

PREPARED BY:
Dewberry Engineers Inc.
100 STERLING PARKWAY, SUITE 201
MECHANICSBURG, PENNSYLVANIA 17050

PROFESSIONAL ENGINEER

DATE _____

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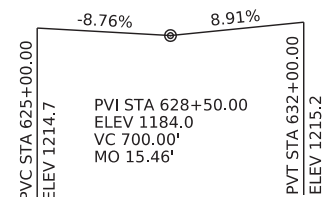
SCOPE OF WORK

1. REMOVE LOOSE AND DETERIORATED CONCRETE IN EXISTING ARCH CULVERT.
2. RETROFIT EXISTING WEEPHOLES AND CORE NEW WEEPHOLES.
3. CONSTRUCT ARCH FOOTING EXTENSIONS.
4. PLACE R-6 ROCK IN FRONT OF FOOTING EXTENSIONS.
5. CONSTRUCT FRAME SYSTEM TO SLIDE STEEL ARCH LINER INTO PLACE.
6. CONSTRUCT SECTIONS OF CORRUGATED GALVANIZED STRUCTURAL STEEL PLATE ARCH CULVERT OUTSIDE EXISTING ARCH AND PLACE REINFORCEMENT ABOVE ARCH. SLIDE NEW ARCH AND REINFORCEMENT INTO THE EXISTING ARCH.
7. PLACE CONCRETE IN REINFORCED CONCRETE SECTION OF RETROFITTED ARCH AND IN KNEE WALLS.
8. PLACE CEMENT GROUT INTO UNREINFORCED SECTION OF RETROFITTED ARCH.
9. CONSTRUCT NEW ANCHORED SPANDREL WALLS IN FRONT OF EXISTING SPANDREL WALLS.

HORIZONTAL CURVE DATA

PI STA 625+04.95
 $\Delta = 29^{\circ}13'00''$ LT
D = 03°00'00" (CHORD)
T = 497.84'
L = 974.00'
R = 1910.08'
E = 63.81'
PC STA 620+07.11
PT STA 629+81.00

VERTICAL CURVE DATA



LEGEND



TRAFFIC FLOW DIRECTION

— 1040 —

EXISTING CONTOUR

— 1040 —

PROPOSED CONTOUR



AS-DRILLED BORING LOCATION

WETLAND BOUNDARY

HYDRAULIC DATA

DRAINAGE AREA = 18.8 SQ MILES

FREQUENCY	MAGNITUDE	ELEVATION	VELOCITY
25-YEAR	2,150 CFS	1146.41	14.91 FPS
100-YEAR	3,001 CFS	1146.96	16.95 FPS
25-YEAR	TBD	TBD	TBD
100-YEAR	TBD	TBD	TBD

FLOOD OF RECORD: UNKNOWN

AS-DRILLED
BORING LOCATIONS

BORING NUMBER	LOCATION	
	STATION	OFFSET
RB-1	628+62.8	10.3' LT
RB-2	628+28.9	11.7' RT
RB-3	629+49.3	11.9' RT
RB-4	629+74.5	10.1' LT

