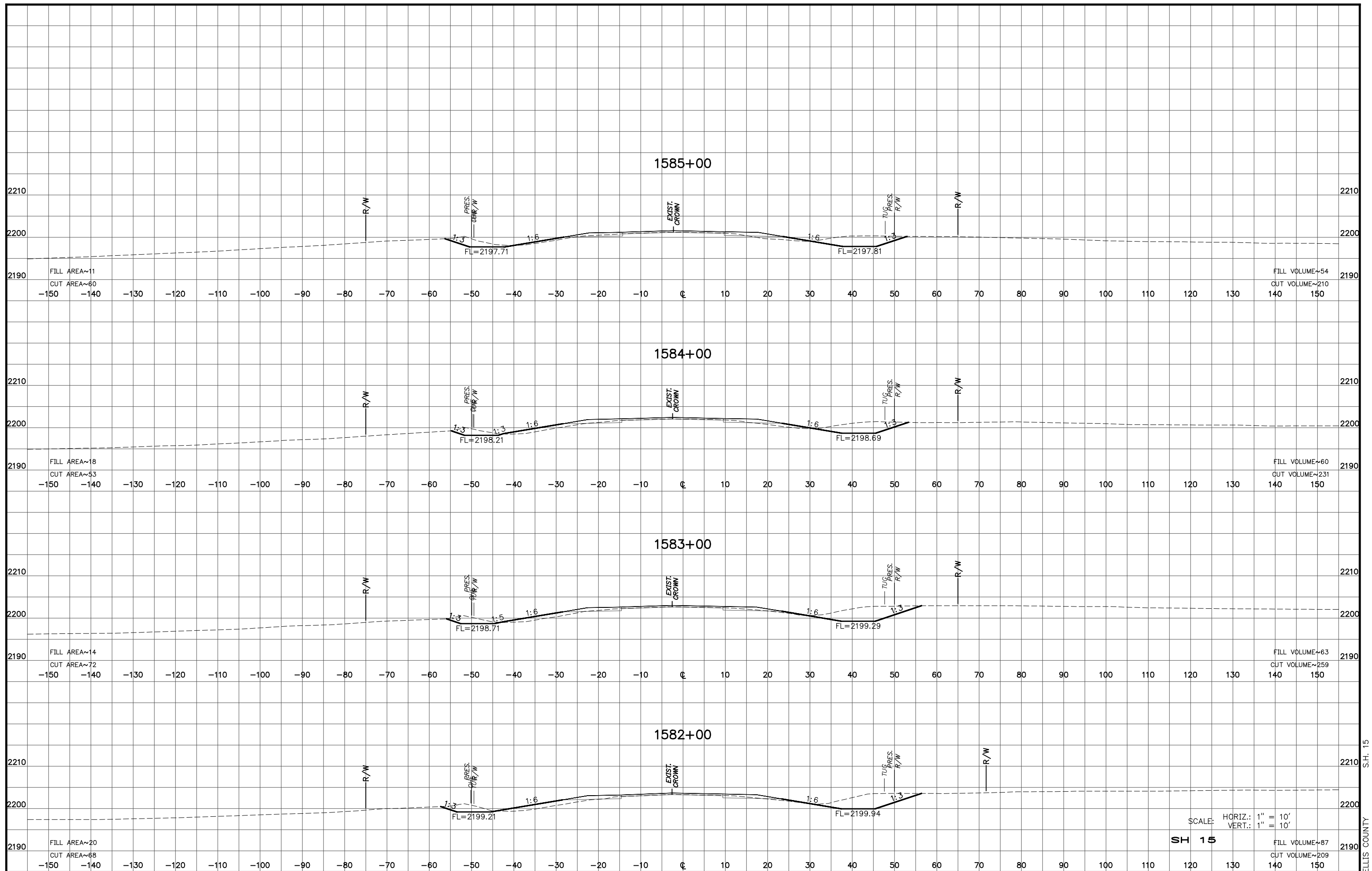


SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15



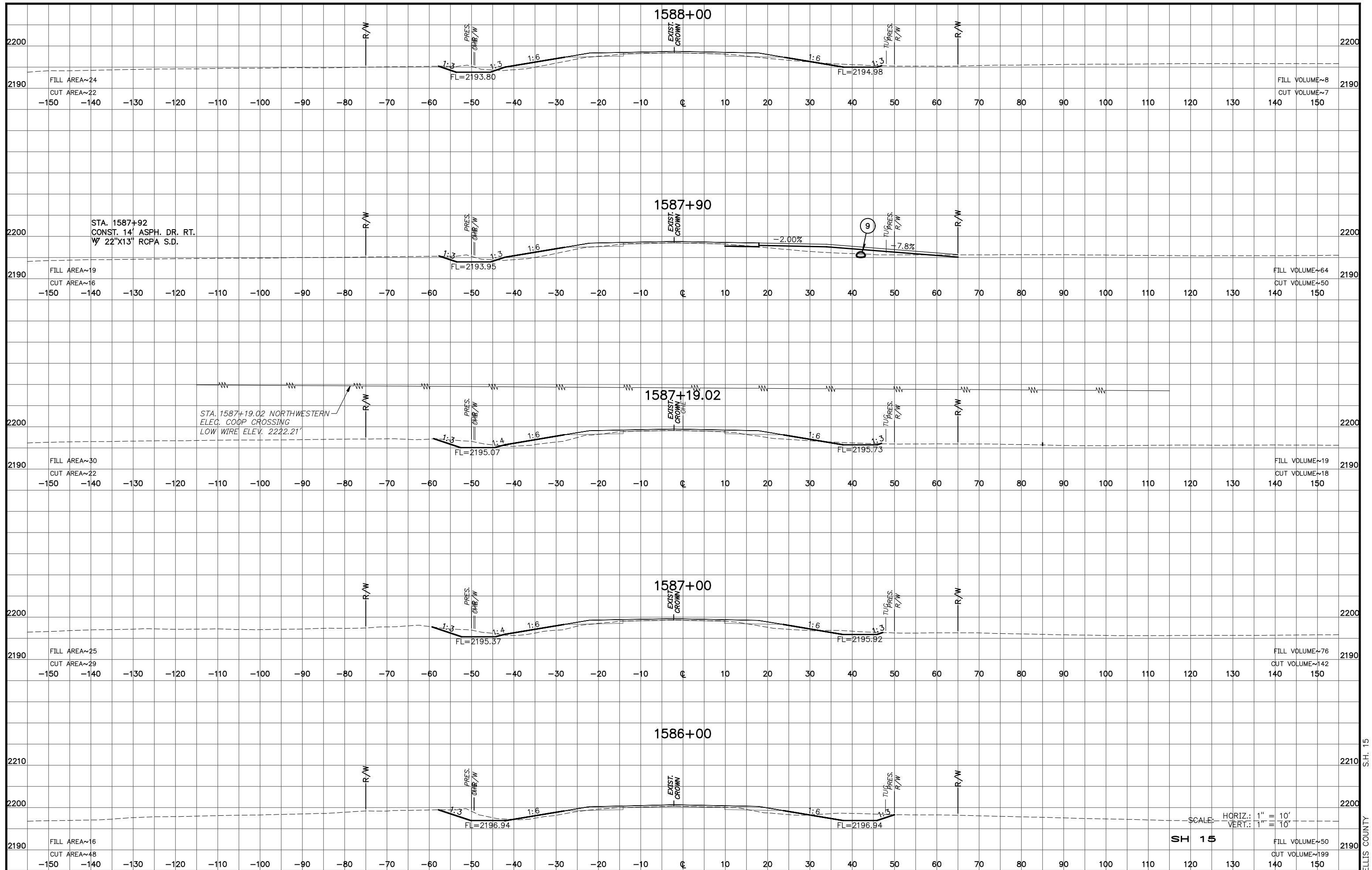
S.H. 15
ELLIS COUNTY



SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15

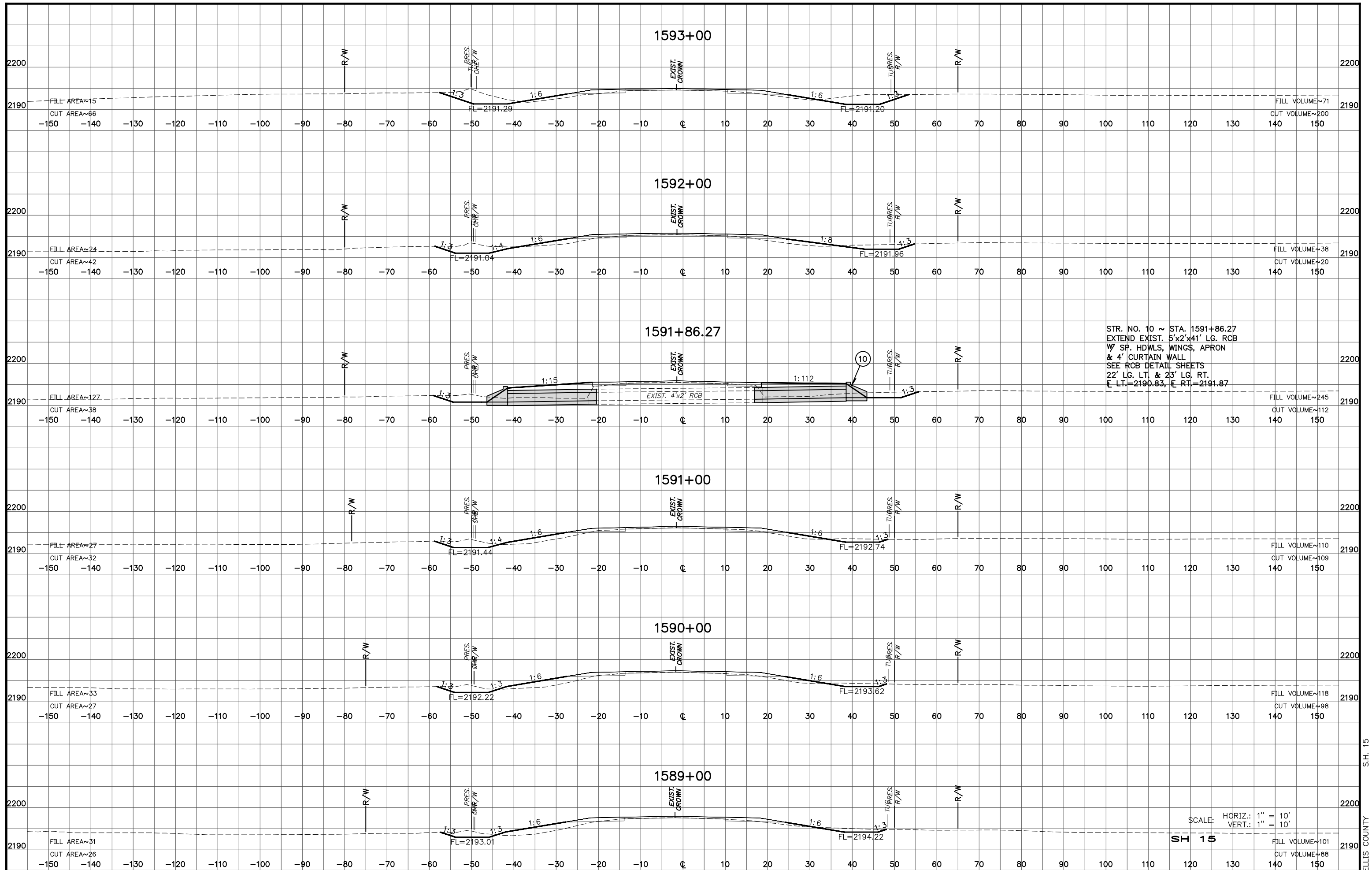
S.H. 15
 ELLIS COUNTY



SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

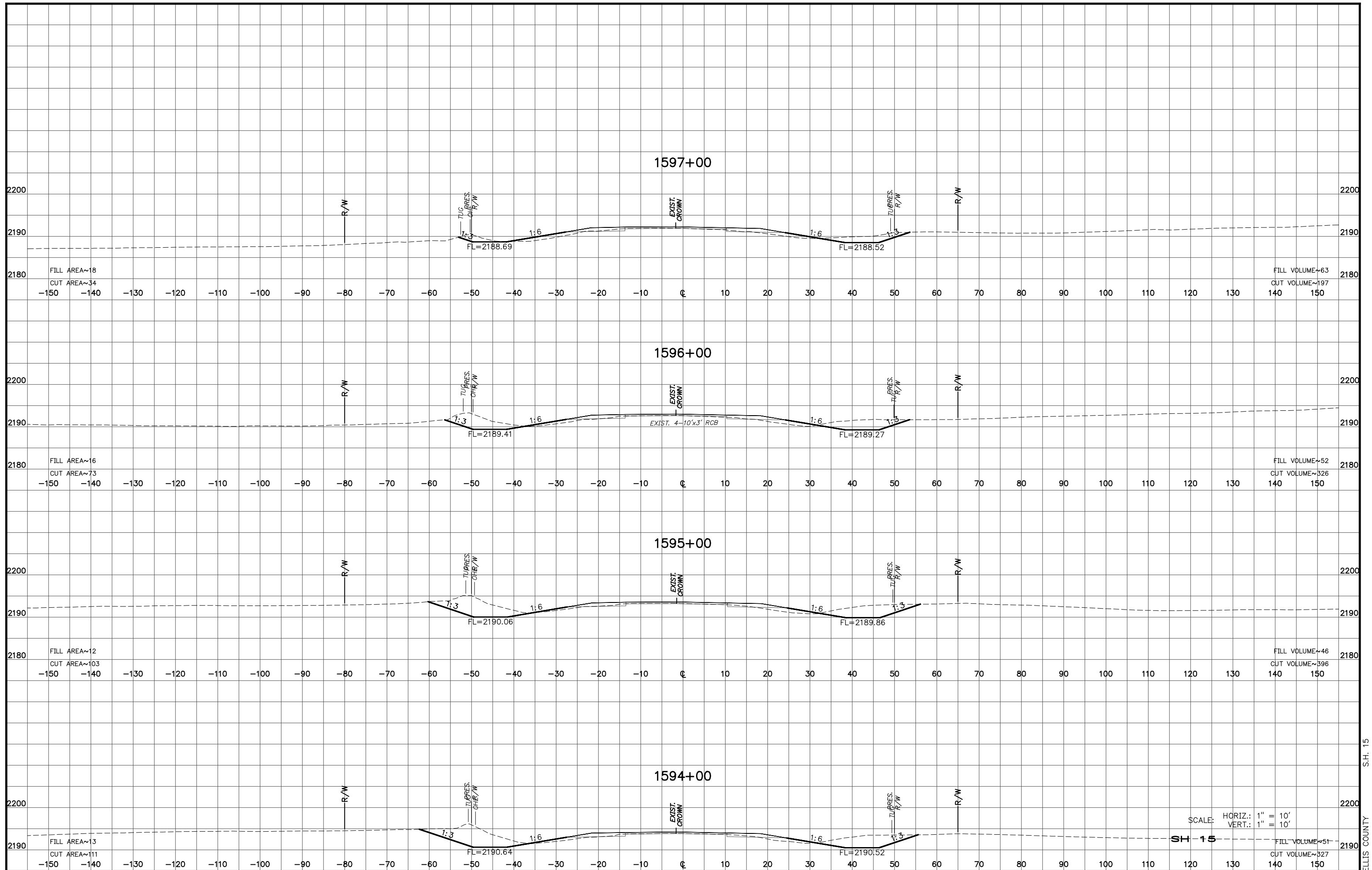
SH 15

FILL VOLUME~50
 CUT VOLUME~199



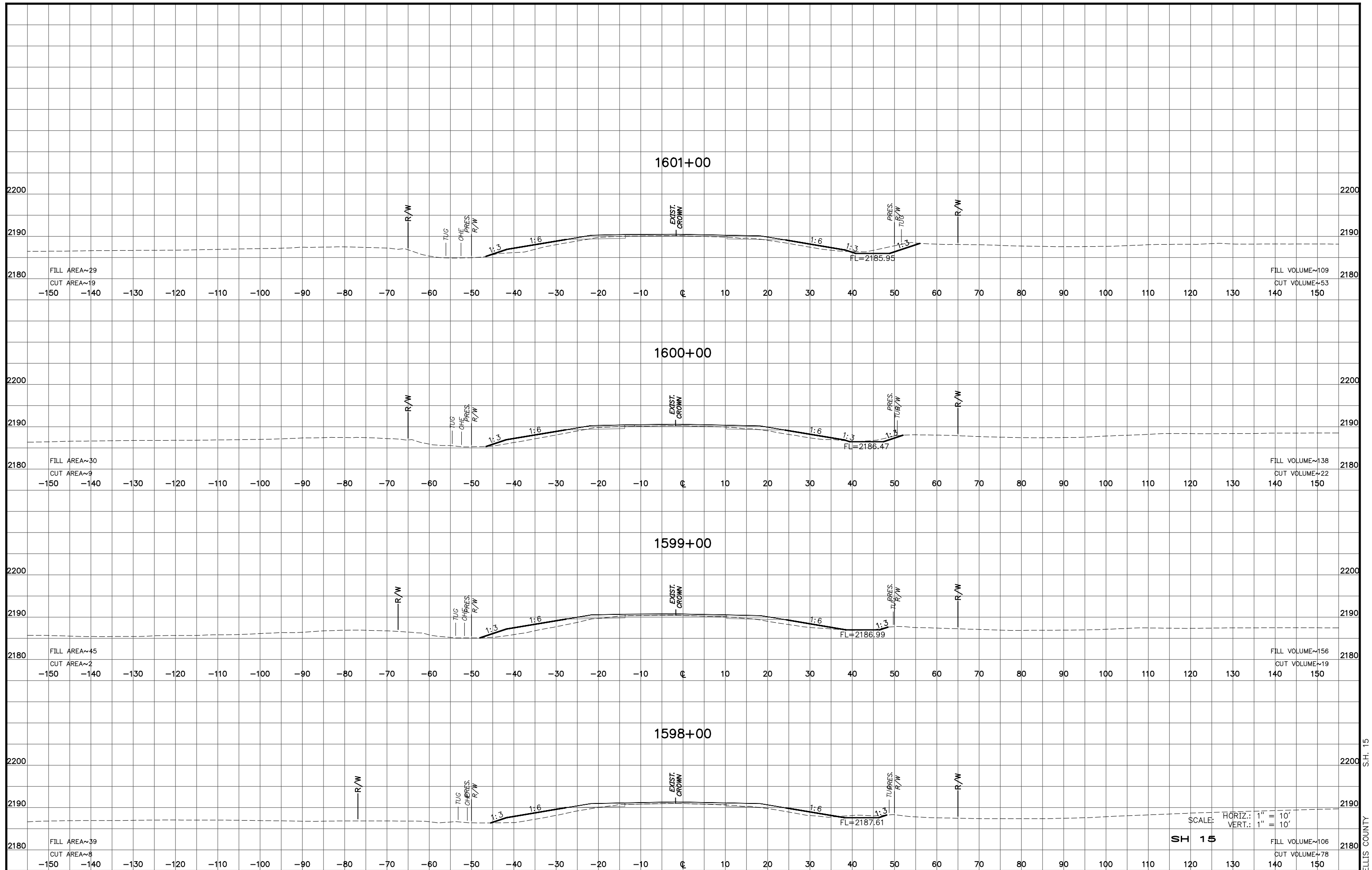
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15



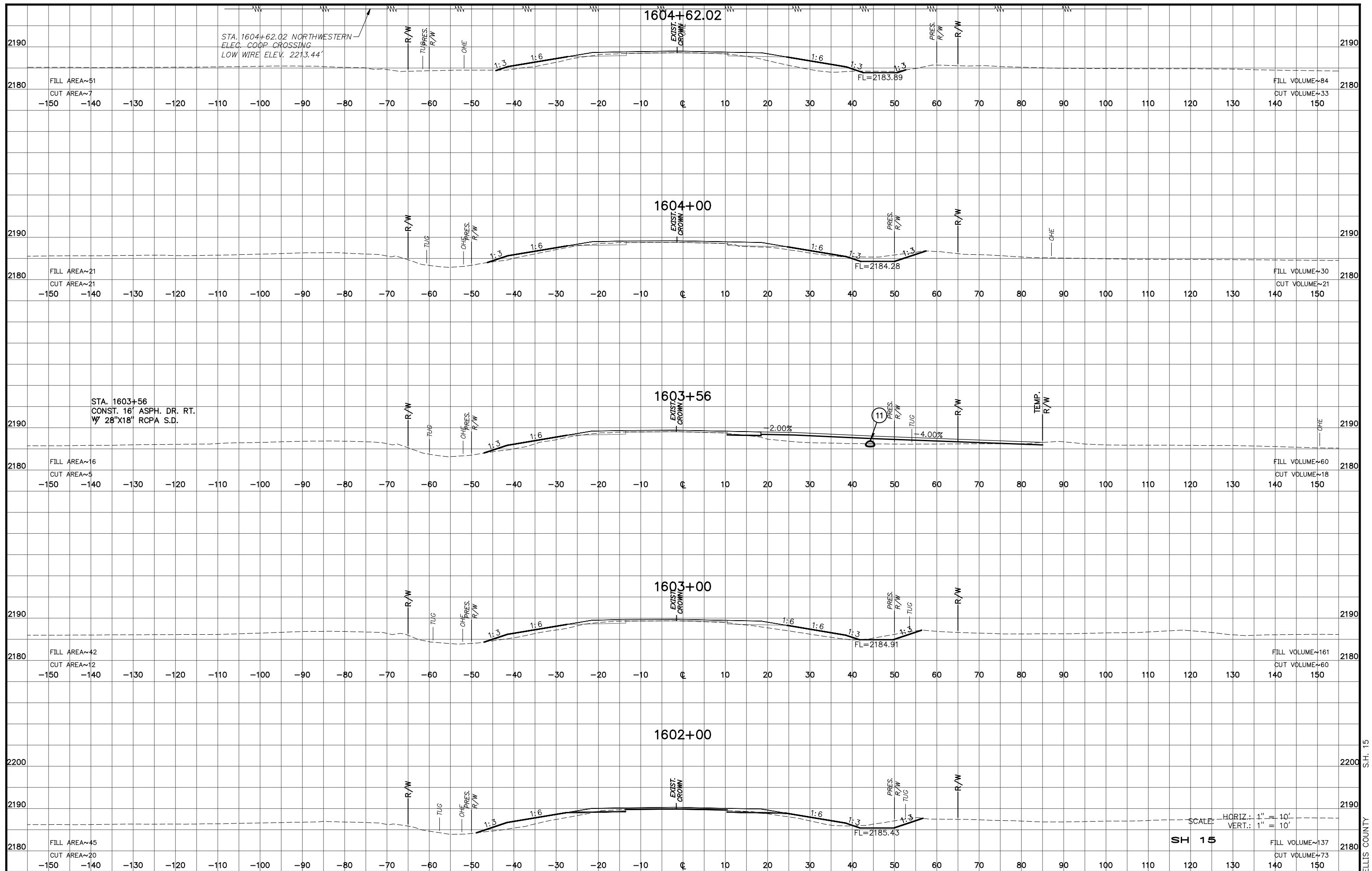
SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15



SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15

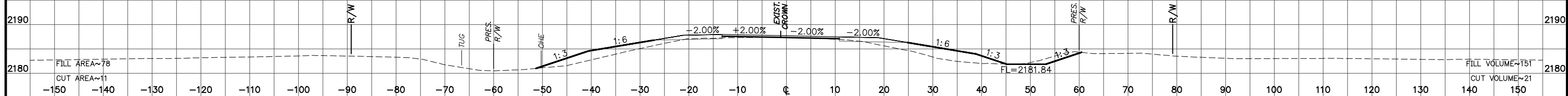


SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15

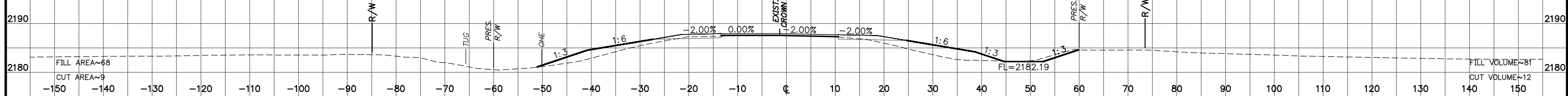
REVERSE CROSS SLOPE STATION

1607+89.64

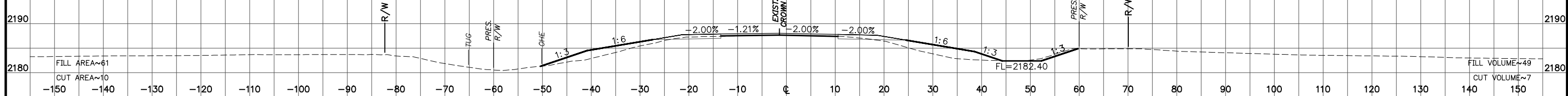


RUNOFF BEGINS STATION

1607+33.78

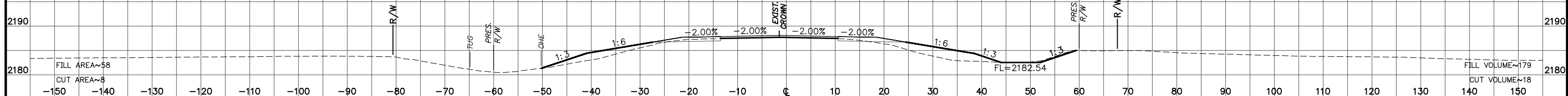


1607+00

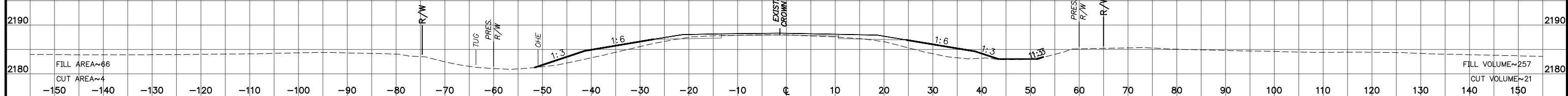


BEGIN SUPERELEVATION

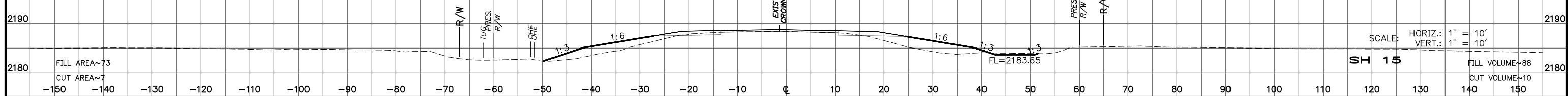
1606+77.93



1606+00

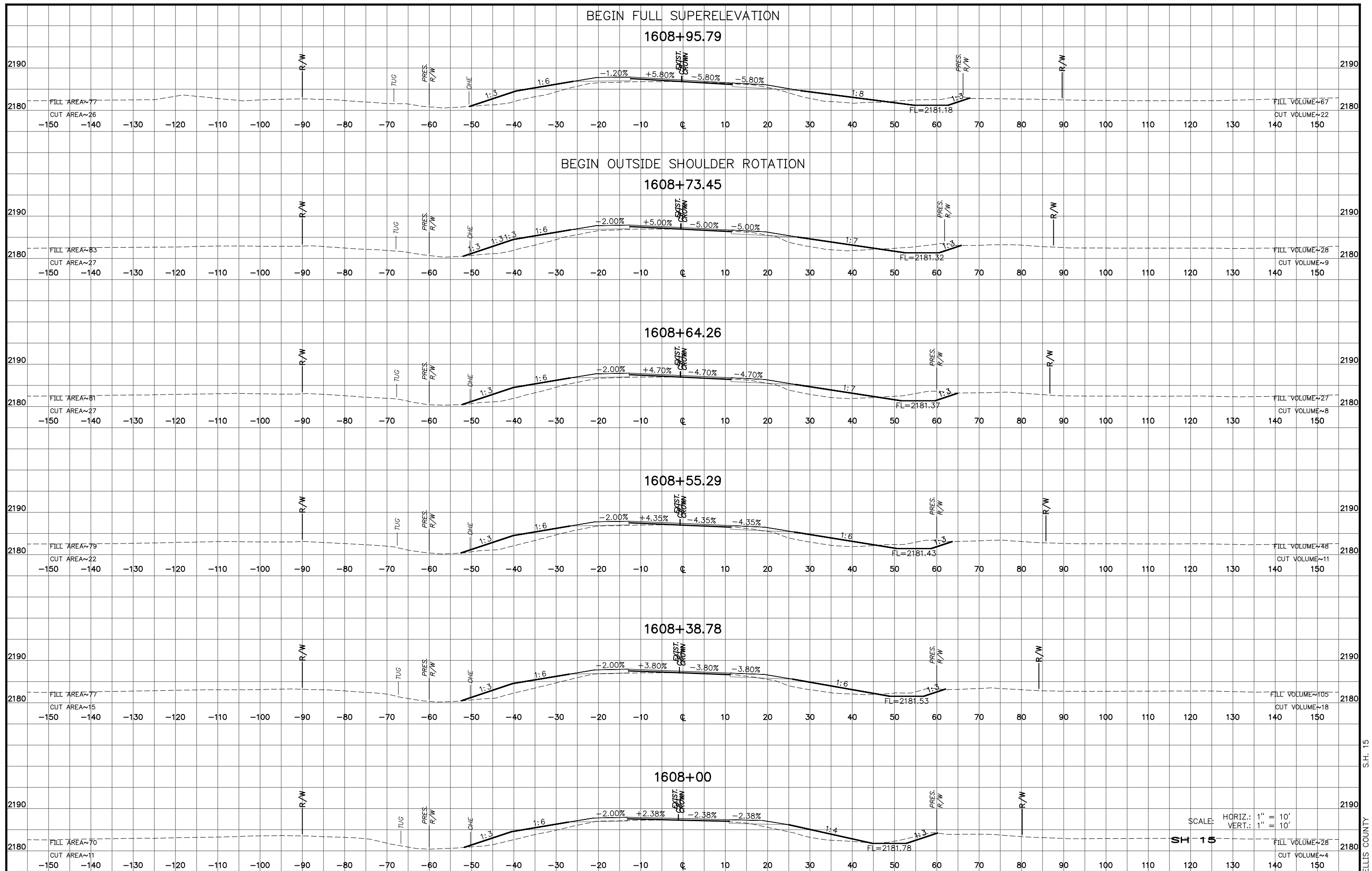


1605+00



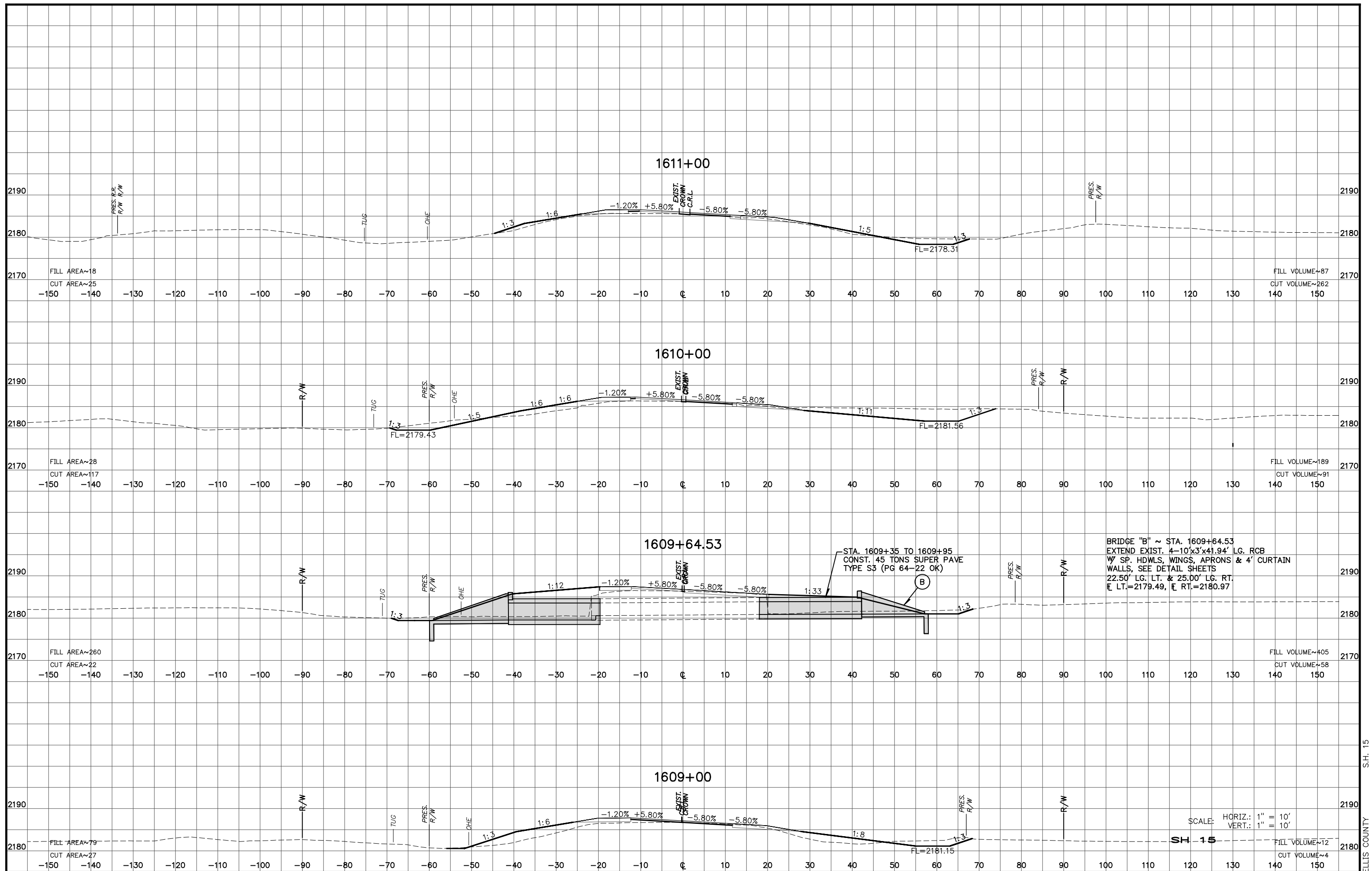
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15



1611+00

1610+00

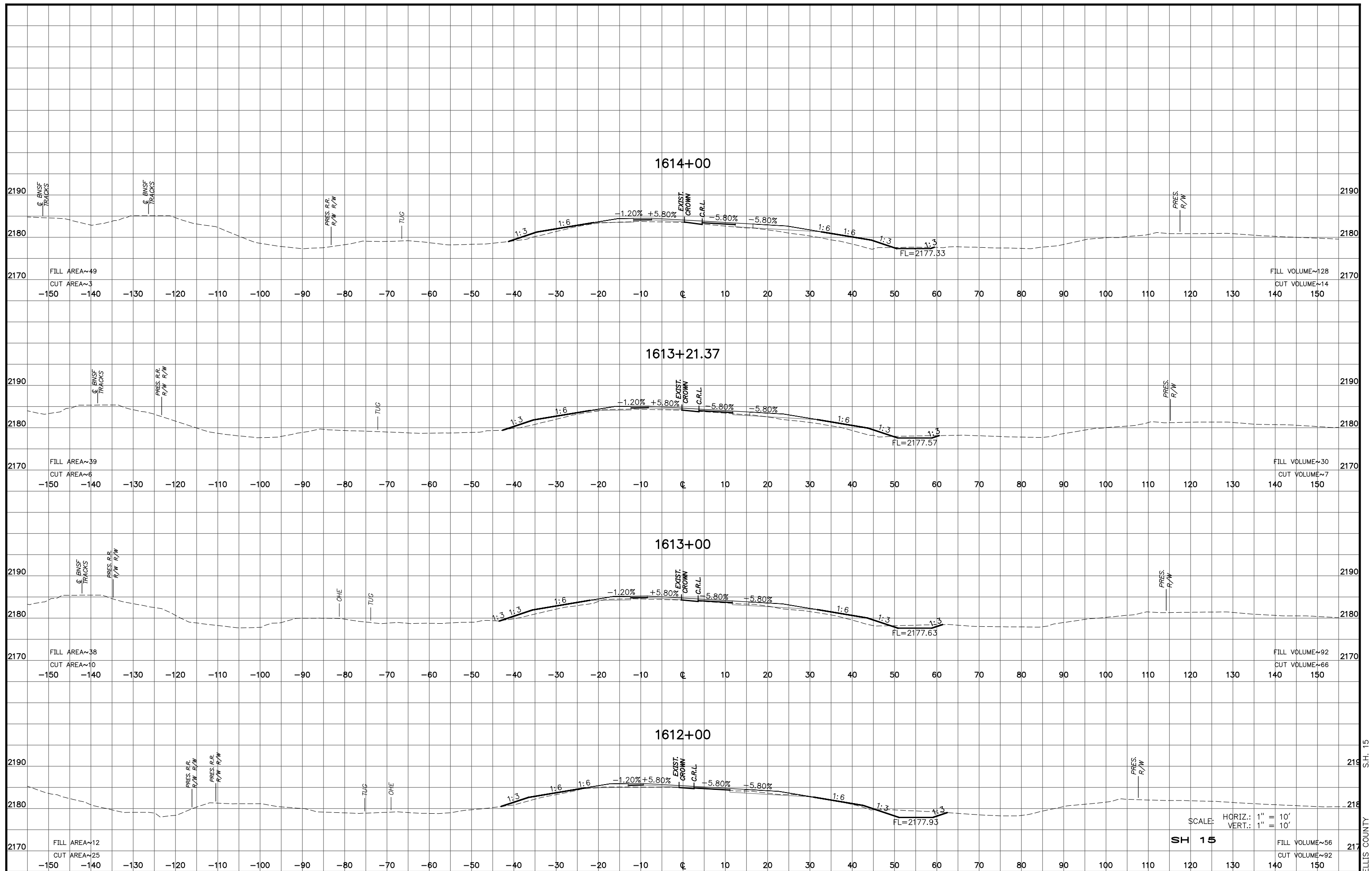
1609+64.53

1609+00

BRIDGE "B" ~ STA. 1609+64.53
 EXTEND EXIST. 4-10'x3'x41.94' LG. RCB
 W/ SP. HDWLS, WINGS, APRONS & 4' CURTAIN
 WALLS, SEE DETAIL SHEETS
 22.50' LG. LT. & 25.00' LG. RT.
 E LT.=2179.49, E RT.=2180.97

SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

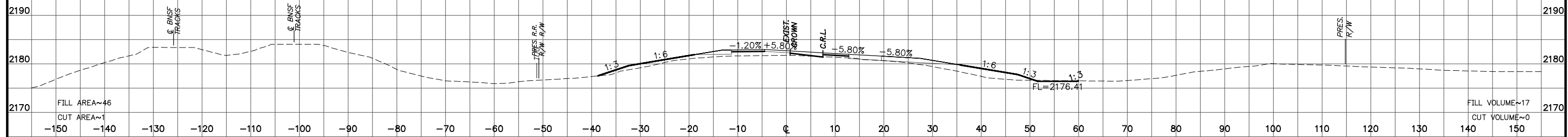
SH 15



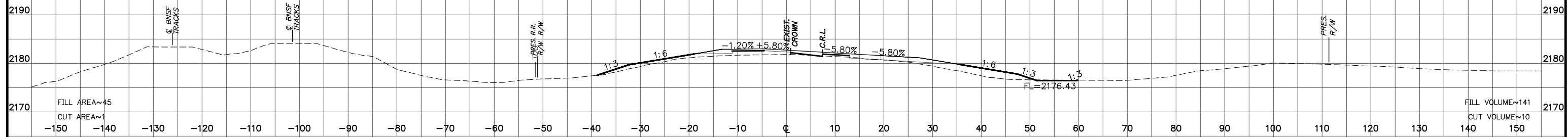
SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15

