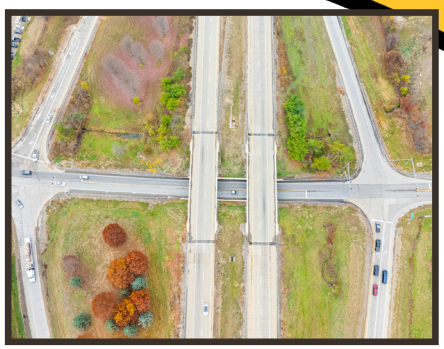
Submitted To:
Ohio Department of Transportation

Technical and Price Proposal

BEL-70-9.35 Interchange Improvement Design-Build

Belmont County, Ohio

PID 120547



Submitted By:

BEAVER EXCAVATING COMPANY

In Association With Lead Designer

TRC

Part A: Project Narrative

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PART A - PROJECT NARRATIVE

Beaver Excavating's approach to this project is to design a technically feasible bridge on IR-70 over SR-149 and the widening of SR-149. The Design-Build Team's (DBT) anticipated structure includes a single-span continuous composite steel bridge with Grade 50 beams and a reinforced concrete deck supported by semi-integral abutments. The foundation will consist of drilled shafts embedded into rock. The right bridge will have a total width of 54 feet, while the left bridge will be 46 feet wide, both measured toe-to-toe of the bridge barriers. The span length will be 80 feet, measured center-to-center of bearings.

During construction, Beaver's first focus will be on the construction of a new widened bridge on IR-70 while limiting the impacts to both IR-70 and SR-149. Our second focus will be to construct the widening on SR-149 along with the Ramps.

To optimize the project schedule and mitigate potential delays associated with right-of-way (ROW) acquisition and utility relocations, our DBT will implement a phased Buildable Unit (BU) approach for constructing I-70 and SR-149. This sequencing will ensure efficient progress while minimizing disruptions to traffic and stakeholders.

BU 1 – I-70 Construction

The I-70 bridge reconstruction will be conducted in a multi-phased approach to ensure continuous traffic flow while allowing for efficient construction. This portion of the project is independent of SR-149, enabling an expedited schedule for bridge work without immediate impacts on the intersecting roadway. By addressing this bottleneck early, the construction sequence minimizes potential risks such as ROW acquisition and most utility relocations. This strategy also optimizes the timeline, ensuring the I-70 bridge widening is completed ahead of any SR-149 impacts. Since the 8-inch diameter sanitary sewer line conflicts with the proposed structure, the DBT shall relocate it behind the new rear abutment.

Pre-Phase 1: Crossovers & Associated MOT

To facilitate traffic management during construction, temporary pavement and crossovers will be implemented to allow contraflow movement of eastbound (EB) traffic onto the westbound (WB) lanes. Crossover temporary pavement for Phase 3 MOT will also be constructed in this Pre-Phase. This work will ensure a seamless transition before Phase 1 begins by creating necessary lane shifts and maintaining traffic mobility. Portable Concrete Barrier (PCB) will be used to delineate traffic and enhance safety. The DBT shall drill 6-inch diameter holes on the existing bridge to maintain positive drainage and shall ensure these do not drain over pedestrian or vehicular traffic.

Commented [AB1]: Addressed ODOT PTI response comment on draining over pedestrian and vehicular traffic

Phase 1: Partial Removal of EB Bridge & Traffic Shift

To maintain traffic flow, WB traffic and one EB lane will be shifted onto the existing WB bridge. Temporary lane reductions will be implemented on the WB bridge to consist of one 11-foot-wide and one 10-foot-wide WB travel lanes with a 2-foot-wide shoulder, and one 12-foot-wide EB lane. The remaining half of the EB bridge will carry one 11-foot-wide EB lane, with PCB protection at the phase line. Once traffic is shifted, demolition of 21-feet of the existing EB bridge width will commence. Sanitary sewer relocation could be completed prior to rear abutment construction. Bridge construction will then begin on a 22-foot-wide section of the new EB bridge, which will consist of steel girders, concrete deck, and pavement tie-ins. Upon completion, traffic will be transferred onto this newly constructed portion. This will allow for one EB lane on the new structure while maintaining two WB lanes and one EB lane on the existing WB bridge, separated by PCB.