Mark	Description	By	Chk'd	Recm'd.	Date
REVISIONS					

SR 208 PREVIOUSLY KNOWN AS LR 218

BMS STR ID: 60-0208-0260-0529

MPMS/ECMS PROJ: 97401

BRKEY: 33730

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

VENANGO COUNTY
SR 208 SECTION B03
SEGMENT 0260 OFFSET 0529

SR 208 STA 629+00.00

OVER LITTLE SCRUBGRASS CREEK
SINGLE BARREL STEEL PLATE ARCH
TYPE, SIZE & LOCATION

RECOMMENDED _____

DISTRICT BRIDGE ENGINEER

SHEET 1 OF 4

+SUPPLEMENTAL DRWGS

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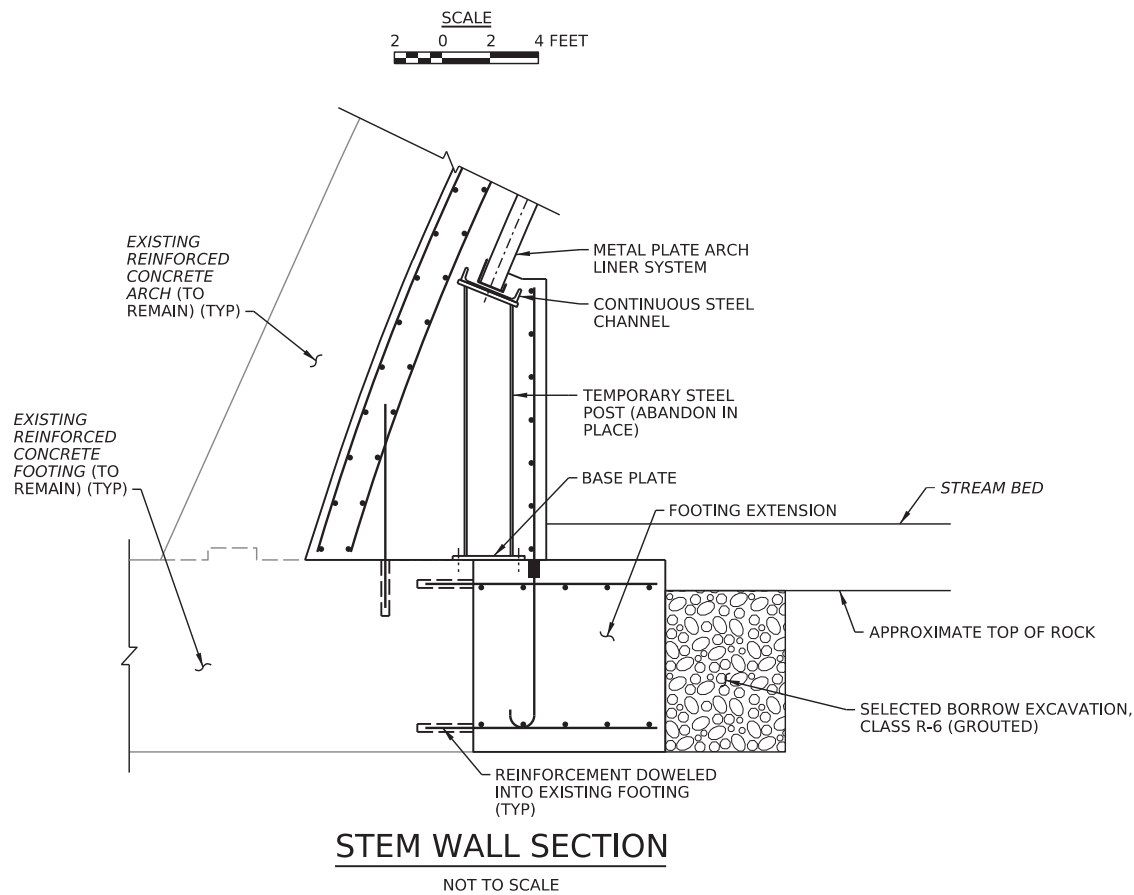
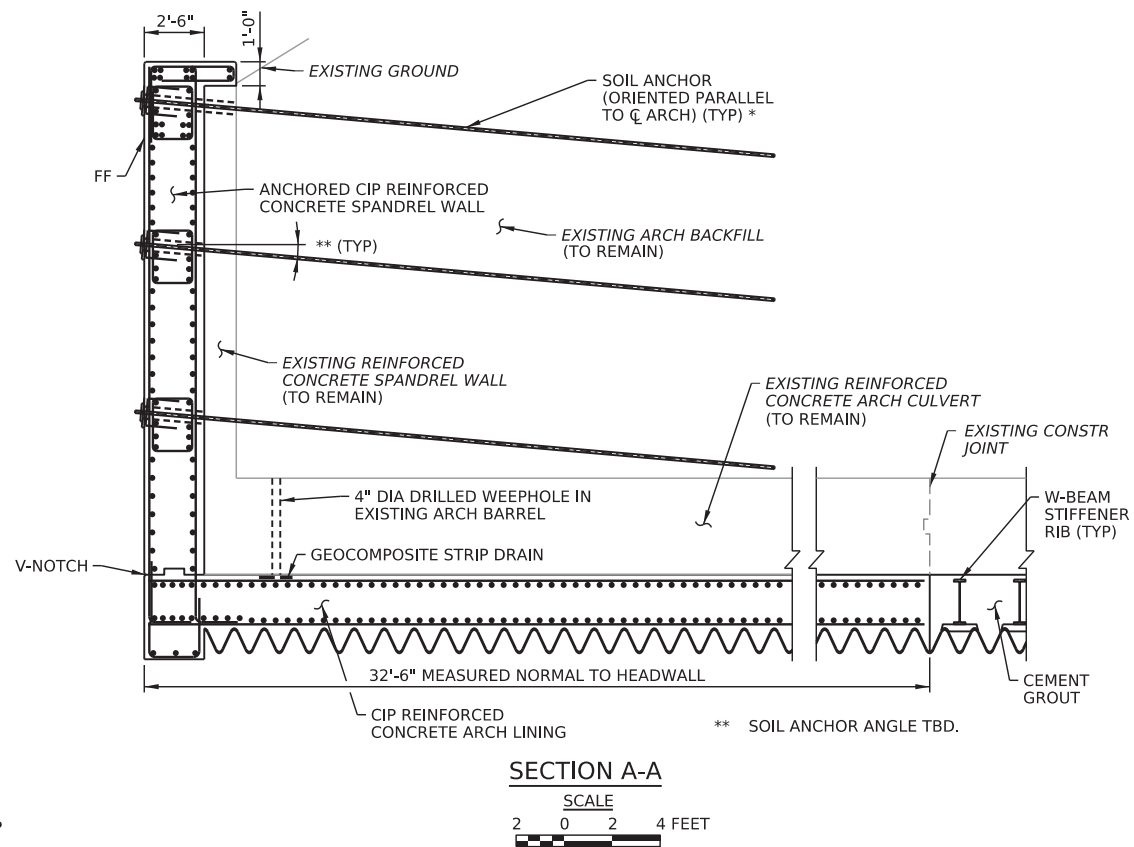
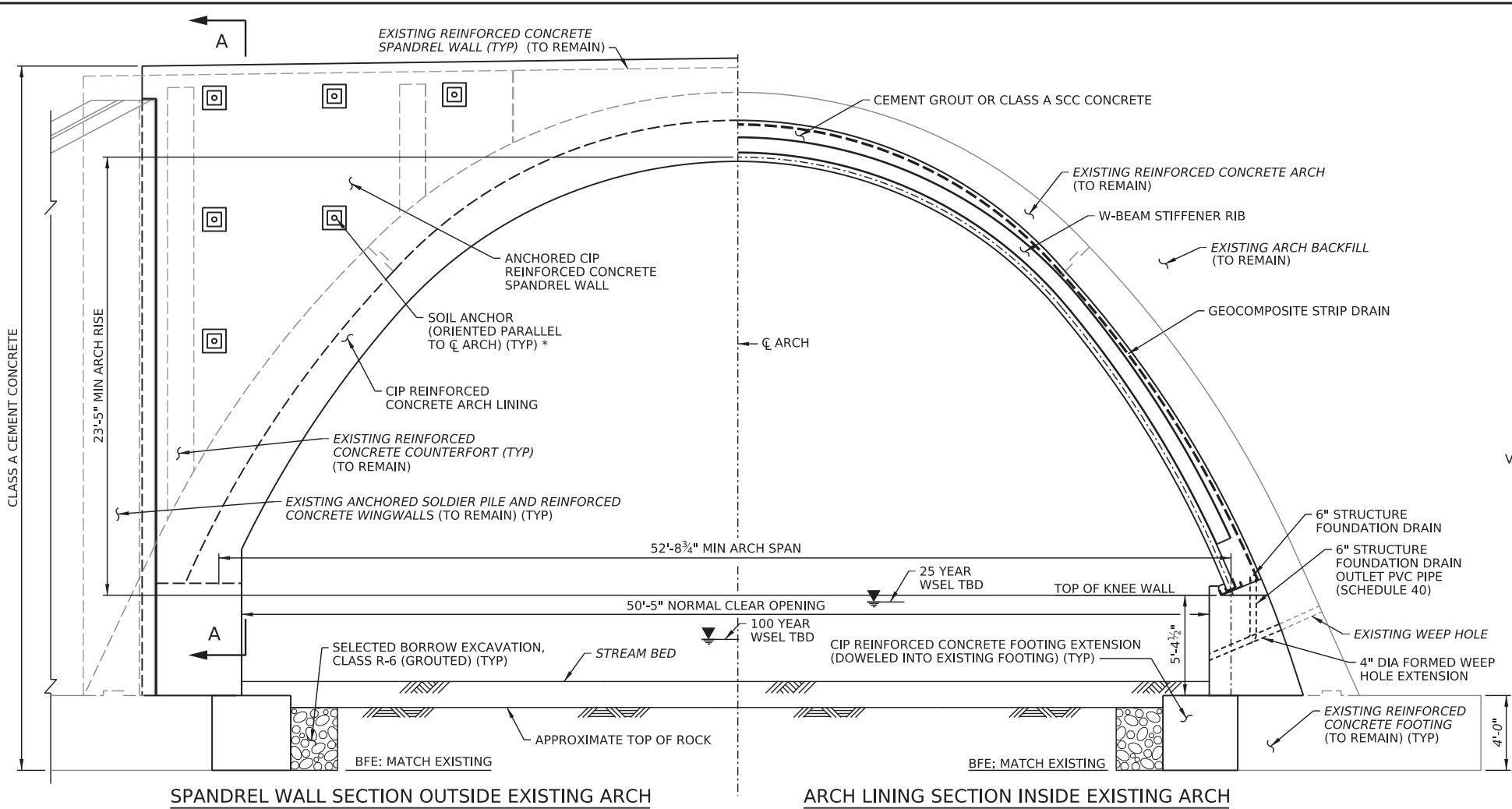
SUPPLEMENTAL DRAWINGS

CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	06/01/10
BACKFILL AT STRUCTURES	RC-12M	11/01/22
WALL CONSTR. & EXP. JOINT DETAILS	BC-735M	09/30/16
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	01/31/19
BRIDGE DRAINAGE	BC-751M	01/31/19
REINFORCED CONCRETE REPAIR	BC-783M	01/31/19
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	01/31/19
DESCRIPTION	DWG NO.	REC DATE

SUPPLEMENTAL DRAWINGS

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SINGLE BARREL STEEL PLATE ARCH
TYPE, SIZE & LOCATION**

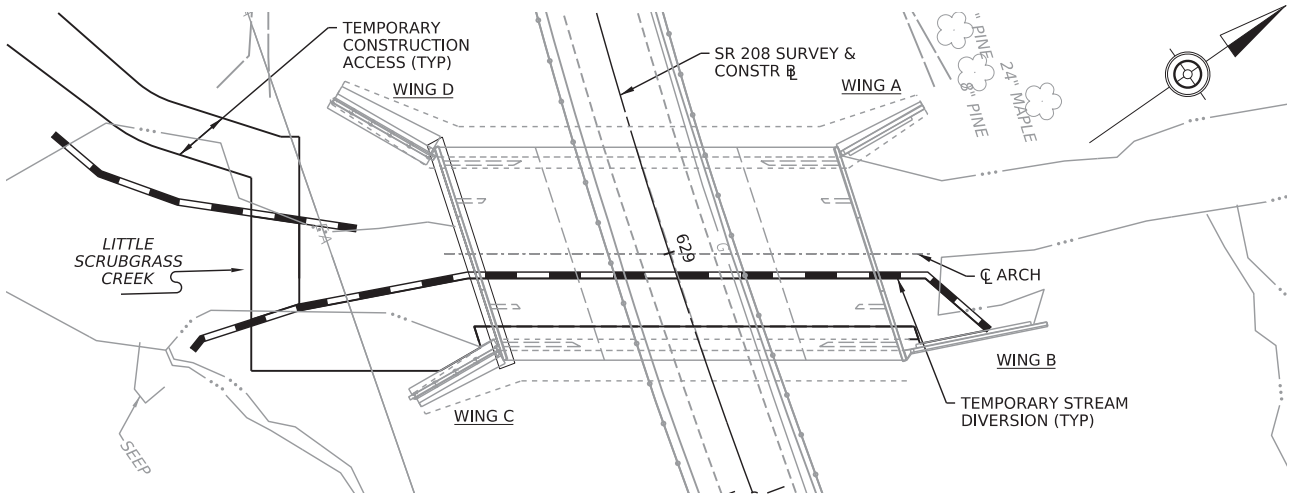
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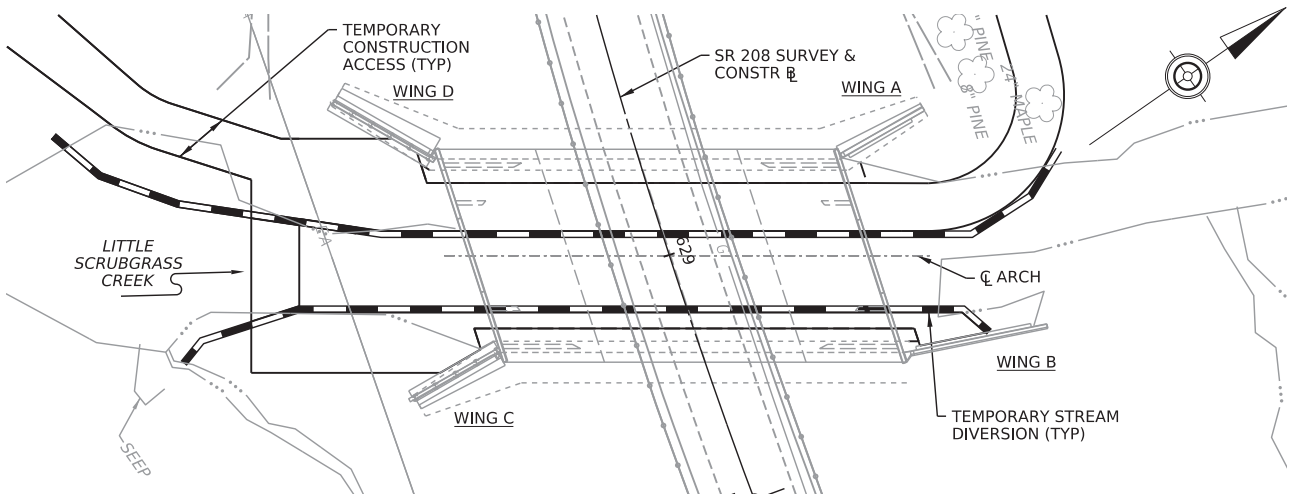
SHEET 2 OF 4