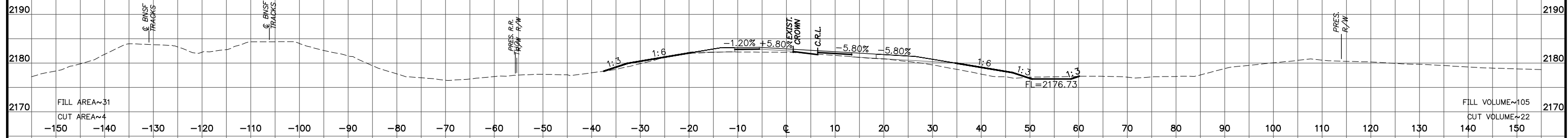
END FULL SUPERELEVATION
1617+10.01



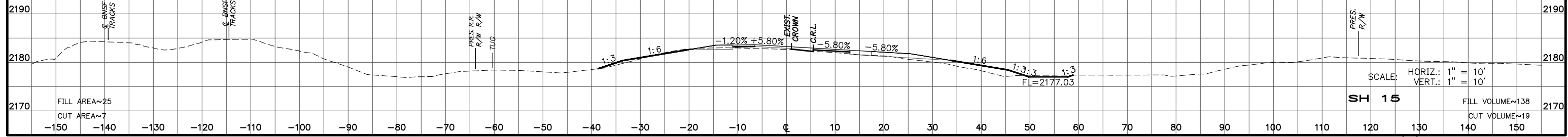
1617+00



1616+00

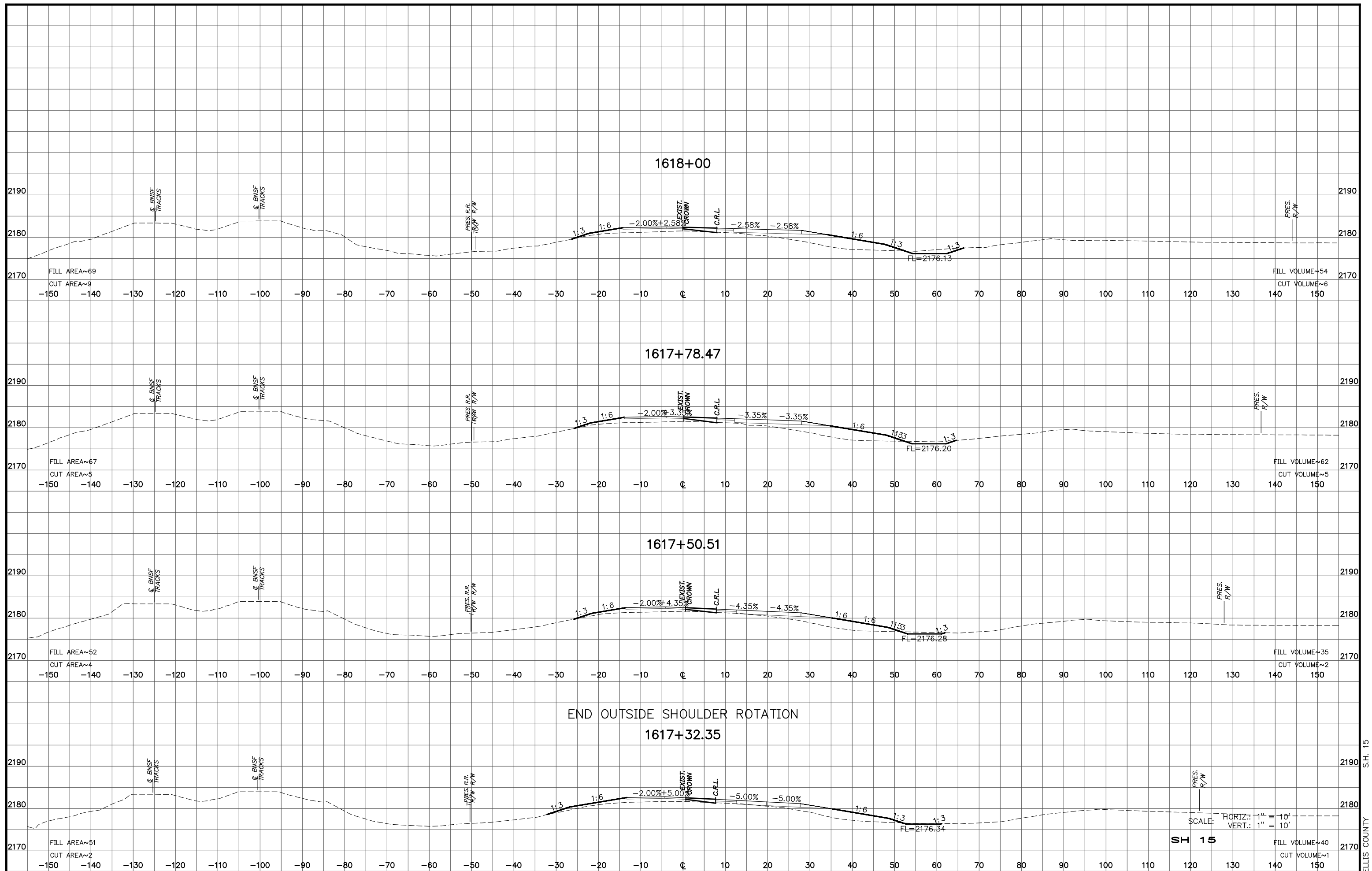


1615+00



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15

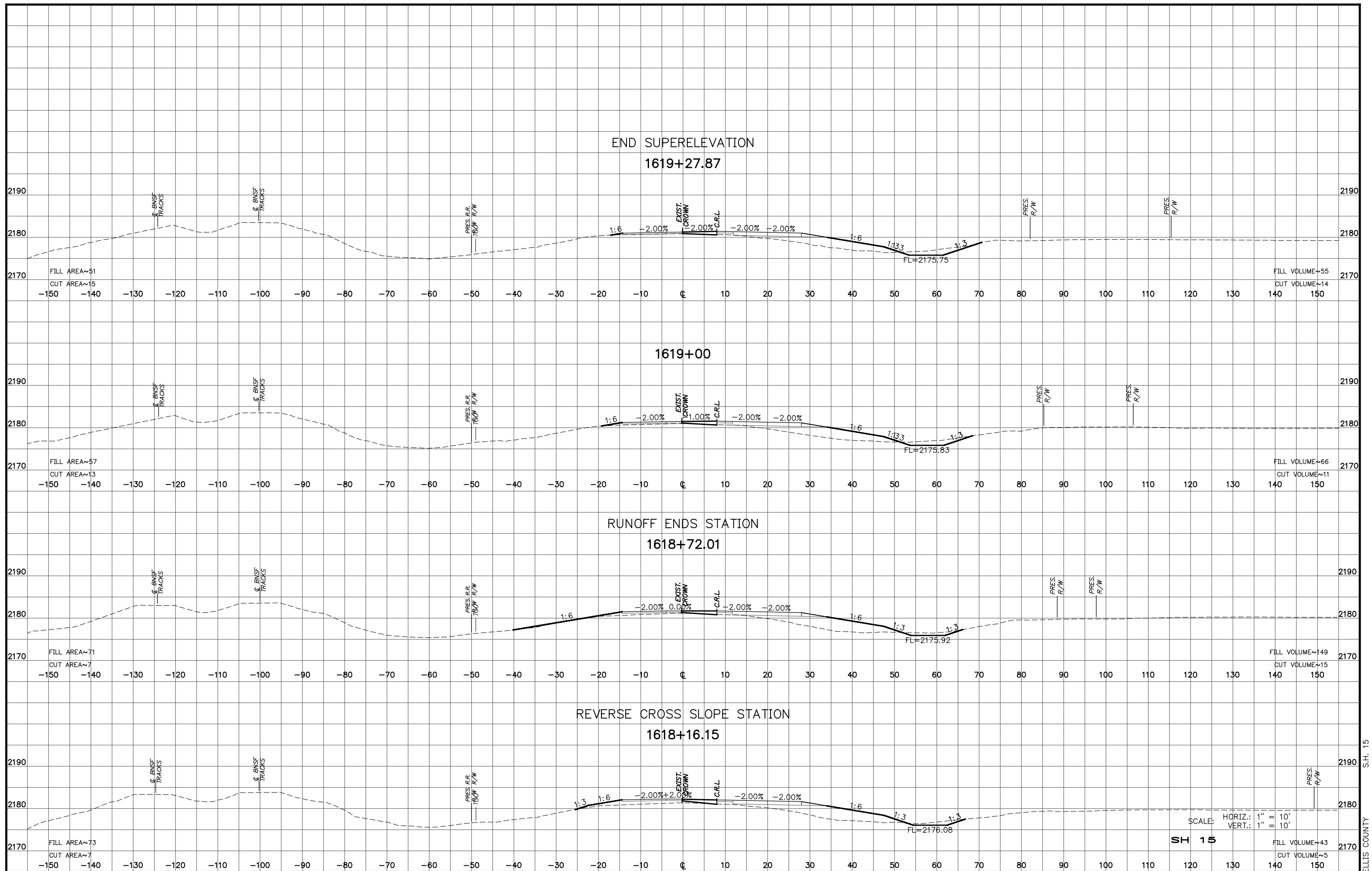


END OUTSIDE SHOULDER ROTATION

1617+32.35

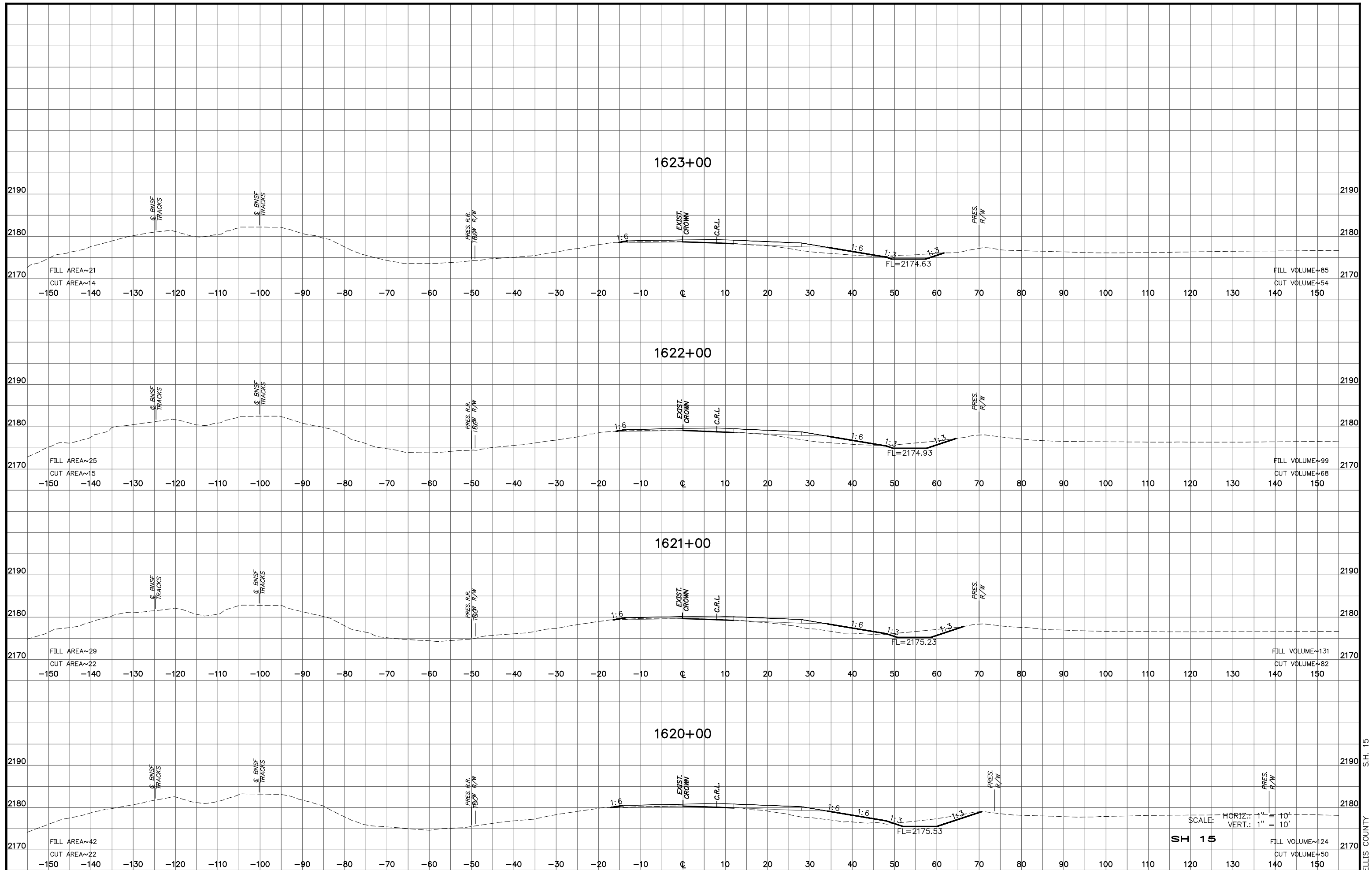
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15



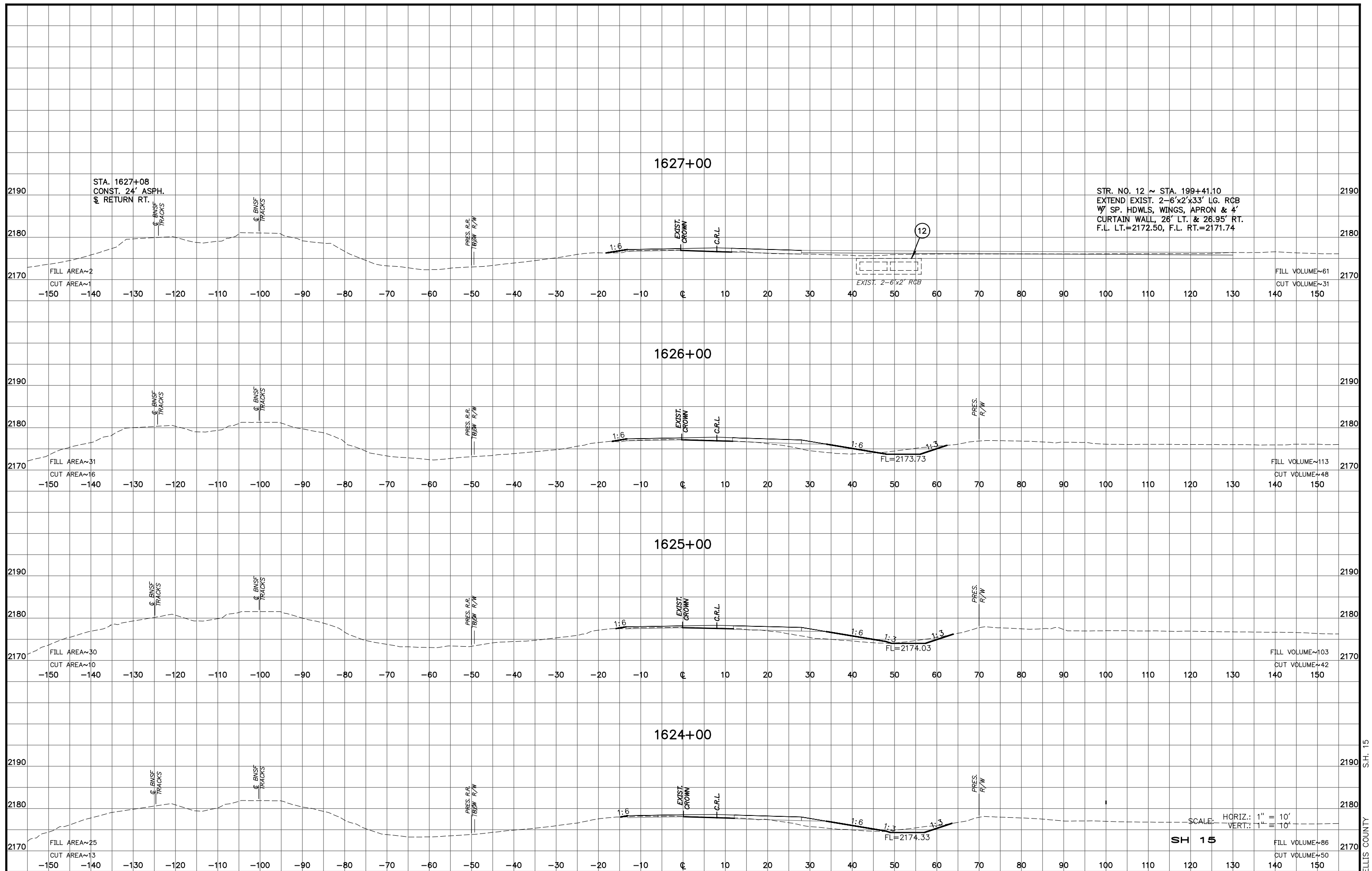
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15



SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15



STA. 1627+08
 CONST. 24' ASPH.
 § RETURN RT.

STR. NO. 12 ~ STA. 199+41.10
 EXTEND EXIST. 2-6'x2'x33' LG. RCB
 W/ SP. HDWLS, WINGS, APRON & 4'
 CURTAIN WALL, 26' LT. & 26.95' RT.
 F.L. LT.=2172.50, F.L. RT.=2171.74

EXIST. 2-6'x2' RCB

12

1627+00

1626+00

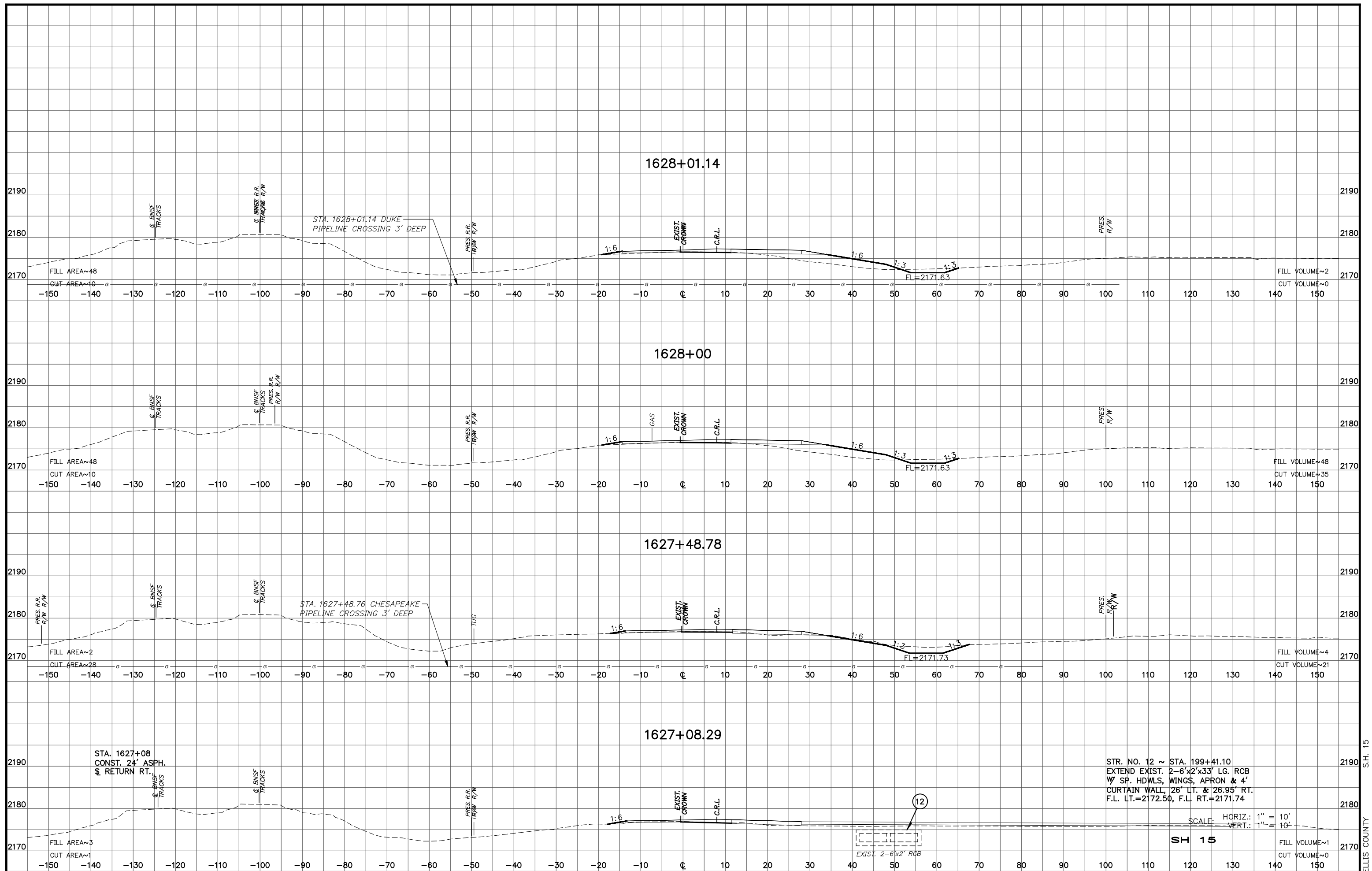
1625+00

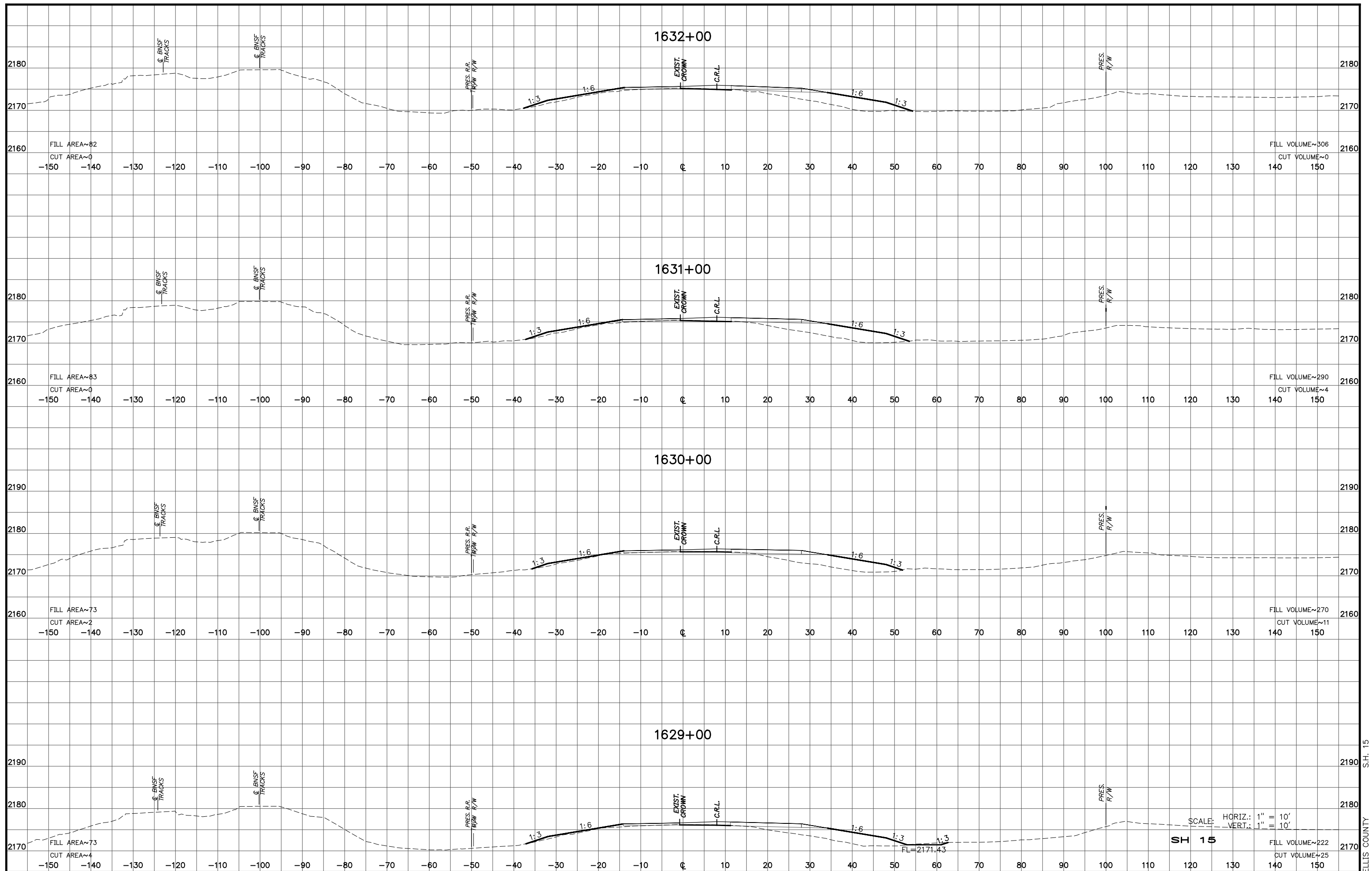
1624+00

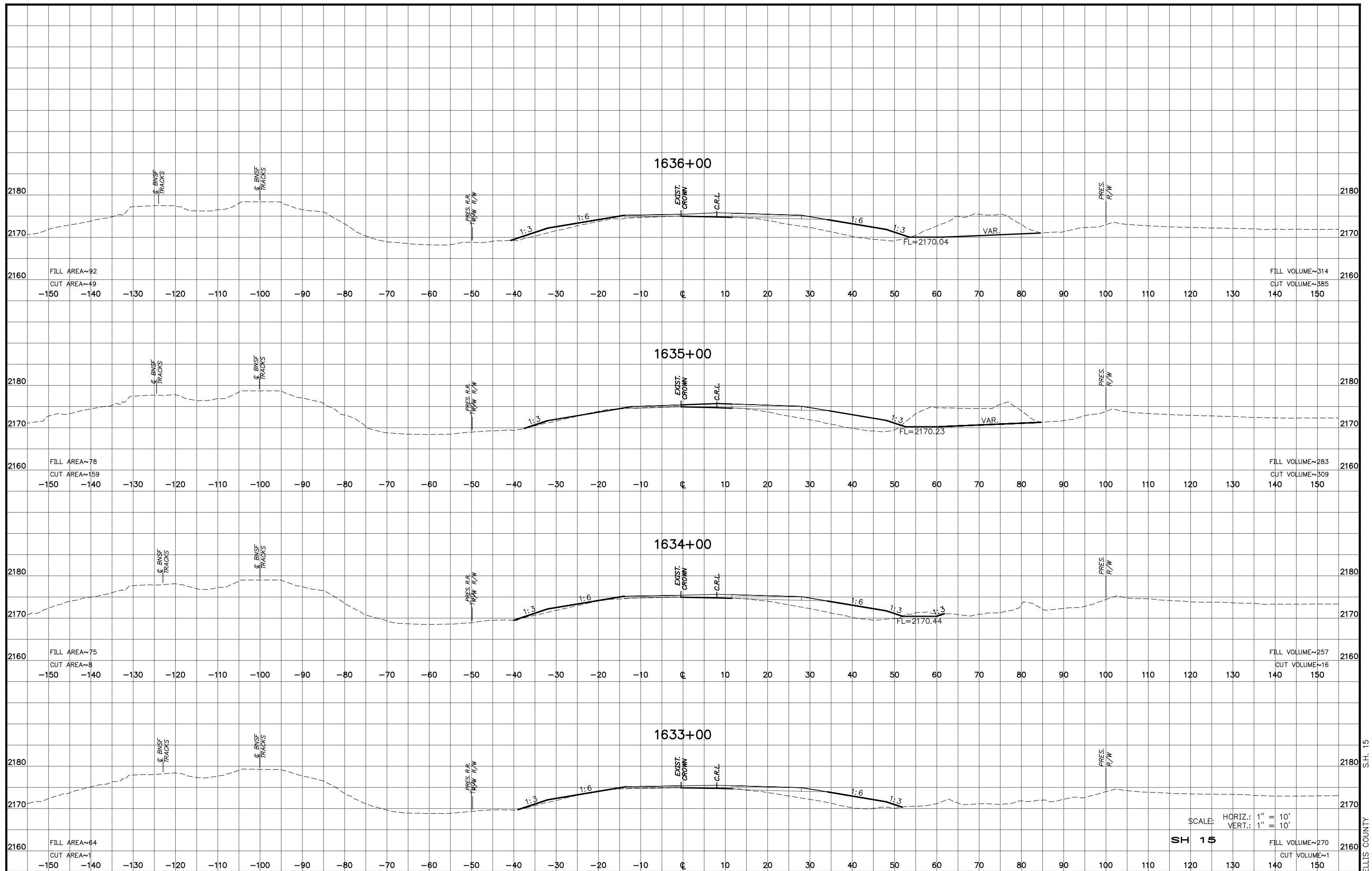
SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15