Phase 2: Complete Removal & Reconstruction of EB Bridge

To facilitate the removal of the remaining EB bridge, traffic will be maintained with two WB lanes and one EB lane on the WB bridge at the same dimension and separated by PCB per the previous phase. One ~~11~~ 12 foot-wide EB lane will use the newly constructed portion of the EB bridge from Phase 1. Once traffic is shifted, demolition of the remaining EB bridge will be completed. Reconstruction will then commence, with the new EB bridge expanded to 54 feet wide, including steel girders, concrete deck, and pavement tie-ins.

Commented [AB2]: Lane widths have been updated as per Technical Proposal Part B

Phase 3: Full WB Bridge Demolition & Reconstruction

To maintain traffic flow, the newly constructed 54-foot-wide EB bridge will carry two EB lanes and two WB lanes with ~~10~~ 11 foot wide inside lanes and ~~11~~ 10 foot wide outside lanes, separated by PCB. Crossovers for WB lanes were constructed in Pre-Phase 1. Once traffic is shifted onto the EB bridge, demolition of the entire existing WB bridge will take place. Construction will then commence on the new 46-foot-wide WB bridge, utilizing steel girders, concrete deck, and pavement tie-ins. Once both new bridges are fully constructed, traffic will be transitioned to its final configuration. The completed EB bridge will carry two 12-foot-wide EB lanes, while the newly constructed WB bridge will carry two WB 12-foot-wide lanes.

Commented [AB3]: Lane widths have been updated as per Technical Proposal Part B

Post-Phase 3: Crossover Removal & Safety Items

Temporary crossovers will be removed, and permanent traffic patterns will be restored. Final pavement markings, signage, and safety features will be installed to ensure a smooth transition to normal operations.

BU 2 – SR-149 Widening

Existing SR-149 shall be constructed in phases to maintain one 11-foot-wide lane in each direction. Work will proceed in half-width sections while ensuring traffic is maintained. Phasing SR-149 construction with utility coordination and stakeholder input minimizes delays, reduces impacts, and ensures efficient execution while maintaining traffic flow. Before starting Phase 4, temporary pavement shall be built on the west side of the existing pavement on SR-149 in three sections between STA122+00 and STA134+00 as specified in the plan sheets.

Phase 4: East Half-Section Construction

The east half of SR-149 will be reconstructed while maintaining one 11-foot-wide lane in each direction on the west half. Utility relocations and ROW acquisition will occur before construction per the relocation schedule dates provided in the bid documents. Access will be maintained for existing stakeholders on SR-149.

Phase 5: MOT Shift to New Pavement & Complete Remaining West Half

Part 1: Northbound (NB) traffic will be shifted to a single 11-foot lane onto the proposed pavement constructed in Phase 4. Southbound (SB) traffic will remain in the Phase 4 configuration. Center portions of SR-149 at the locations specified in the MOT plans shall be constructed.

Part 2: After Part 1 is complete, SB traffic will be shifted onto the newly constructed east half-section. The remaining west portion of SR-149 will then be reconstructed while still maintaining one 11-foot-wide lane in each direction. Access will be maintained for existing stakeholders on SR-149. Reco Drive realignment is planned to be completed in this phase. Resurfacing on the south end will be single lane traffic flow with flaggers, while the north end resurfacing will be coordinated after Phase 5.

Ramp Construction

Ramps B and C will be constructed during Phase 4, while Ramps A and D will be constructed in Phase 5. Ramps A, B, and C will be constructed part-width. Ramp tie-ins to SR-149 will be completed within the 21-day closure period allowed for each Ramp. Ramp D will be constructed within the 21-day closure period allowed.

The general construction sequence will begin with the installation of temporary pavement as needed, allowing traffic to be shifted to one side while maintaining a 12-foot-wide lane for traffic flow. Then the proposed ramp will be constructed part-width. Once this phase is complete, traffic will be transitioned onto the newly constructed pavement, and the remaining portion of the ramp will be built. The roadway tie-in to SR-149 for each Ramp will be constructed during allowed closures.