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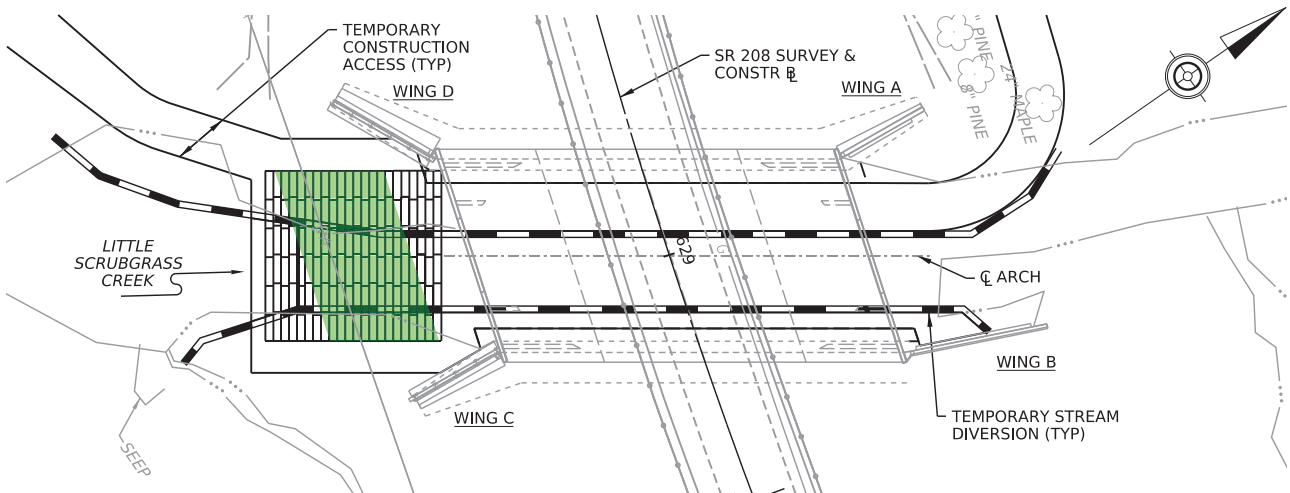
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STAGE 1