FILL VOLUME~86
 CUT VOLUME~50

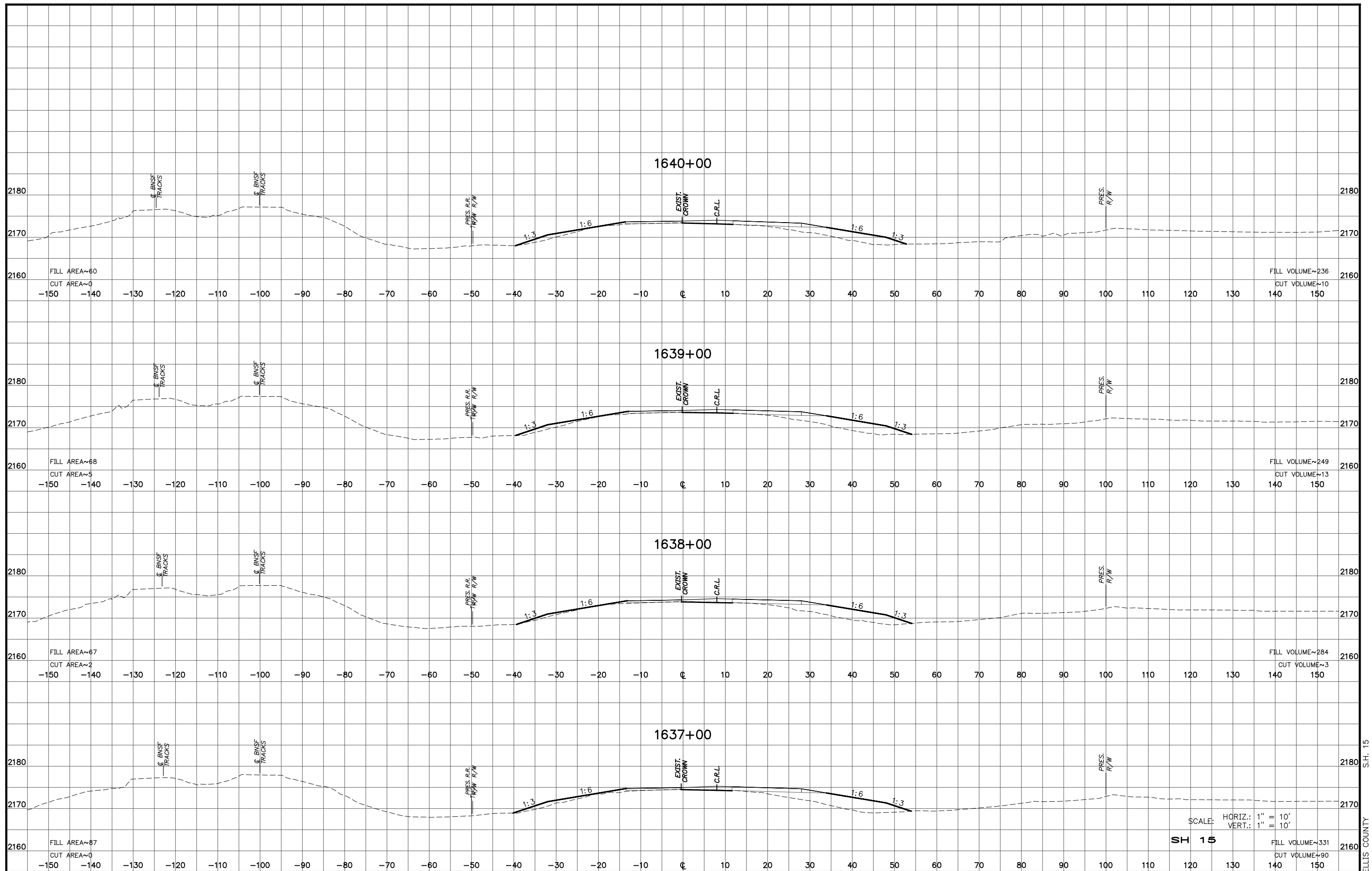






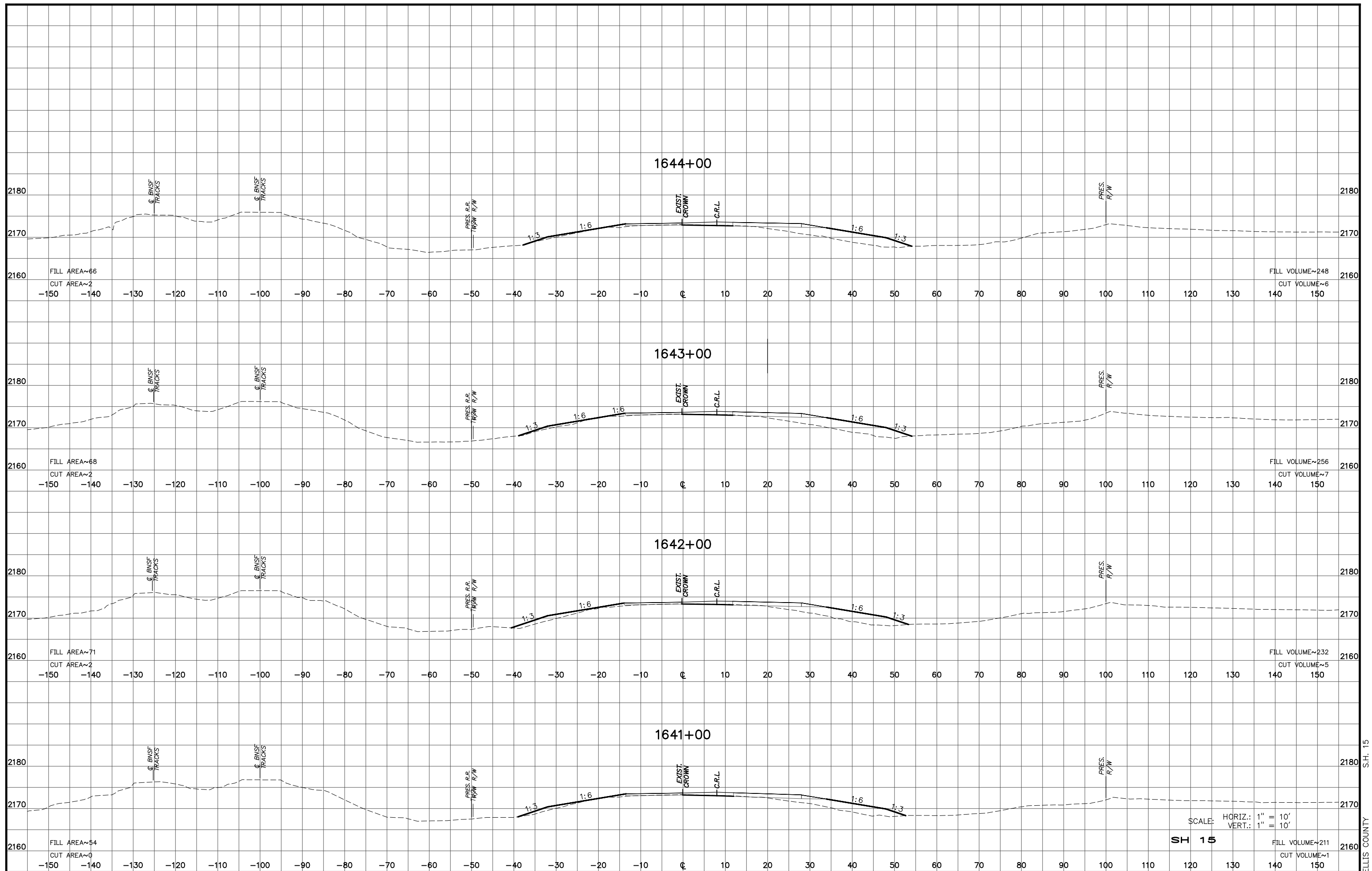
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15



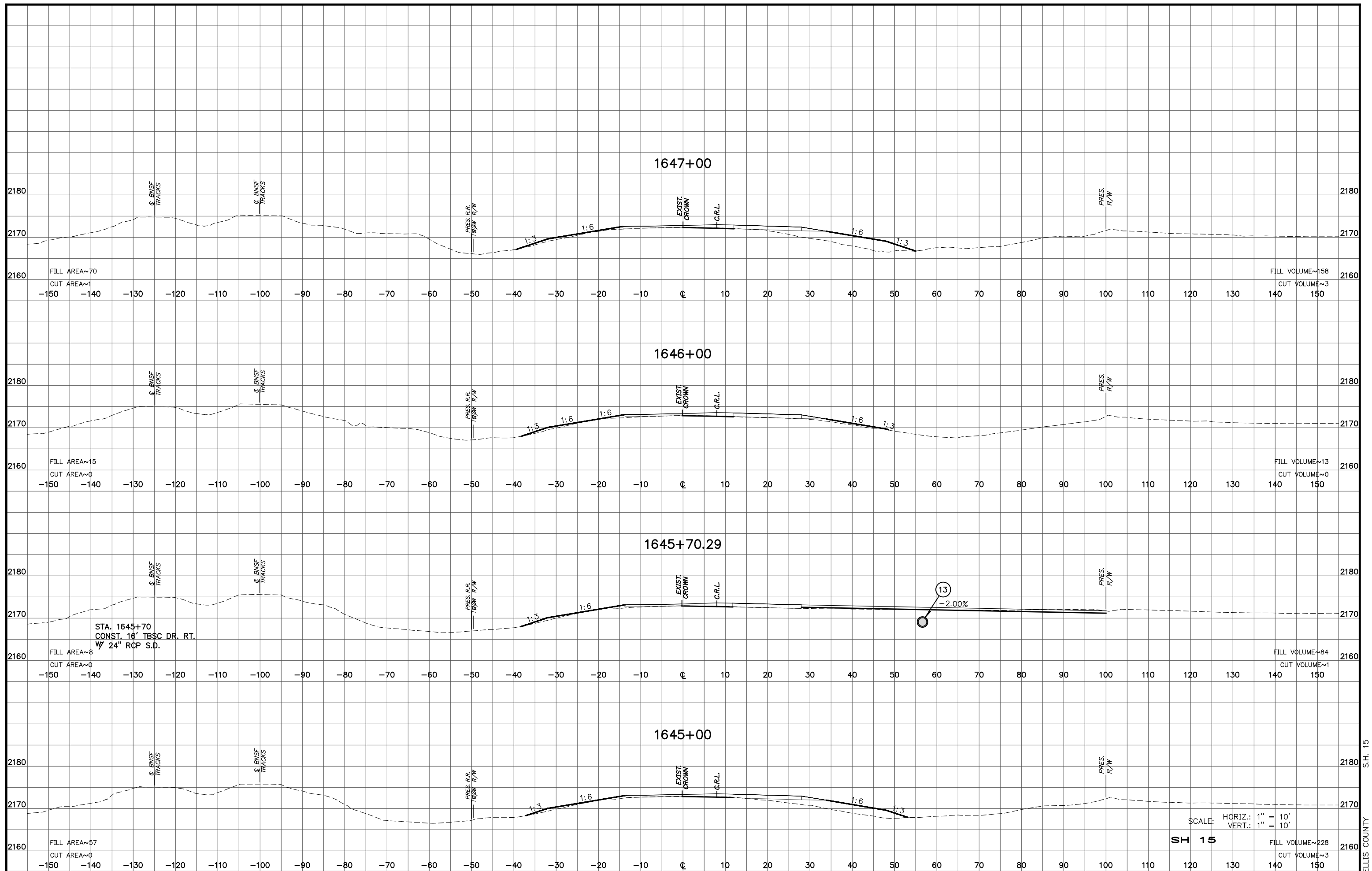
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15



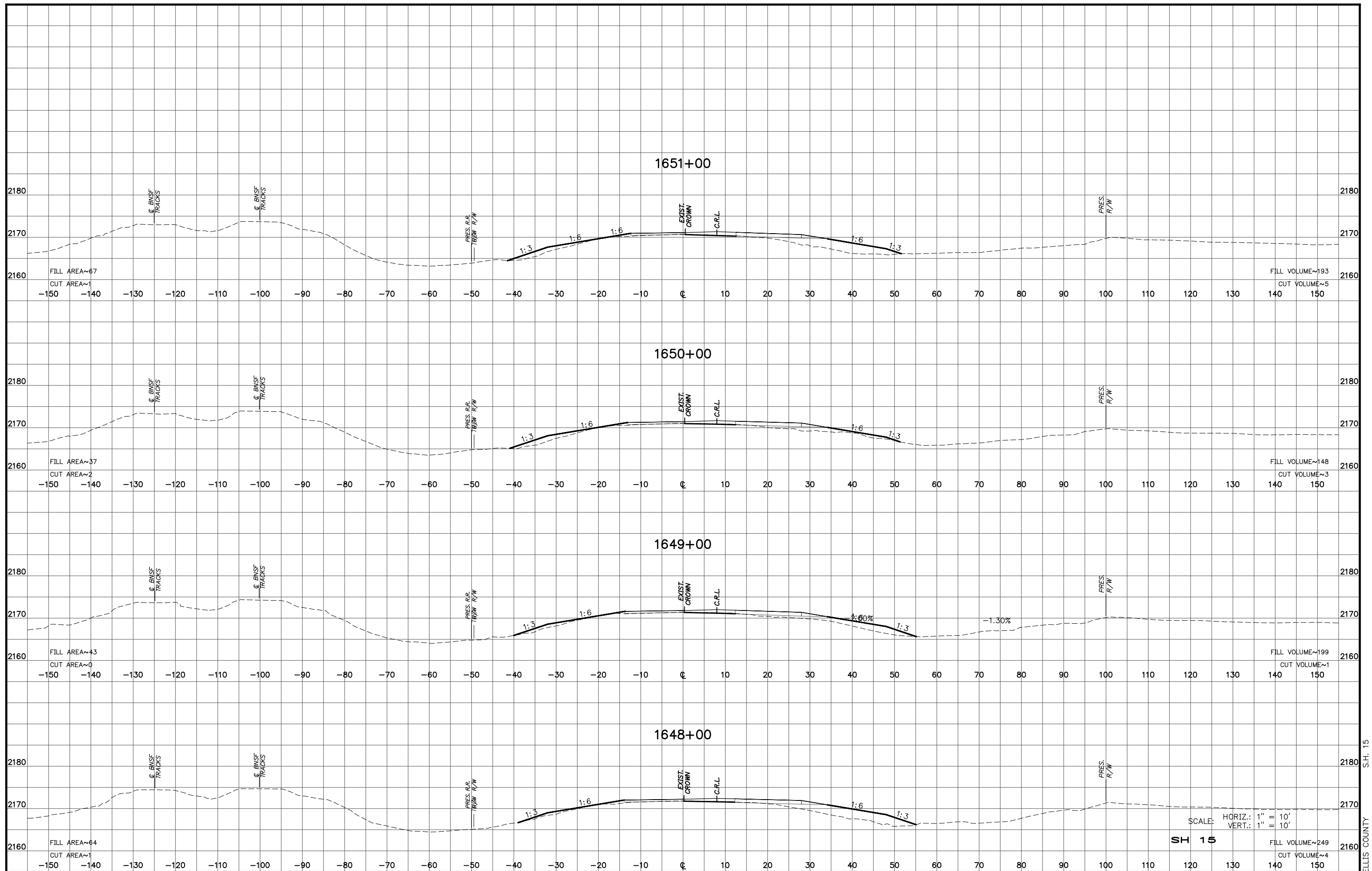
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

SH 15



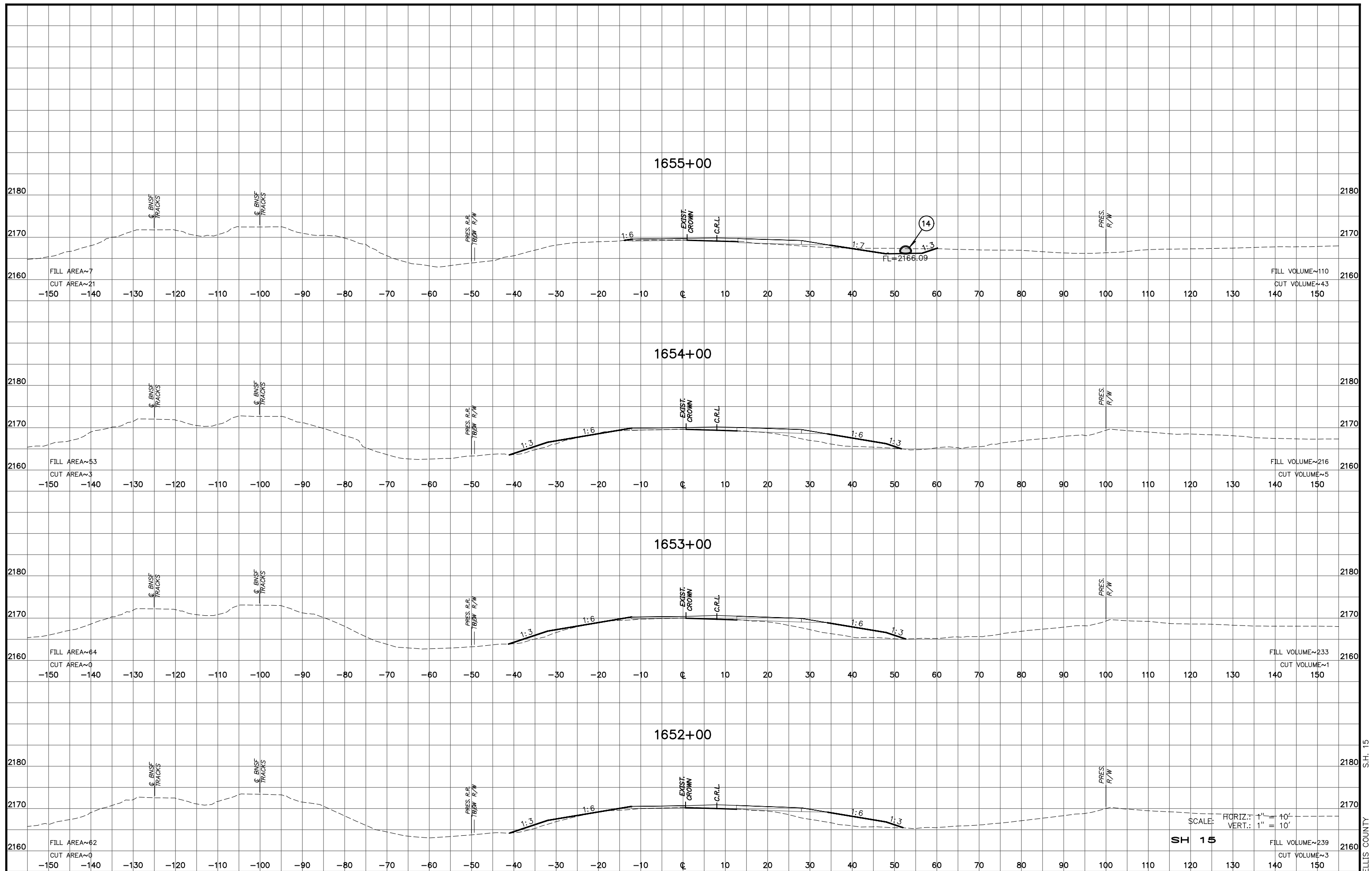
SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