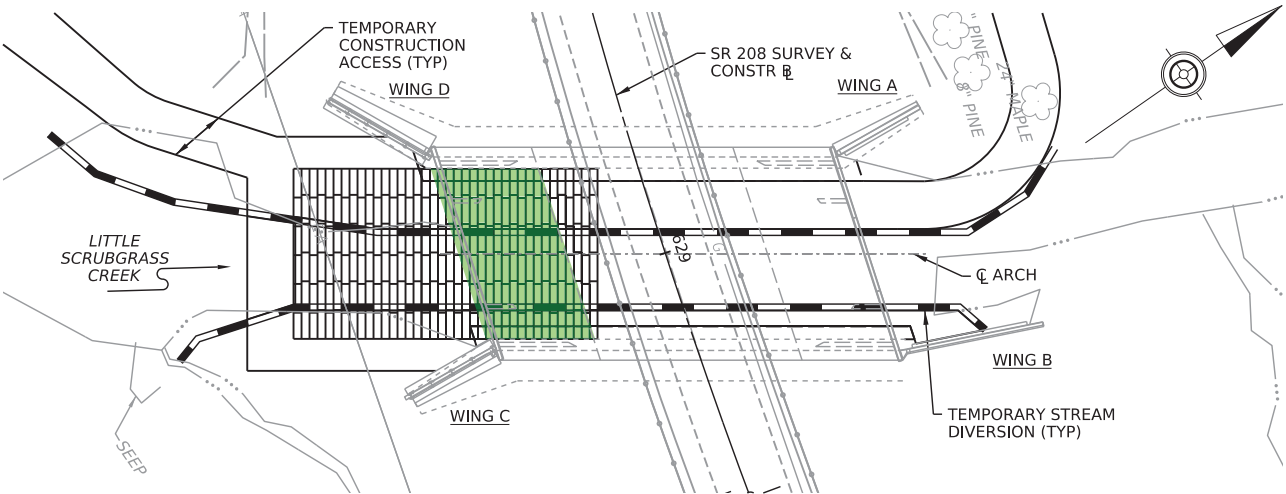
STAGE 2



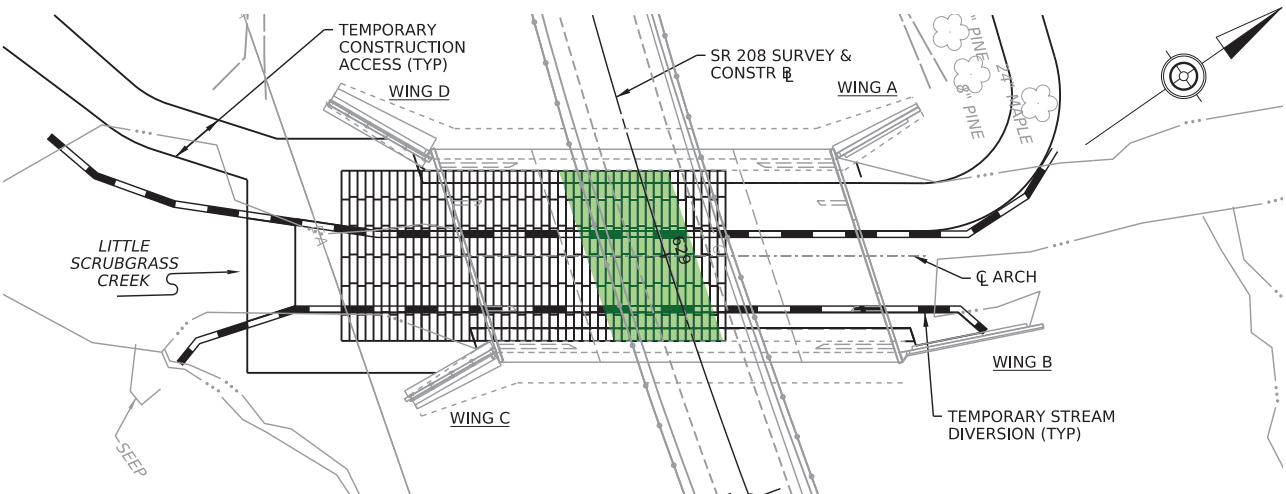
STAGE 3

LEGEND

REINFORCED SECTION OF ARCH



STAGE 4



STAGE 5

CONCEPTUAL CONSTRUCTION SEQUENCE

STAGE 1

1. CONSTRUCT TEMPORARY ACCESS ROAD AND ELEVATED PLATFORM OVER LITTLE SCRUBGRASS CREEK.
2. INSTALL STAGE 1 TEMPORARY STREAM DIVERSION.
3. CONSTRUCT FOOTING EXTENSION AND TEMPORARY STEEL POSTS AND CONTINUOUS STEEL CHANNEL ON EAST SIDE OF ARCH.

STAGE 2

1. RELOCATE TEMPORARY STREAM DIVERSION IN FRONT OF FOOTING ON EAST SIDE OF ARCH.
2. INSTALL STAGE 2 TEMPORARY STREAM DIVERSION.
3. CONSTRUCT FOOTING EXTENSION AND TEMPORARY STEEL POSTS AND CONTINUOUS STEEL CHANNEL ON WEST SIDE OF ARCH.

STAGE 3

1. CONSTRUCT PORTION OF METAL PLATE ARCH LINER AND REINFORCED END SECTION OF ARCH TO THE LIMITS SHOWN.
2. SLIDE PORTION OF ARCH INTO POSITION FOR STAGE 4.

STAGE 4

1. CONSTRUCT PORTION OF METAL PLATE ARCH LINER.
2. SLIDE PORTION OF ARCH INTO POSITION FOR STAGE 5.

STAGE 5

1. CONSTRUCT PORTION OF METAL PLATE ARCH LINER.
2. SLIDE PORTION OF ARCH INTO POSITION FOR STAGE 6.

NOTES

1. CONSTRUCTION SEQUENCE IS CONCEPTUAL AND CONTRACTOR IS REQUIRED TO SUBMIT CONSTRUCTION SEQUENCE CONSISTENT WITH THEIR INTENDED MEANS AND METHODS.
2. FOR STAGES 6 THROUGH 8, SEE SHEET 4.

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SINGLE BARREL STEEL PLATE ARCH
ARCH CONSTRUCTION STAGING - 1

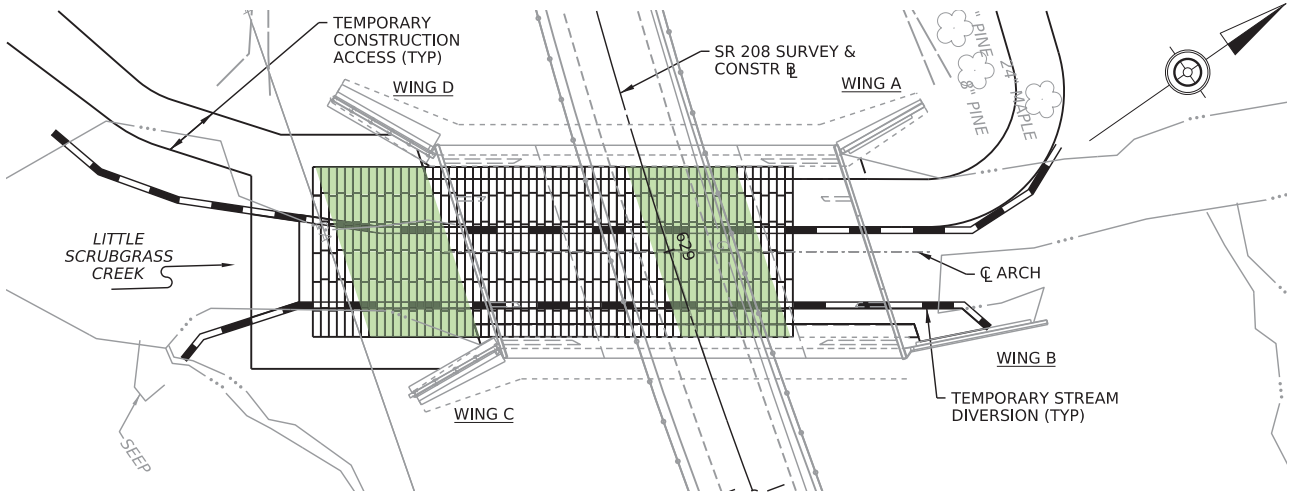
RECOMMENDED

SHEET 3 OF 4

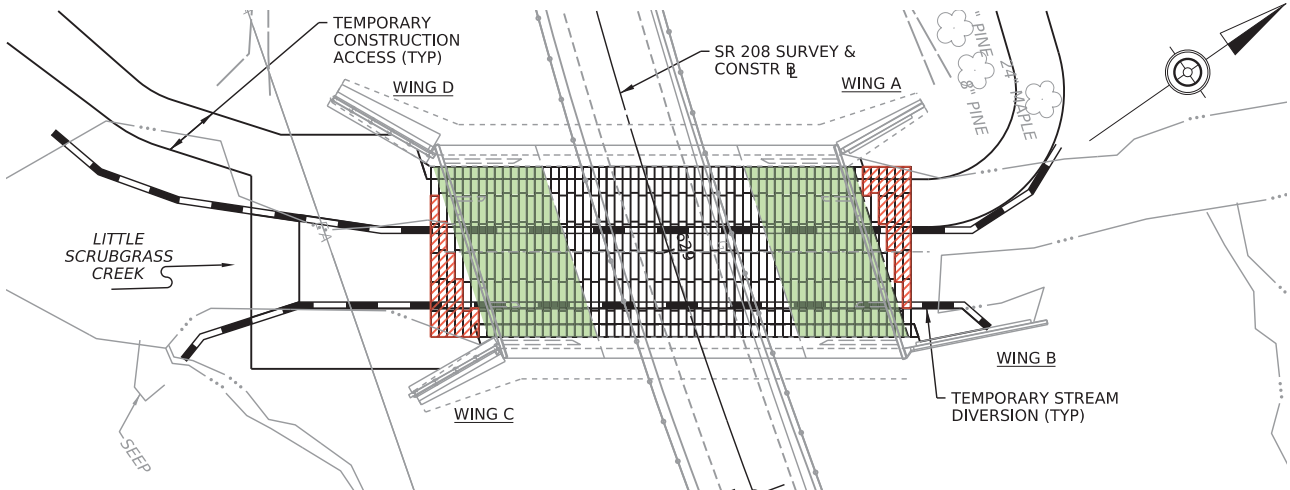
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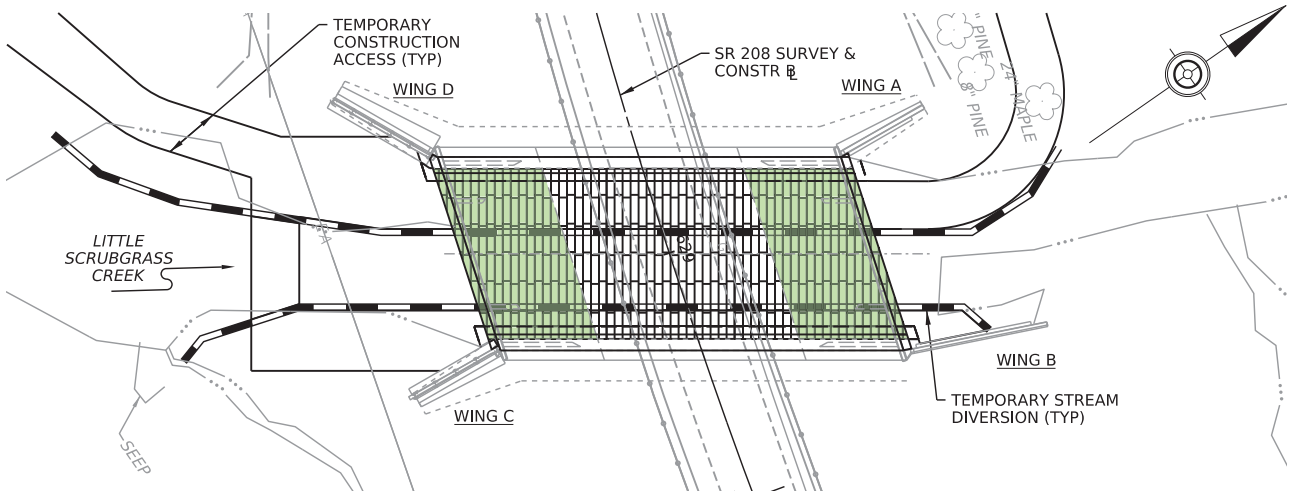
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STAGE 6



STAGE 7



STAGE 8

CONCEPTUAL CONSTRUCTION SEQUENCE

STAGE 6

1. CONSTRUCT PORTION OF METAL PLATE ARCH LINER AND REINFORCE END SECTION OF ARCH TO THE LIMITS SHOWN.
2. SLIDE ARCH INTO FINAL POSITION.

STAGE 7

1. INSTALL REINFORCEMENT IN STEMS AND PLACE CONCRETE.
2. GROUT ANNULAR SPACE IN UNREINFORCED SECTION OF ARCH.
3. INSTALL ARCH CENTERING TO SUPPORT END PORTION OF METAL ARCH LINER WHICH WILL BE CUTOFF IN THE FINAL CONDITION.
4. REMOVE PORTION OF STEEL ARCH LINER TO BE USED TO FACILITATE SLIDING OF THE ARCH.
5. TRIM END STEEL ARCH LINER SECTIONS MATCH THE SKEW OF THE ENDS OF THE ARCH.

STAGE 8

1. PLACE SCC CONCRETE IN ANNULAR SPACE IN REINFORCED SECTION OF ARCH.
2. CONSTRUCT ANCHORED SPANDREL WALLS.
3. REMOVE TEMPORARY DIVERSIONS AND CONSTRUCTION ACCESS FROM SCRUBGRASS CREEK.

LEGEND

- REINFORCED SECTION OF ARCH
- TEMPORARY SECTION OF ARCH LINER TO BE REMOVED THIS STAGE

NOTES

1. CONSTRUCTION SEQUENCE IS CONCEPTUAL AND CONTRACTOR IS REQUIRED TO SUBMIT CONSTRUCTION SEQUENCE CONSISTENT WITH THEIR INTENDED MEANS AND METHODS.
2. FOR STAGES 1 THROUGH 5, SEE SHEET 3.

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OVER LITTLE SCRUBGRASS CREEK
SINGLE BARREL STEEL PLATE ARCH
ARCH CONSTRUCTION STAGING - 2

RECOMMENDED

SHEET 4 OF 4

S -

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DES: DWN CKD: CRH DWG: DWN CKD: CRH