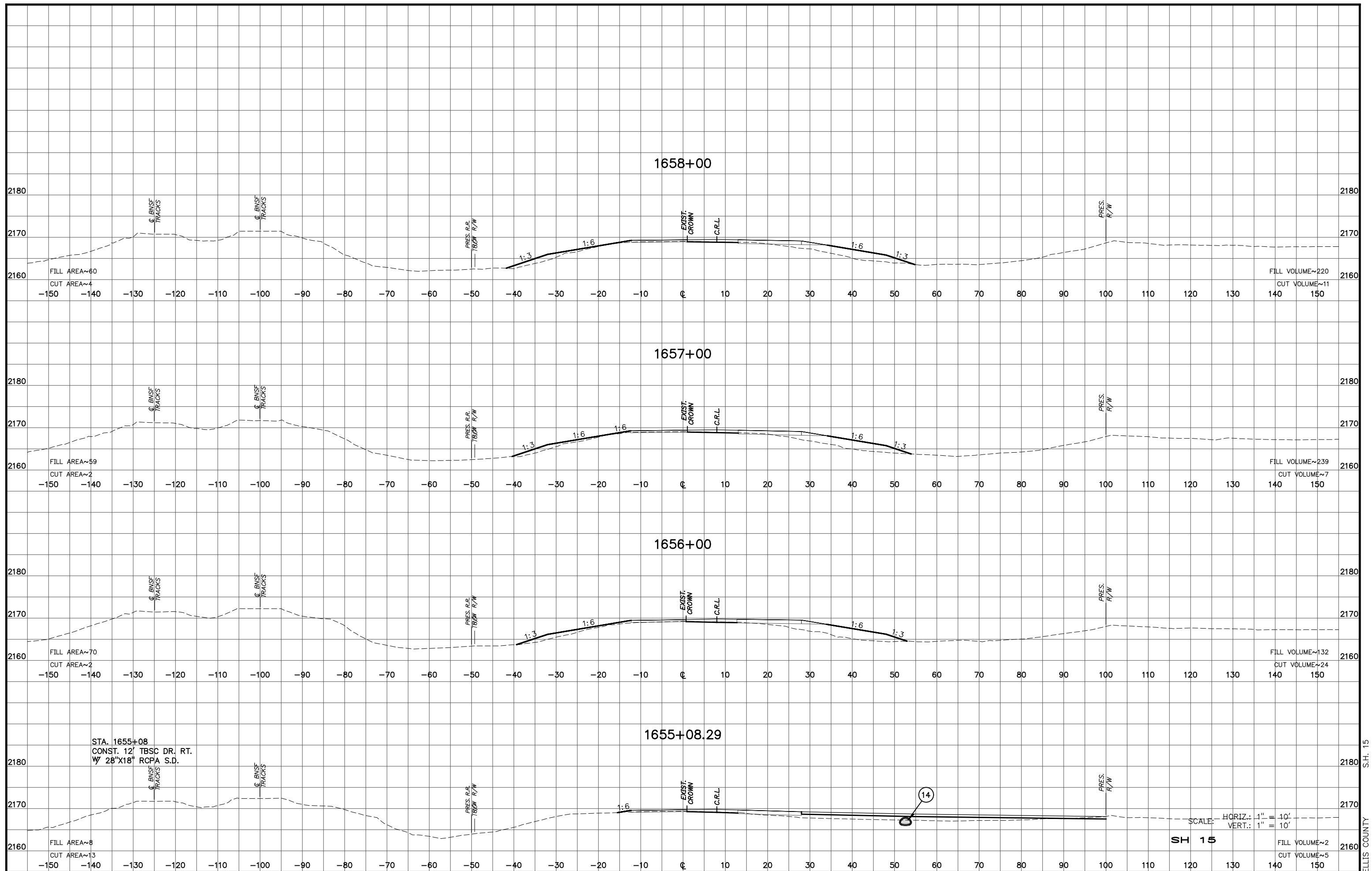
SH 15

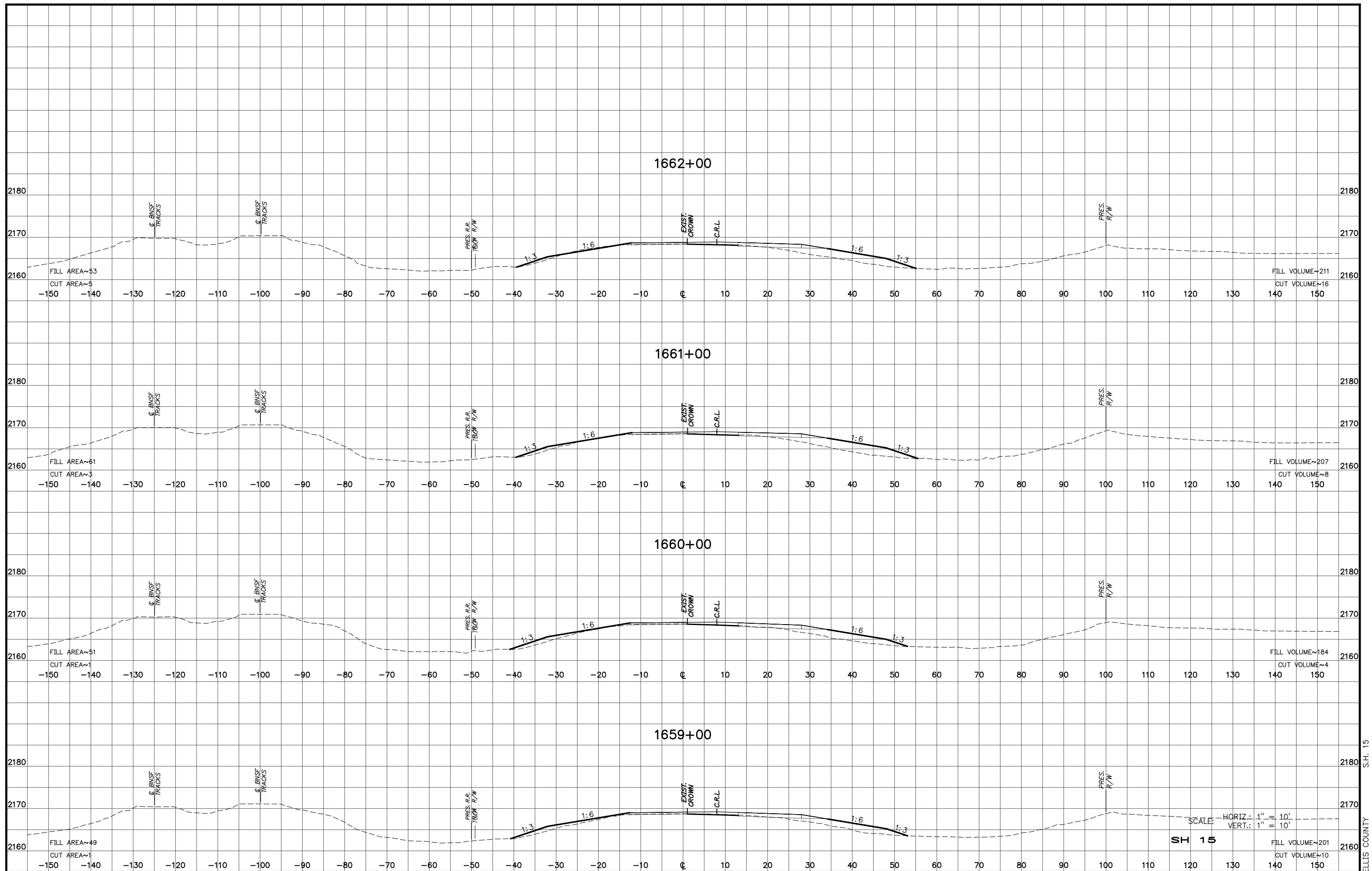


SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15

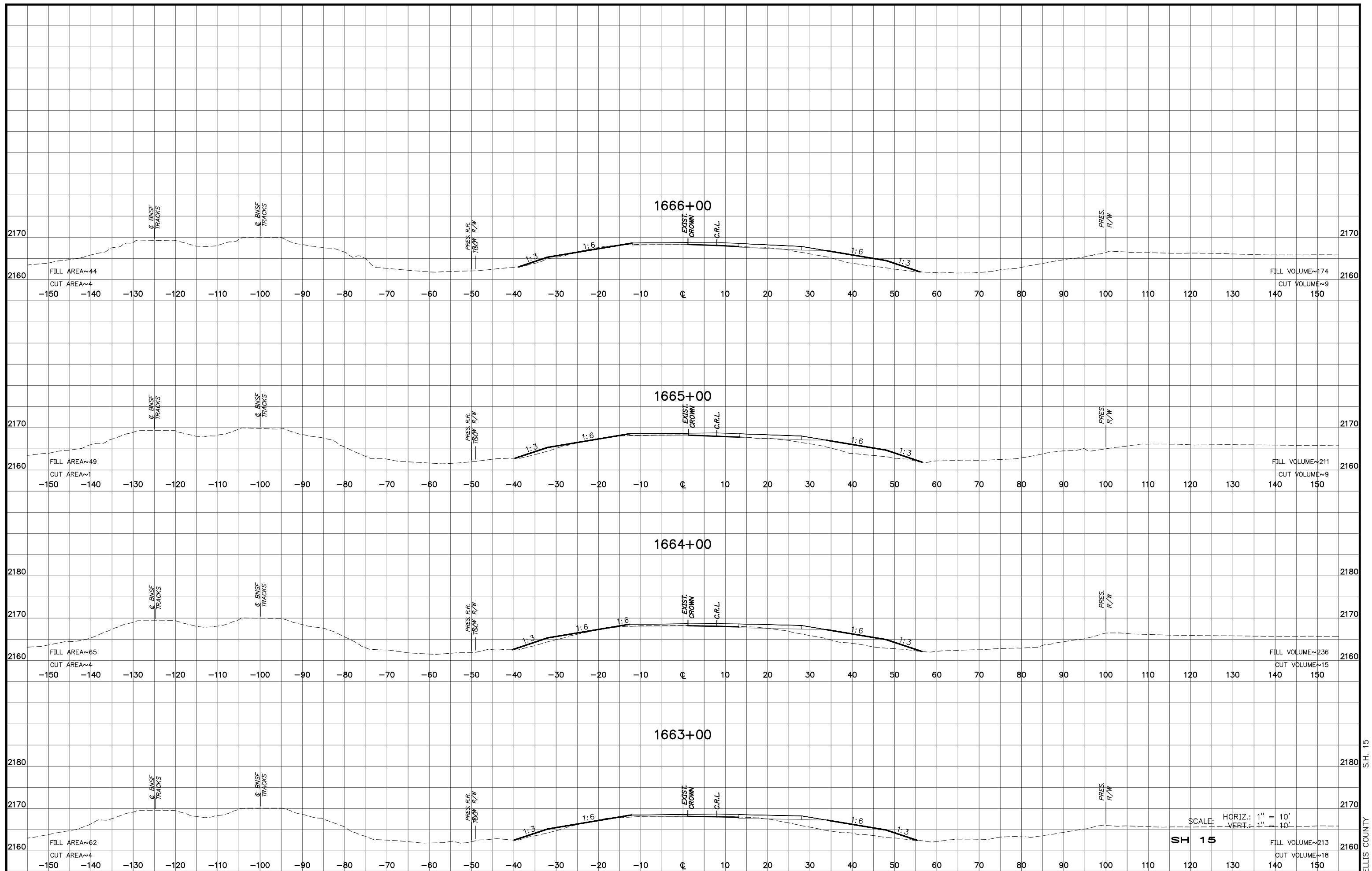






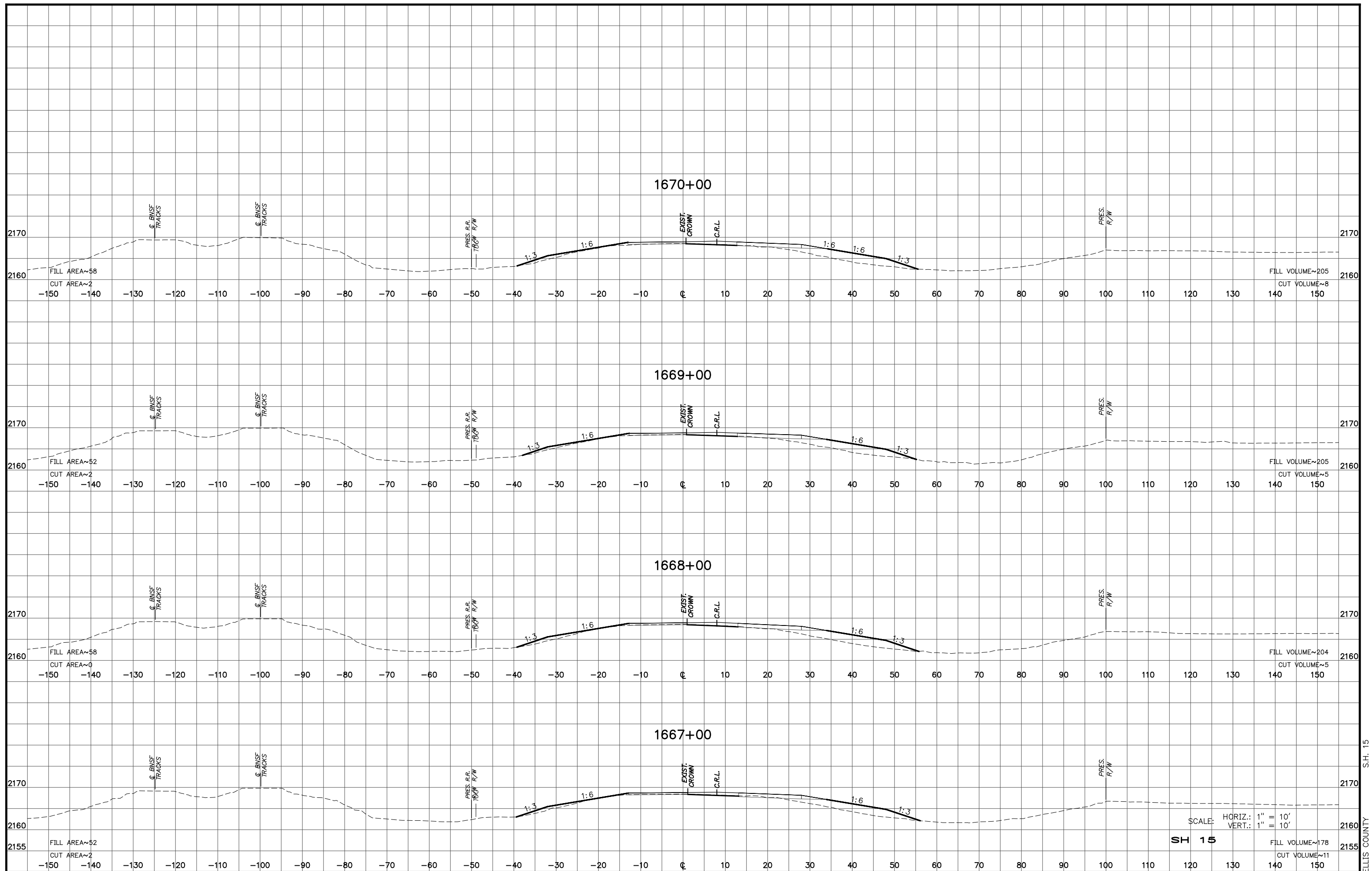
SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15



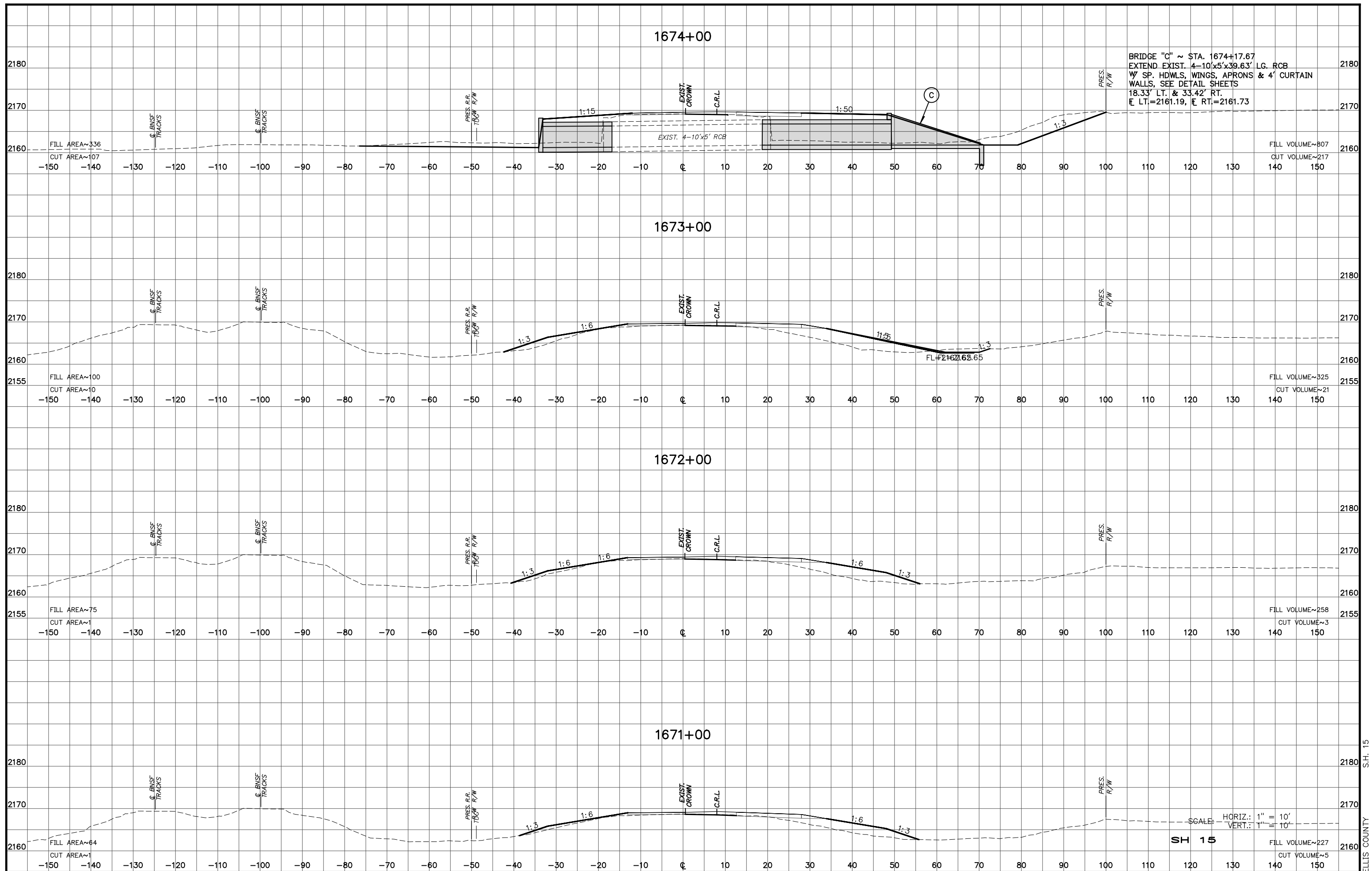
SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

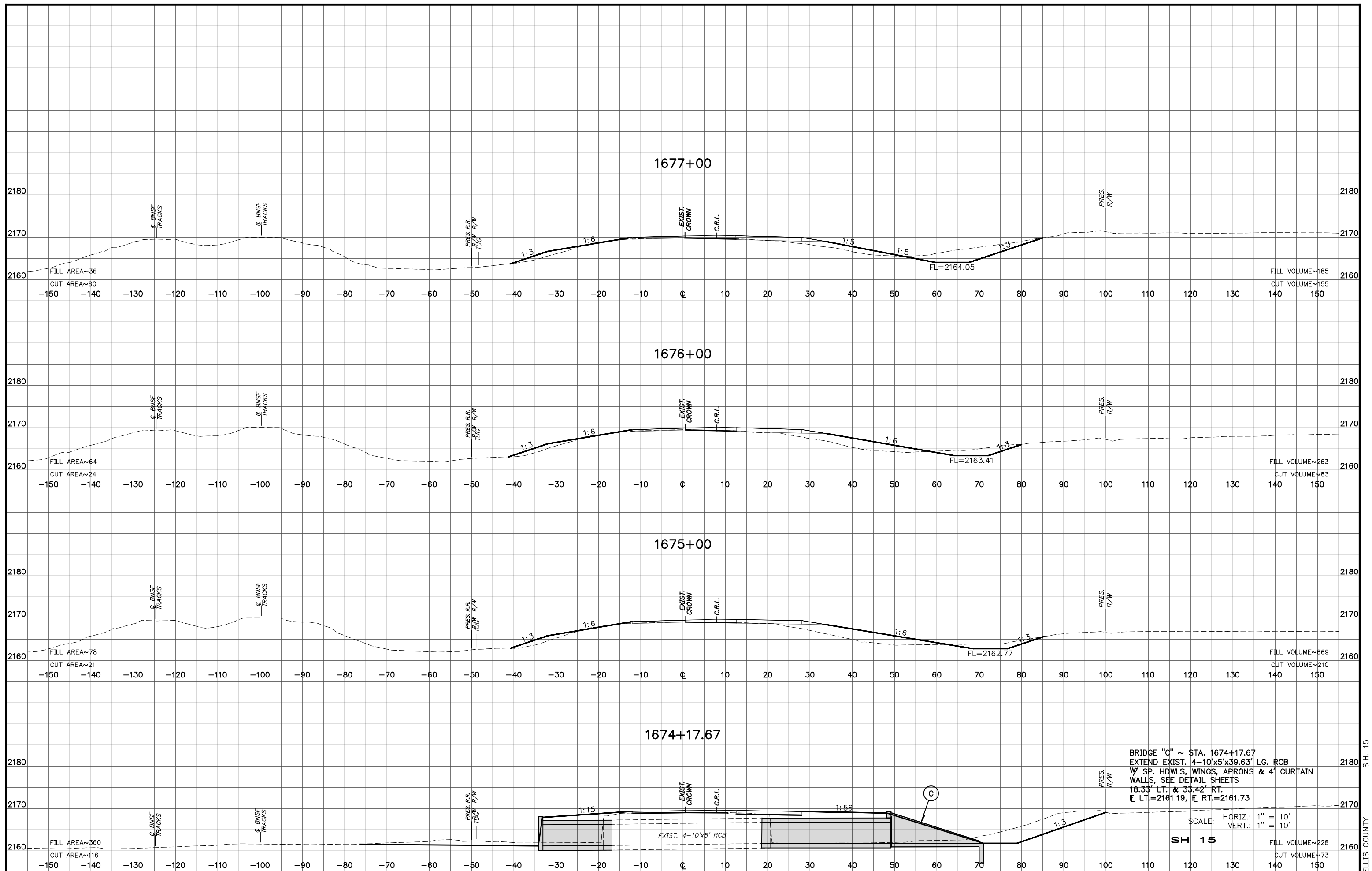
SH 15

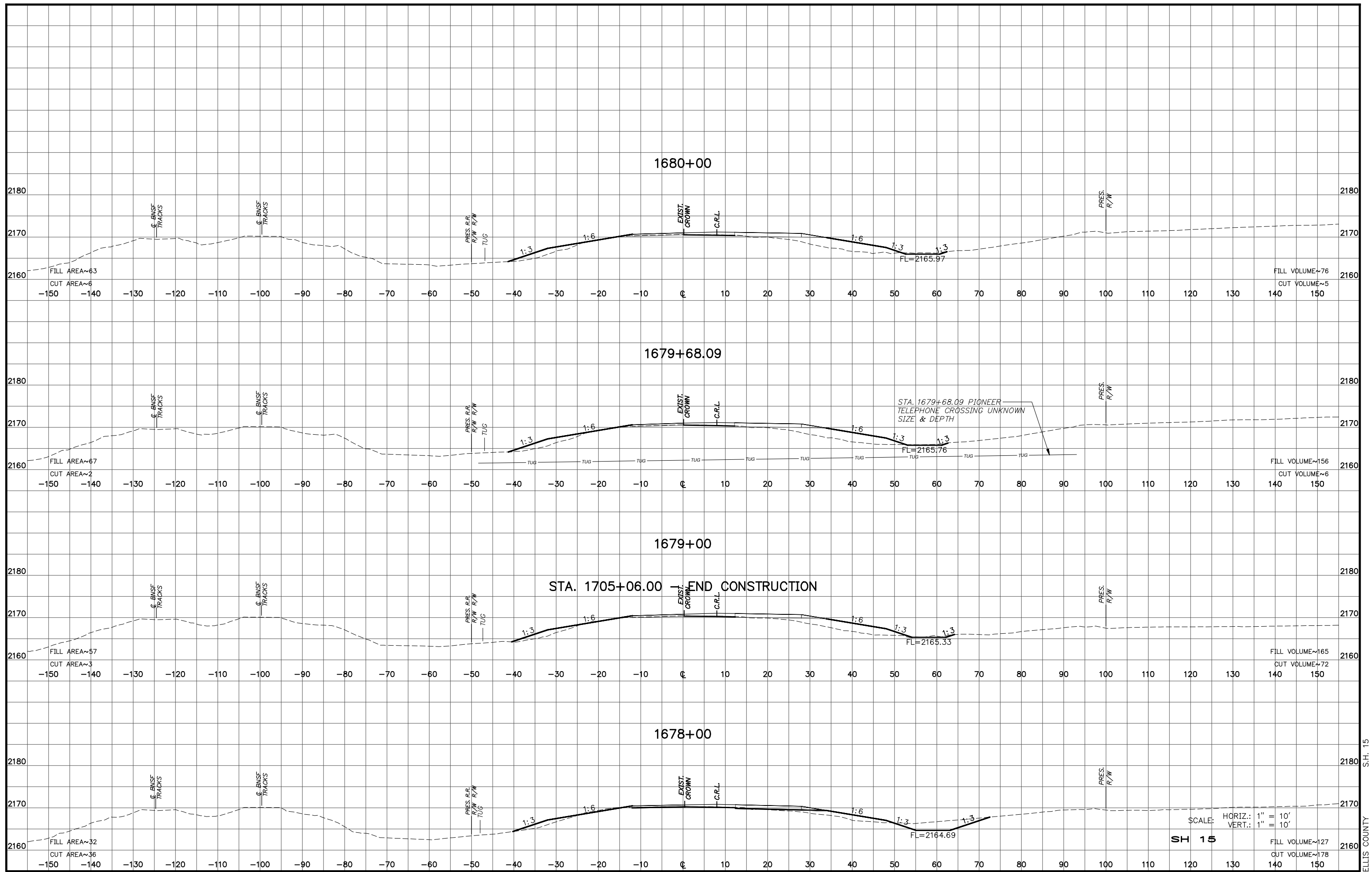


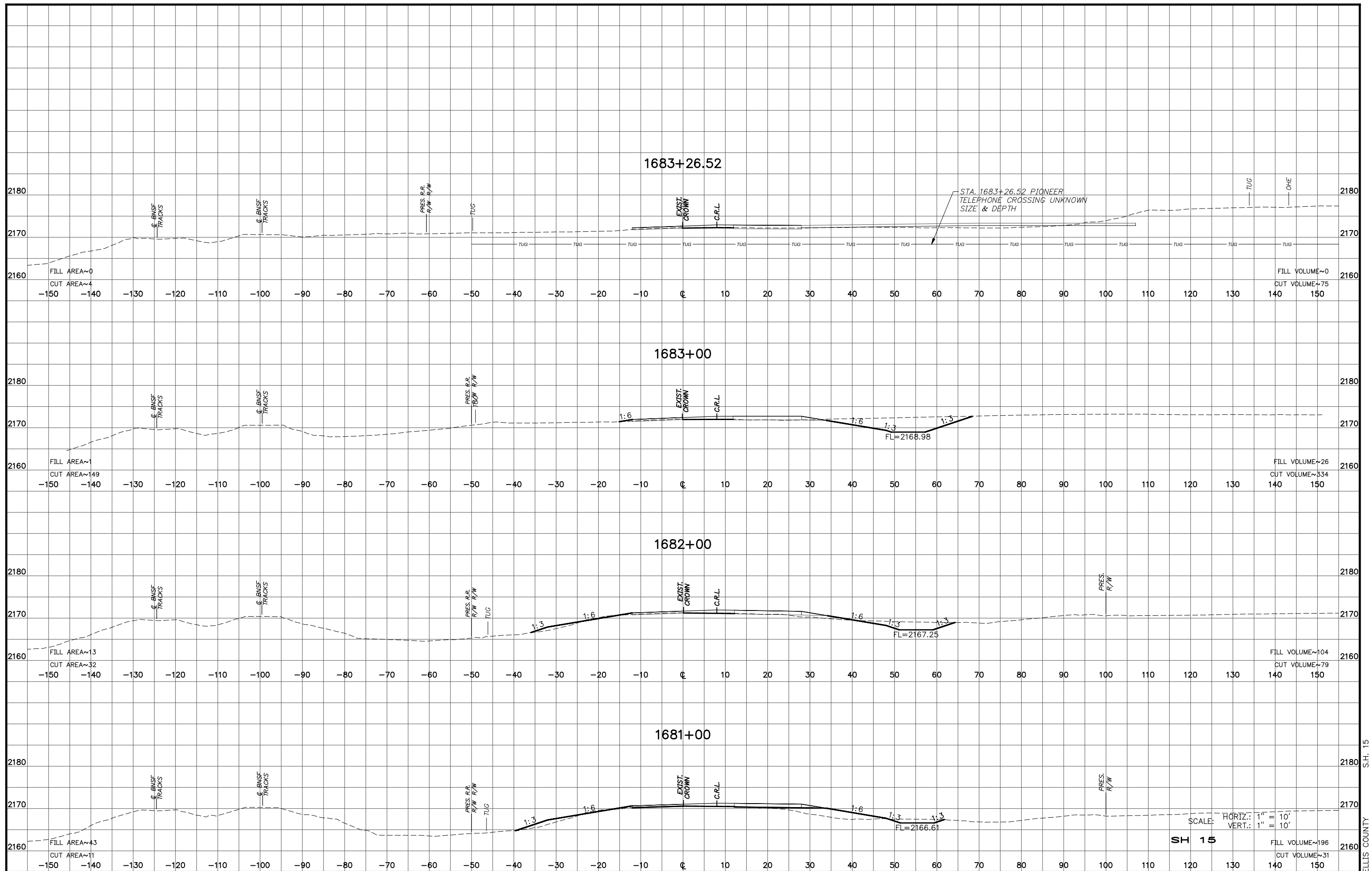
SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

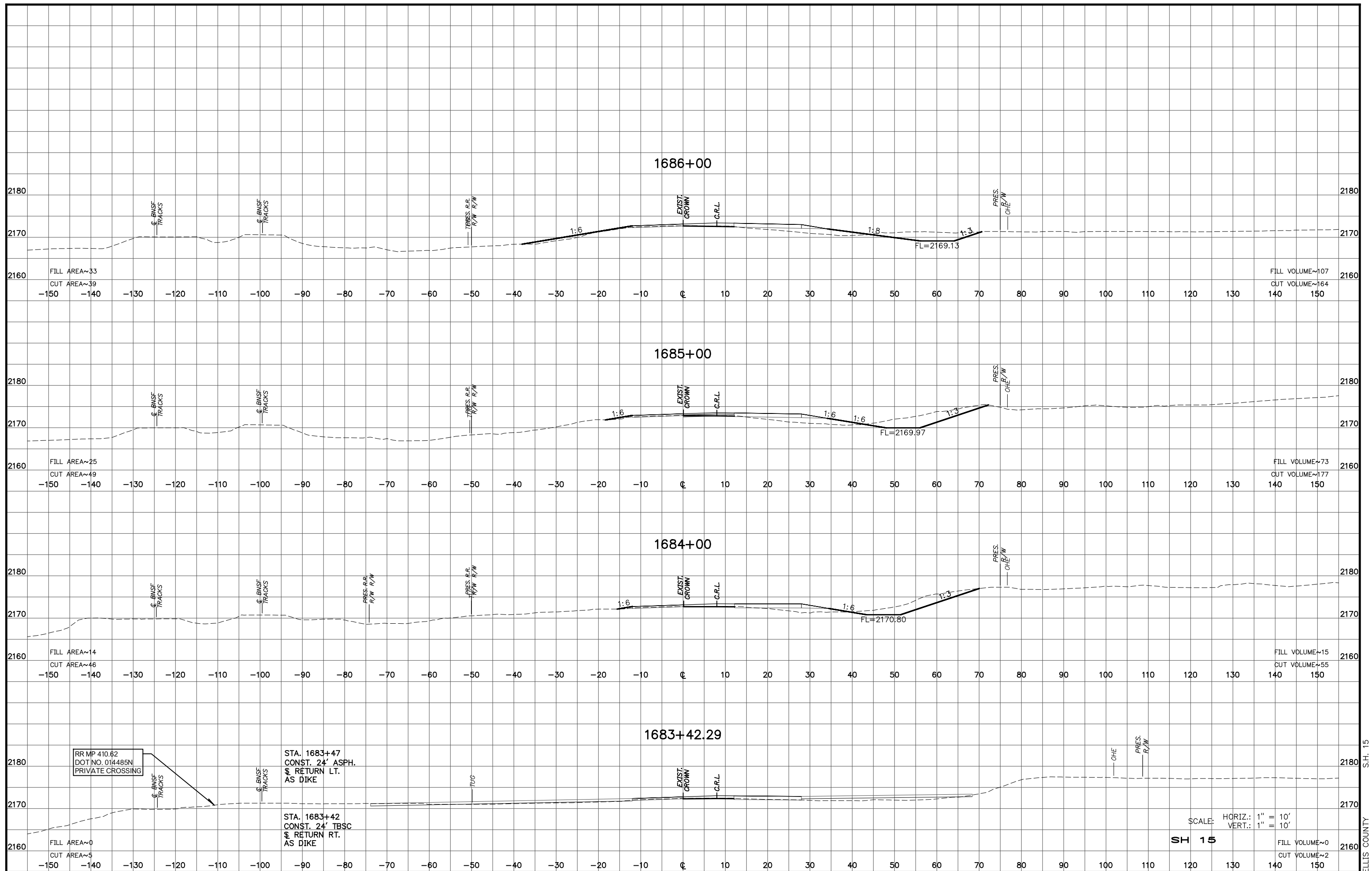
SH 15





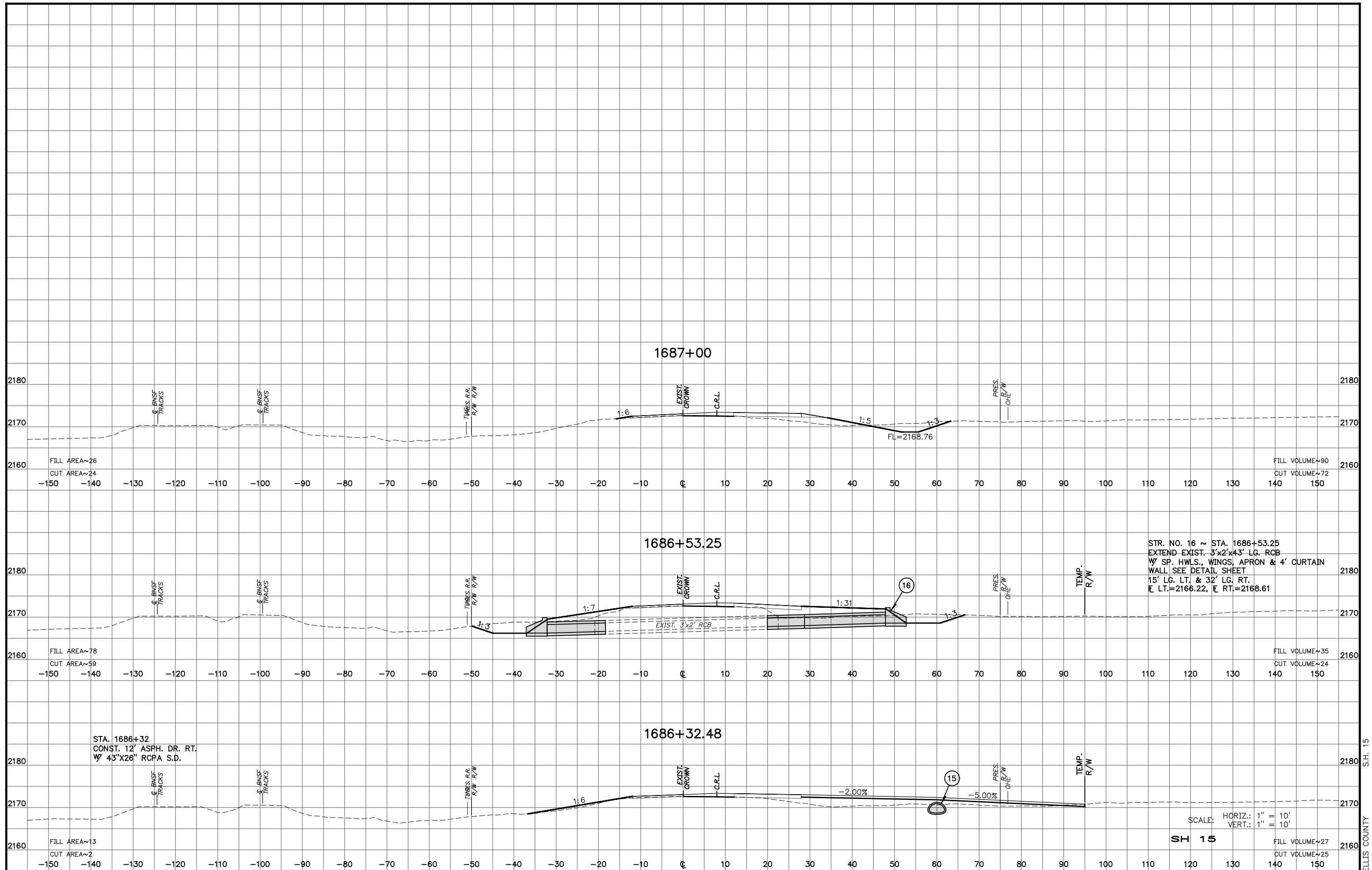


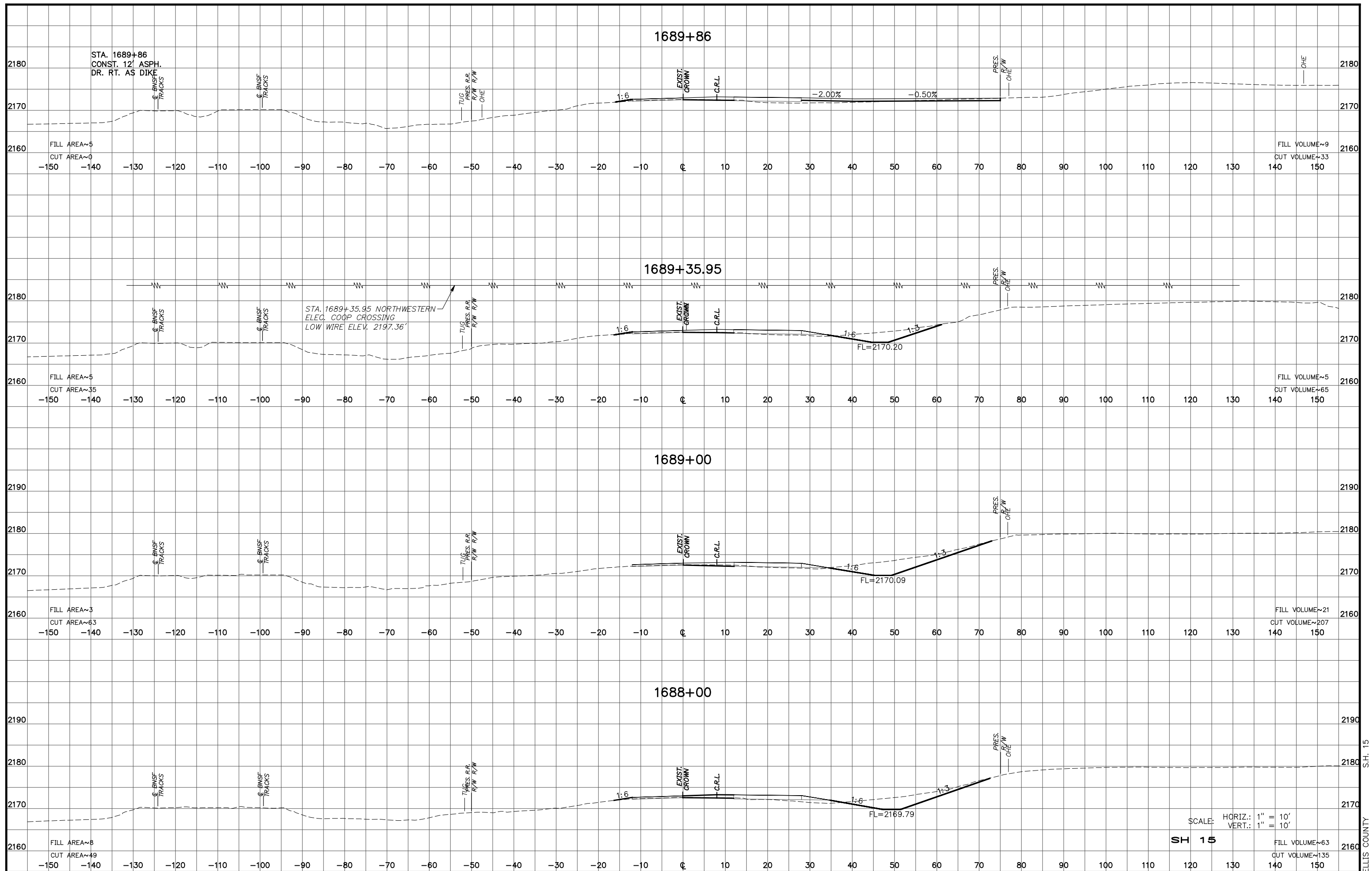




SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15



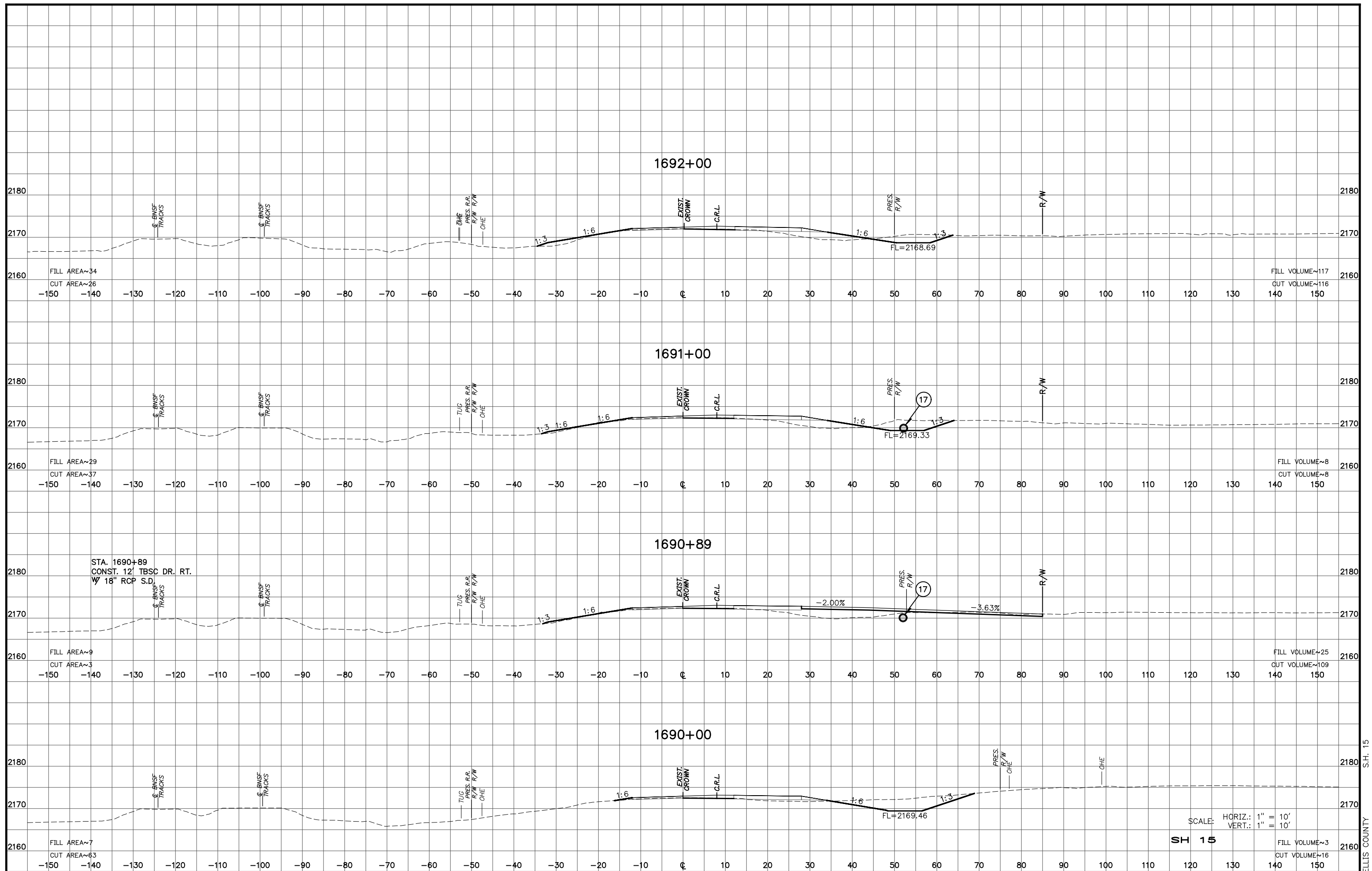


STA. 1689+86
CONST. 12' ASPH.
DR. RT. AS DIKE

STA. 1689+35.95 NORTHWESTERN
ELEC. COOP CROSSING
LOW WIRE ELEV. 2197.36'

SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

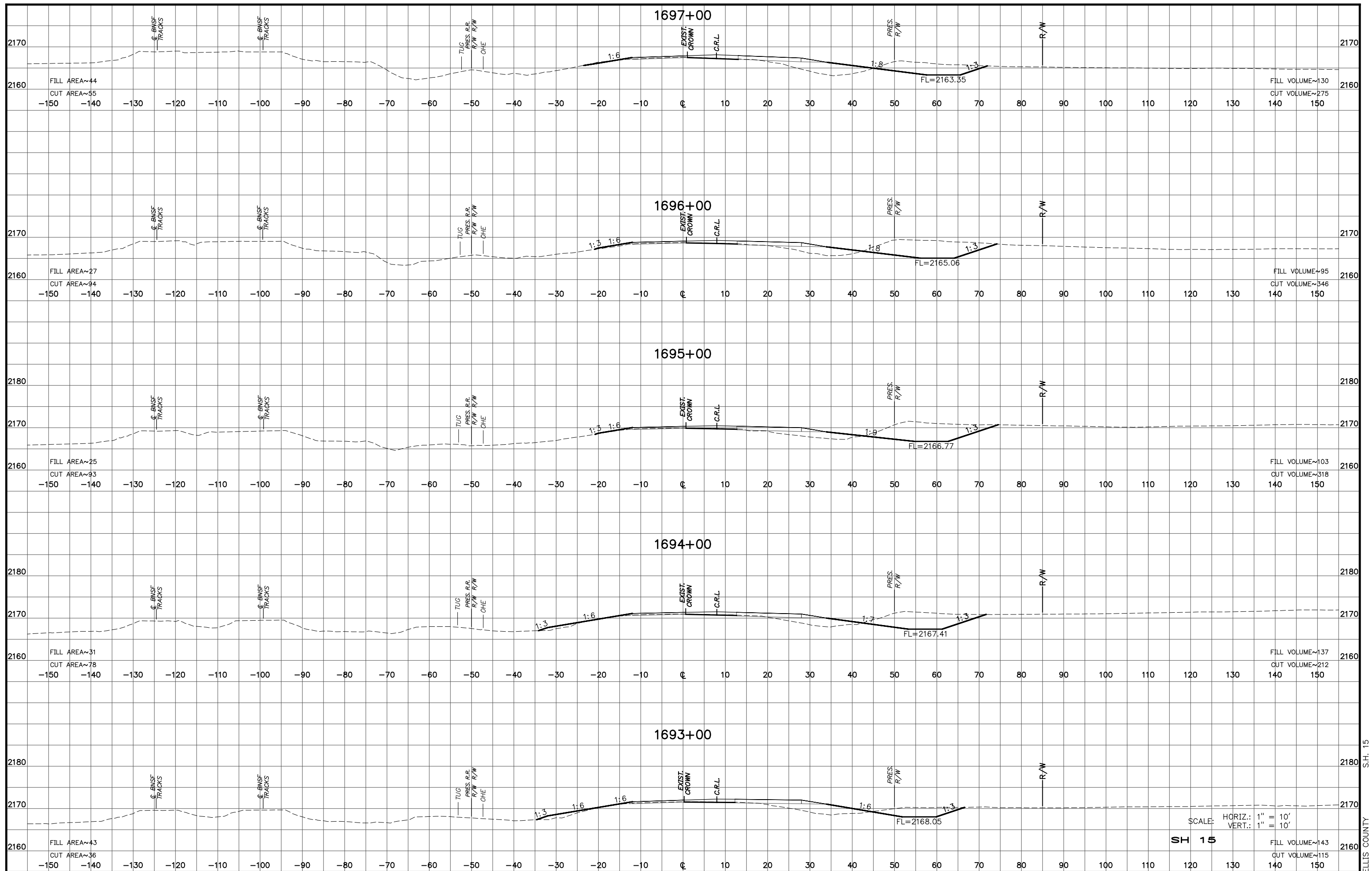
SH 15



SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

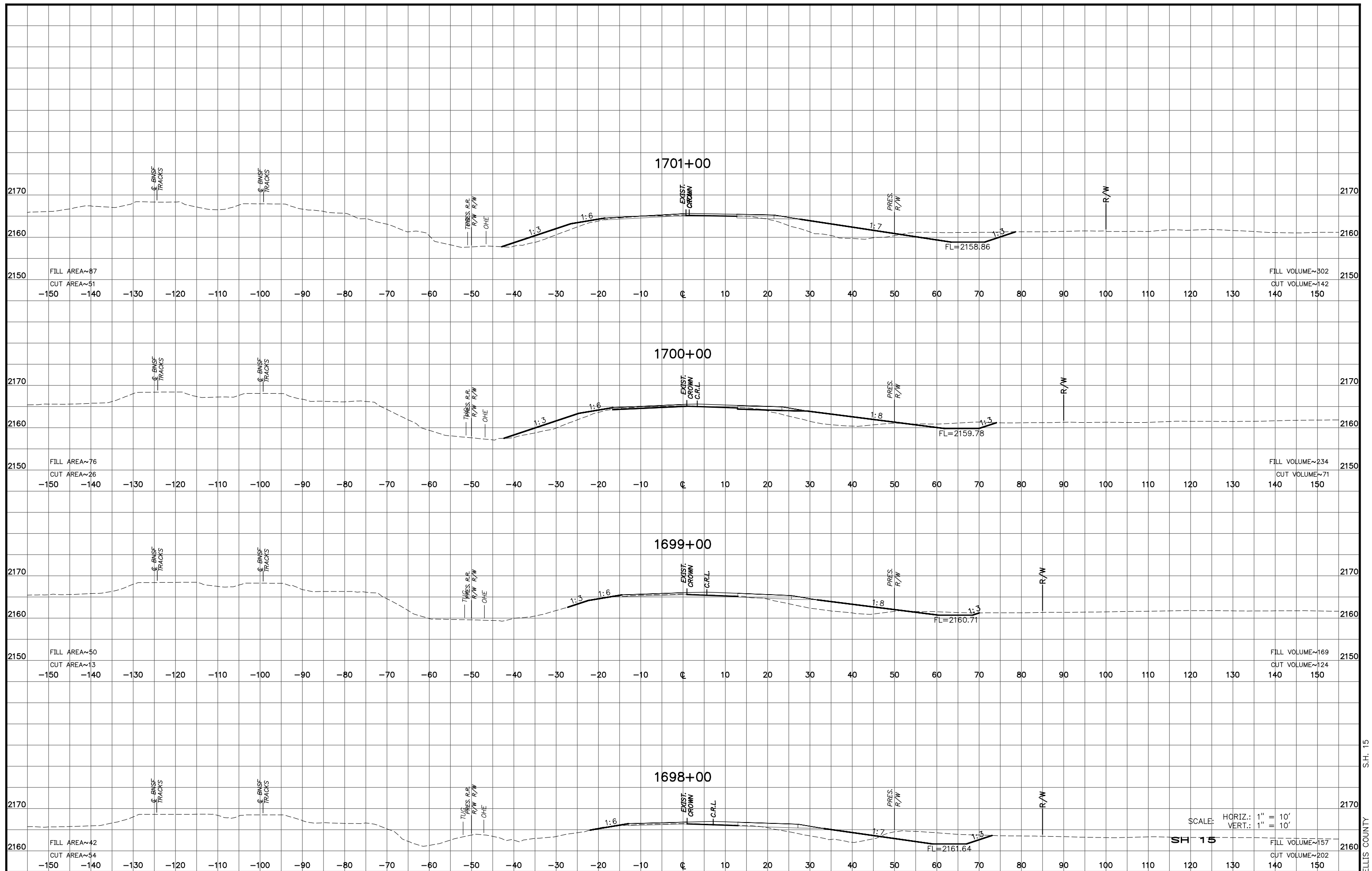
SH 15

FILL VOLUME~3
 CUT VOLUME~16



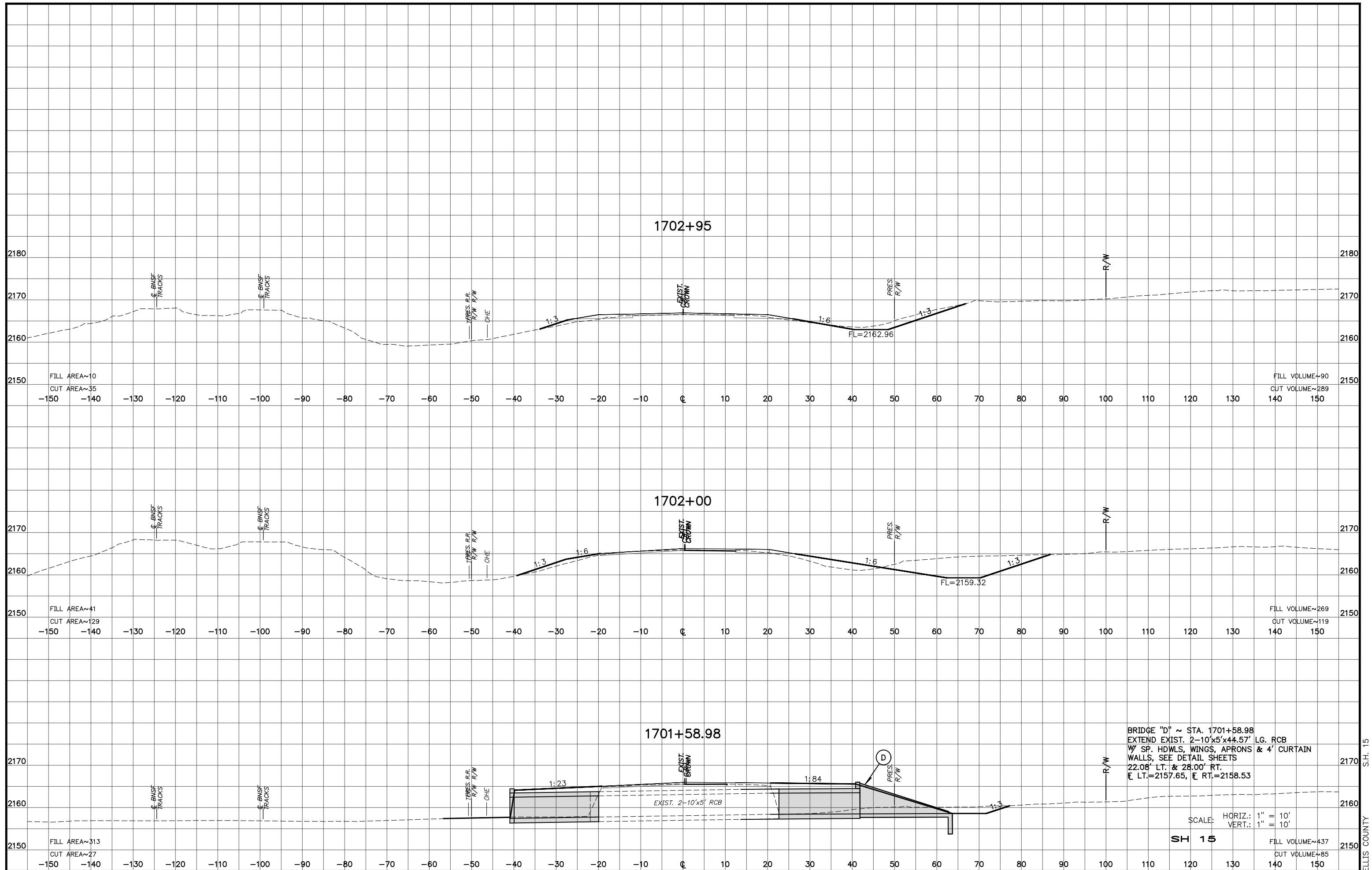
SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

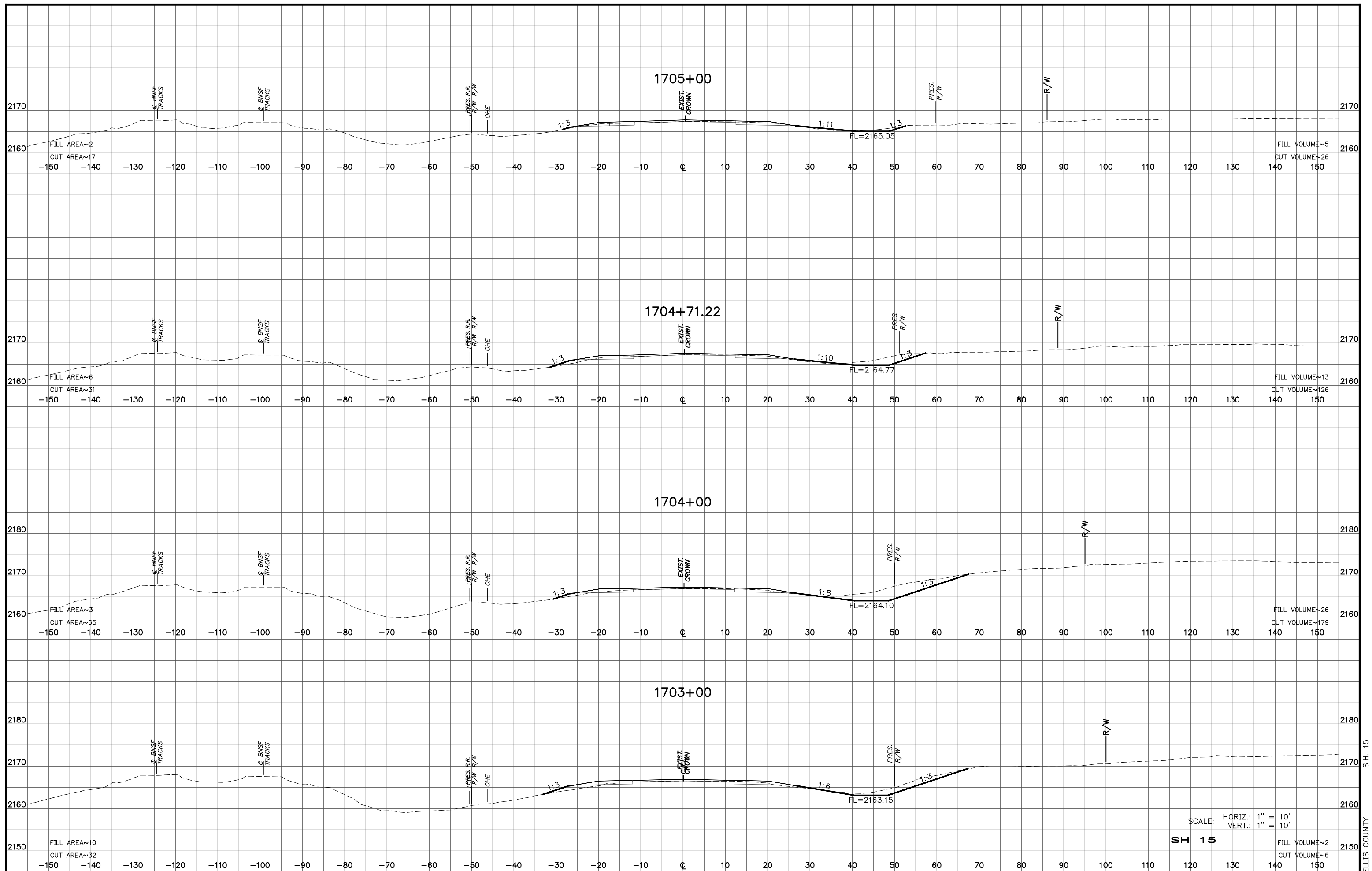
SH 15



SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

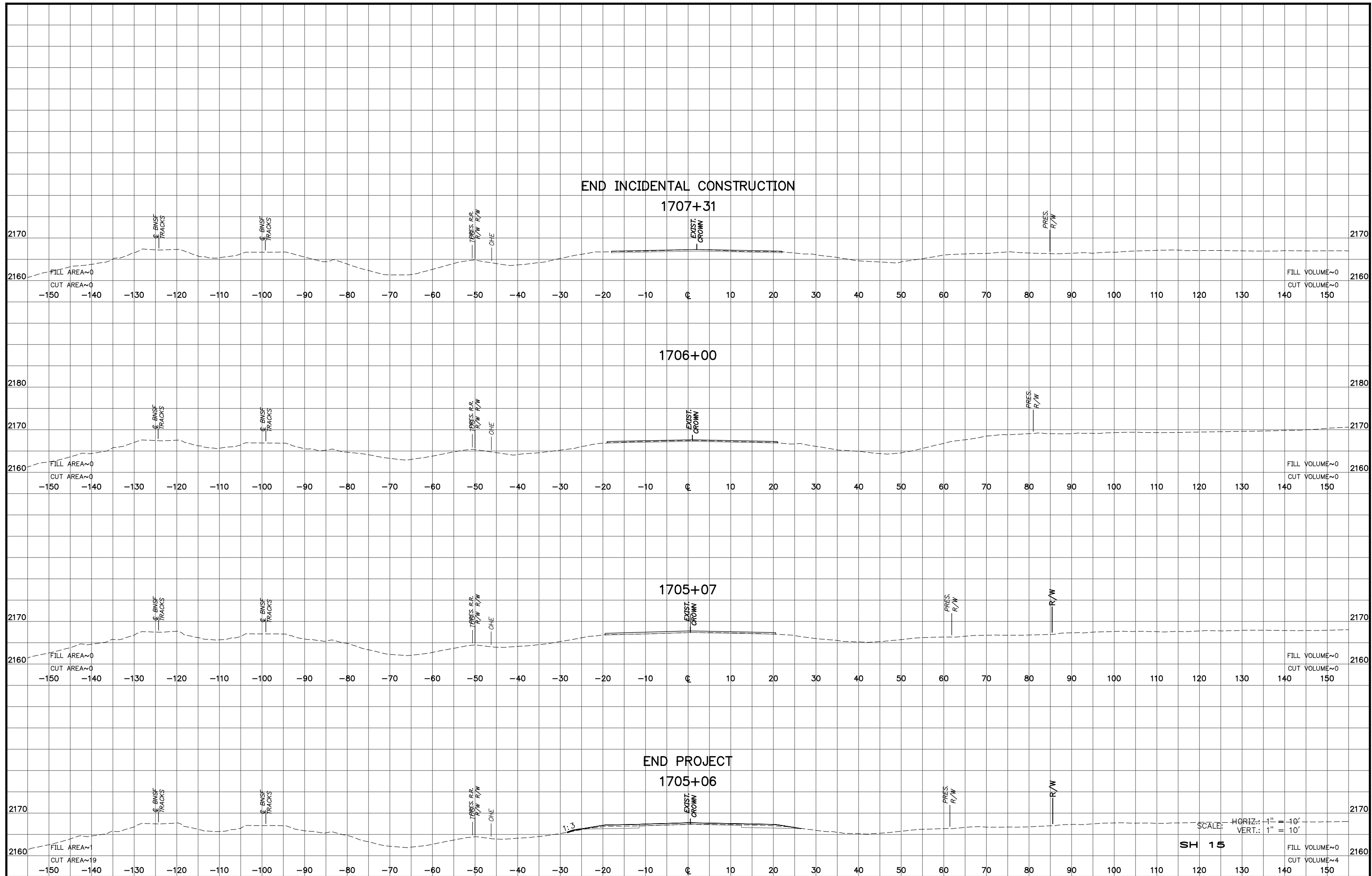
SH 15





SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

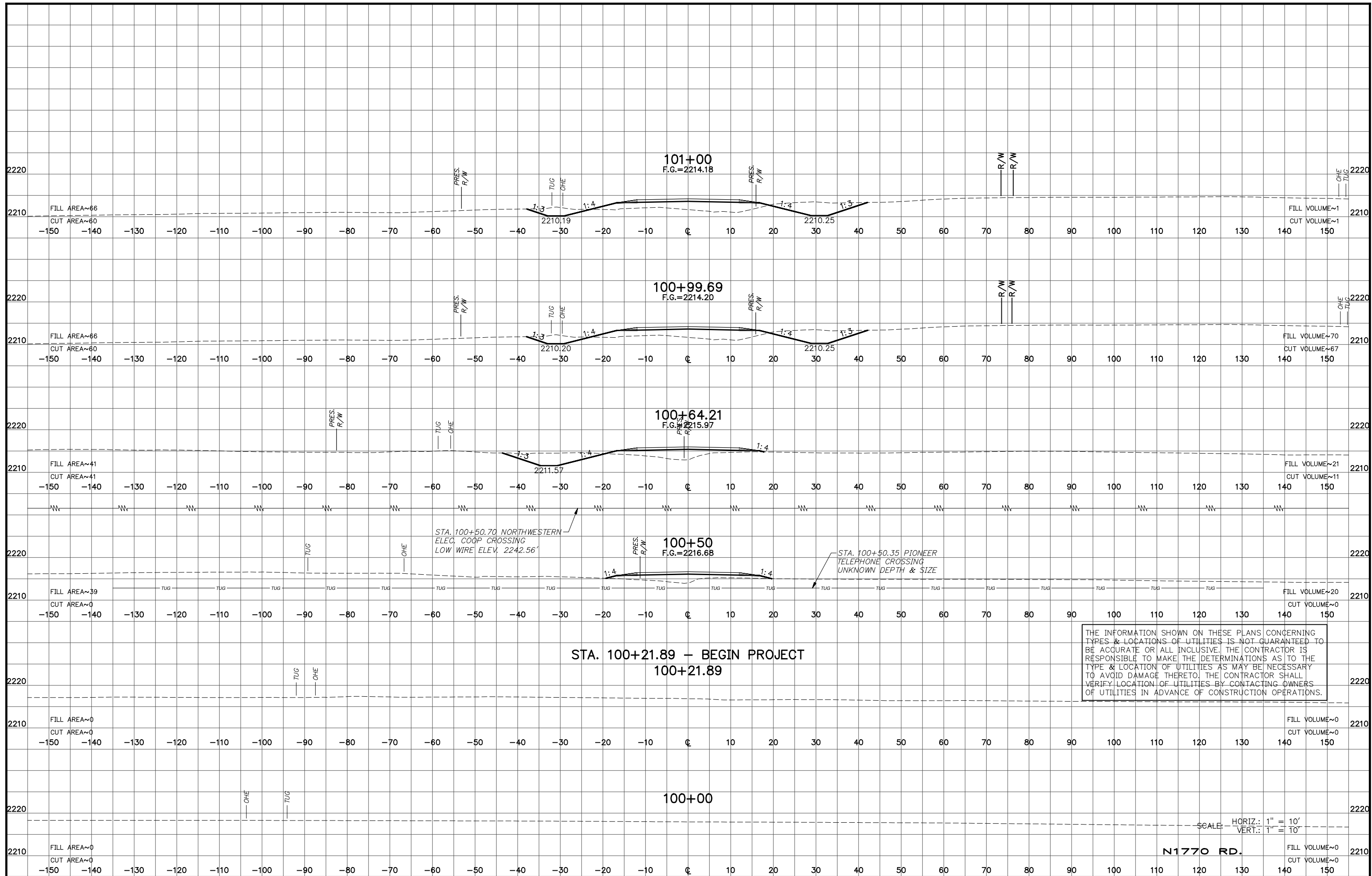
SH 15



SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

SH 15

FILL VOLUME~0
 CUT VOLUME~4

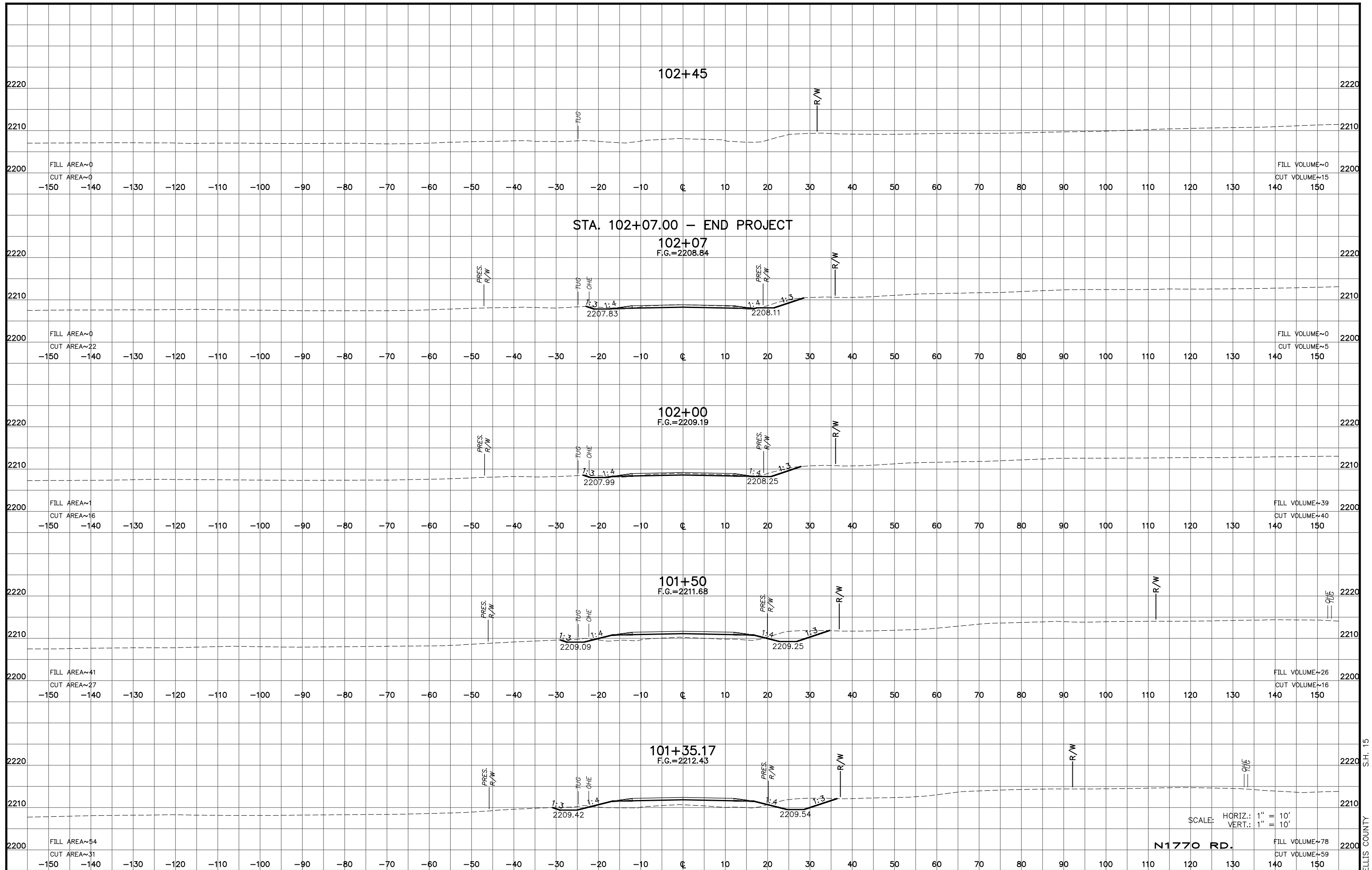


STA. 100+21.89 – BEGIN PROJECT
100+21.89

THE INFORMATION SHOWN ON THESE PLANS CONCERNING TYPES & LOCATIONS OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE TO MAKE THE DETERMINATIONS AS TO THE TYPE & LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES BY CONTACTING OWNERS OF UTILITIES IN ADVANCE OF CONSTRUCTION OPERATIONS.

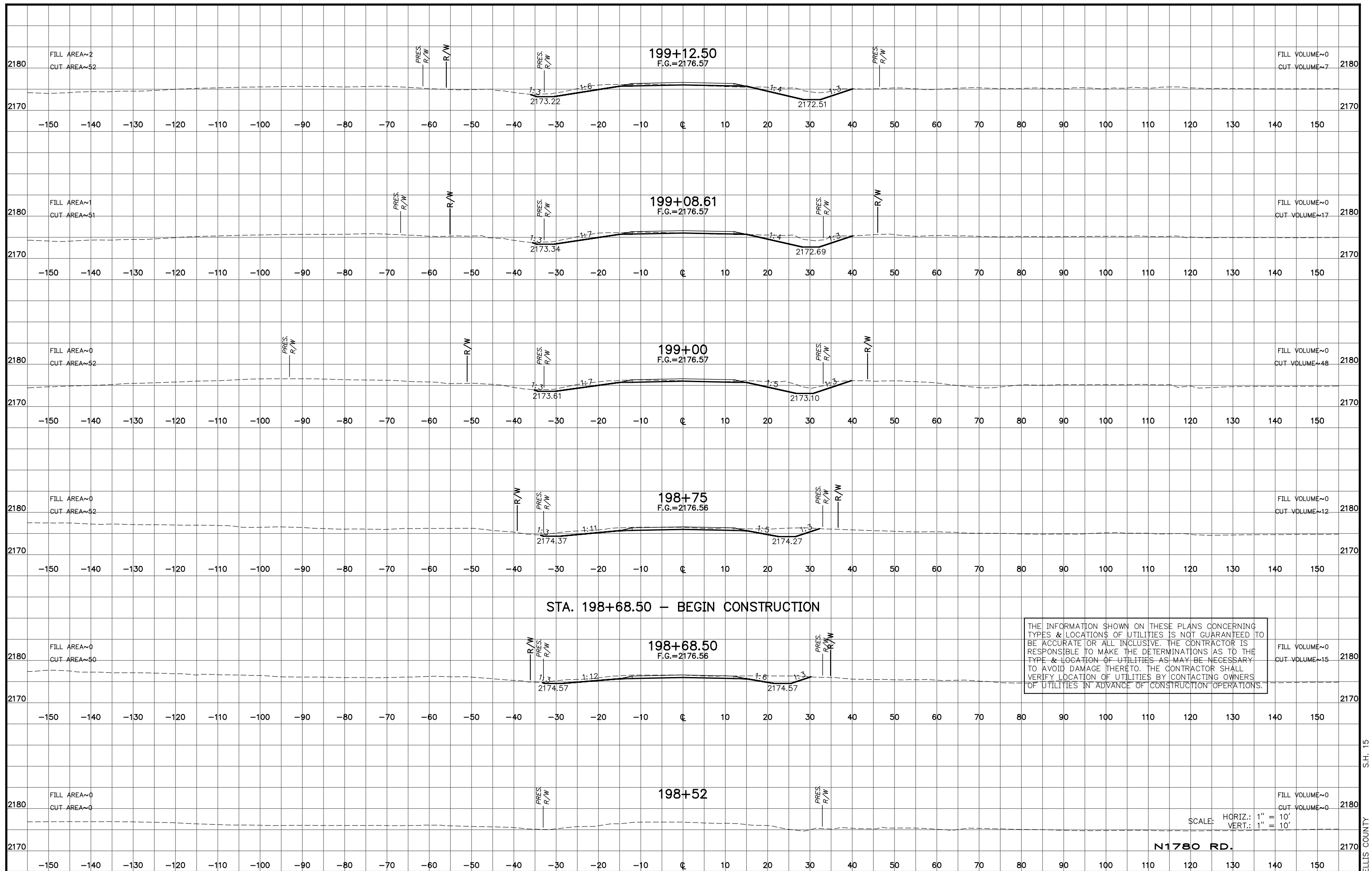
SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

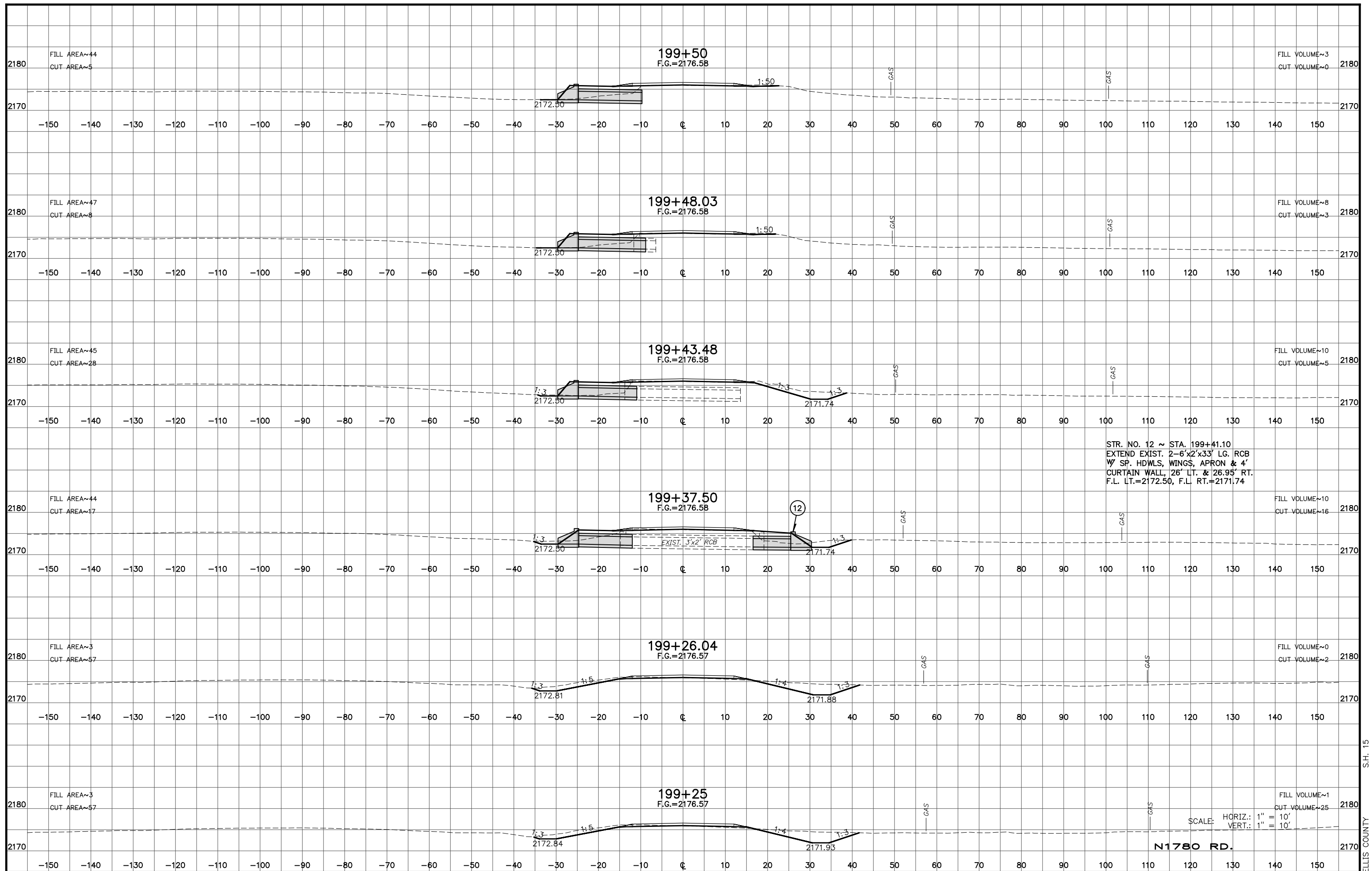
N1770 RD.



SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

N1770 RD.

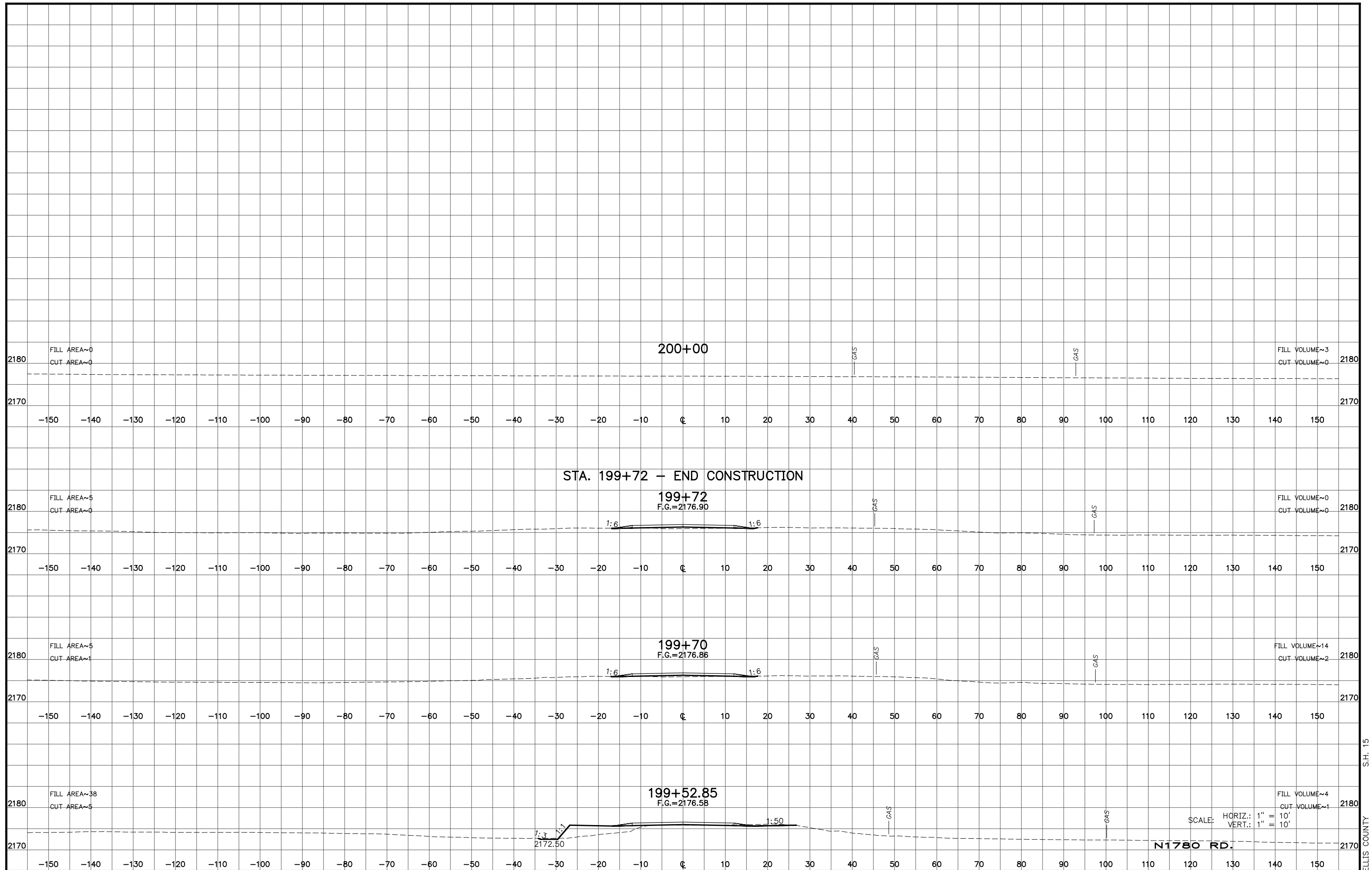




STR. NO. 12 ~ STA. 199+41.10
 EXTEND EXIST. 2-6'x2'x33' LG. RCB
 W/ SP. HDWLS, WINGS, APRON & 4'
 CURTAIN WALL, 28' LT. & 26.95' RT.
 F.L. LT.=2172.50, F.L. RT.=2171.74

SCALE: HORIZ.: 1" = 10'
 VERT.: 1" = 10'

N1780 RD.



STA. 199+72 - END CONSTRUCTION

200+00

199+72
F.G.=2176.90

199+70
F.G.=2176.86

199+52.85
F.G.=2176.58

N1780 RD.

SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

FILL AREA~0
CUT AREA~0

FILL VOLUME~3
CUT VOLUME~0

FILL AREA~5
CUT AREA~0

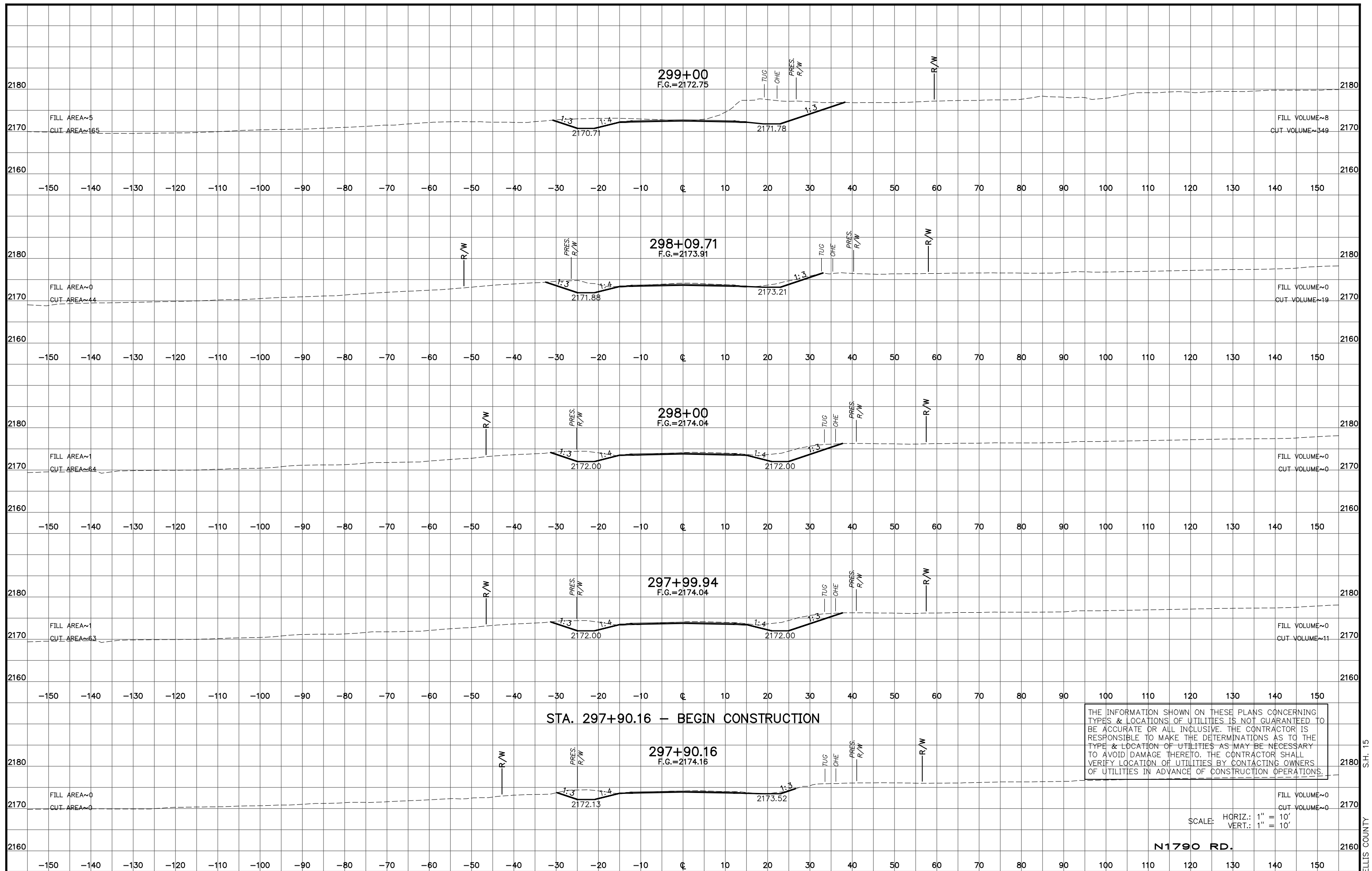
FILL VOLUME~0
CUT VOLUME~0

FILL AREA~5
CUT AREA~1

FILL VOLUME~14
CUT VOLUME~2

FILL AREA~38
CUT AREA~5

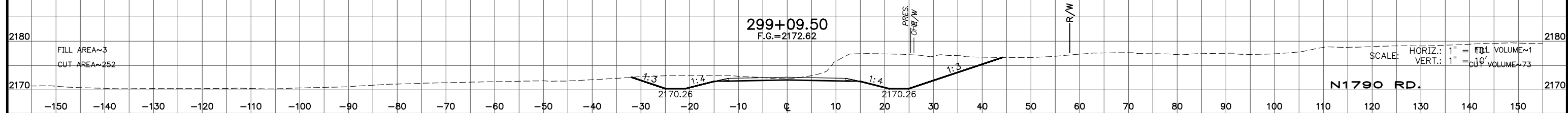
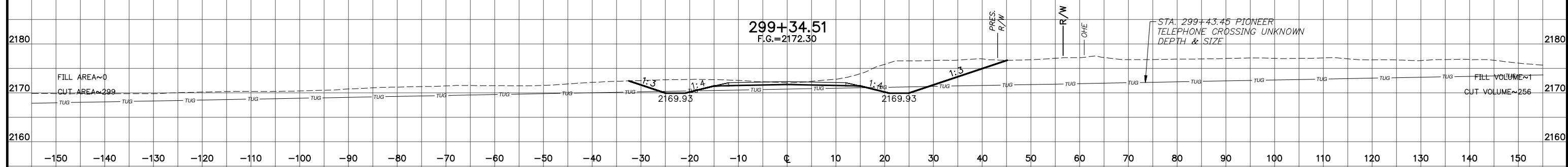
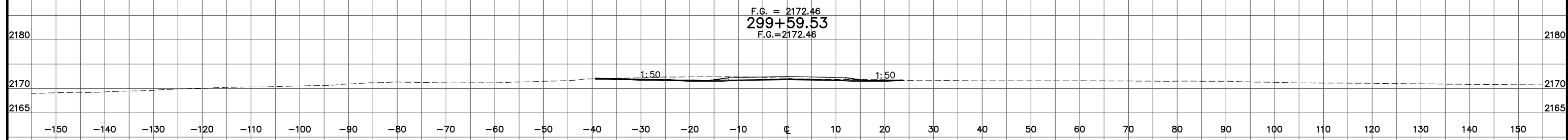
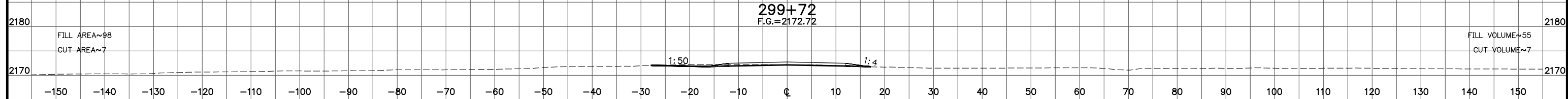
FILL VOLUME~4
CUT VOLUME~1



THE INFORMATION SHOWN ON THESE PLANS CONCERNING TYPES & LOCATIONS OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE TO MAKE THE DETERMINATIONS AS TO THE TYPE & LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES BY CONTACTING OWNERS OF UTILITIES IN ADVANCE OF CONSTRUCTION OPERATIONS.

SCALE: HORIZ.: 1" = 10'
VERT.: 1" = 10'

STA. 299+72 - BEGIN PAVEMENT EXCEPTION



N1790 RD.

SCALE: HORIZ.: 1" = 10' VERT.: 1" = 10'