The required bar chart schedule can be found at the end of Part A. The schedule assumes a winter shutdown from January to February for the duration of the project. Beaver identifies the following major milestones:

Activity	Date
Contract Award	12th May 2025
Interim Design Review by ODOT BU1	15th August 2025
Final Design Review by ODOT BU1	21st November 2025
Interim Design Review by ODOT BU2	27th March 2026
Final Design Review by ODOOT BU2	3rd July 2026
IR70 Phase 1 Complete	13th October 2026
IR70 Phase 2 Complete	2nd June 2027
IR70 Phase 3 Complete	21st April 2028
IR70 Final Configuration Traffic Switch	19th May 2028
ROW Acquisition	10th July 2026
NEPA Permits	12th May 2025
Utility Relocations	30th July 2027
SR149 Phase 4 Complete	21st June 2028
SR149 Phase 5 (P1 and P2) Complete	25th May 2029
SR149 Final Configuration Traffic Switch	29th June 2029

Commented [AB4]: Table has been updated with revised dates after introducing asphalt and concrete calendars in P6 schedule.

Utility Constraints and Coordination

For the sanitary, water, Gas, and communication and electric, A comprehensive site survey and utility mapping will kick off the design. Utility coordination will be managed by the DBT Project Manager during both design and construction, with onsite coordination led by the Project Superintendent. Beaver will, as needed, assign project engineers for utility owner outreach and documentation, and work directly with the ODOT Utility Contact at District 11 to resolve issues with utility companies. If necessary, onsite meetings will be scheduled to address design and construction decisions. Buildable units will be considered to minimize schedule impacts from utility relocations. Plans shall be provided to the utilities at both the interim and final review submission stages.

Commented [AB5]: Coordination efforts by the DBT with utilities have been expanded upon as per deficiency in PTI response.

- Sanitary - The DBT shall coordinate and relocate the existing sanitary line between ramps A&D behind the new rear abutment. The DBT shall have recurring meetings with the Belmont County Sewer and Water District to keep

them informed on planned sanitary pipe relocations and alignments. All relocations and installations (if needed) shall be with input from the Belmont Water and Sewer District while abiding by the project scope documents.

- Water – The DBT shall make every effort to avoid impacts to existing water mains, service lines, etc. The DBT shall coordinate and relocate the water line if needed. The DBT shall have recurring meetings with the Belmont County Sewer and Water District to keep them informed on planned sanitary pipe relocations and alignments. All relocations and installations (if needed) shall be with input from the Belmont Water and Sewer District while abiding by the project scope documents.
- Gas – The DBT shall make every effort to avoid impacts to existing gas mains, service lines, etc. The DBT shall coordinate this work with the utility owner per the schedule provided in the scope document. The DBT shall hold recurring coordination meetings with the gas utility provider to keep them informed of the planned gas line relocations and alignments. All relocations and installations, if required, shall be performed in coordination with the utility provider.
- Communication & Electric – The DBT shall coordinate this work with the utility owner per the schedule provided in the scope document for fiber and aerial line relocation. The DBT shall hold recurring coordination meetings with the electric and communication utility providers to keep them informed of the planned relocations and alignments of their respective facilities. All relocations and installations, if required, shall be performed in close coordination with each utility provider to ensure alignment with project schedules and minimize service disruptions.
- ROW Acquisition and NEPA Permits – The DBT shall work with ODOT for any assistance required for the ROW Acquisition and NEPA permits. The DBT will keep ODOT informed of the planned construction schedule and activities within areas pending ROW acquisition. Work in these areas shall only proceed at the direction of ODOT, and the DBT shall ensure that no construction-related activities occur within these parcels until ODOT provides explicit authorization. Continuous communication will be maintained to align with ODOT's processes and avoid delays related to access, permitting, and compliance.

Commented [AB6]: Coordination efforts by the DBT with utilities have been expanded upon as per deficiency in PTI response.

Commented [AB7]: Coordination efforts by the DBT with utilities have been expanded upon as per deficiency in PTI response.

Commented [AB8]: Coordination efforts by the DBT with utilities have been expanded upon as per deficiency in PTI response.

Commented [AB9]: Coordination efforts by the DBT with utilities have been expanded upon as per deficiency in PTI response.

Commented [AB10]: Coordination efforts by the DBT with utilities have been expanded upon as per deficiency in PTI response.

Beaver and TRC plan to incorporate the following approved ATCs into the final design:

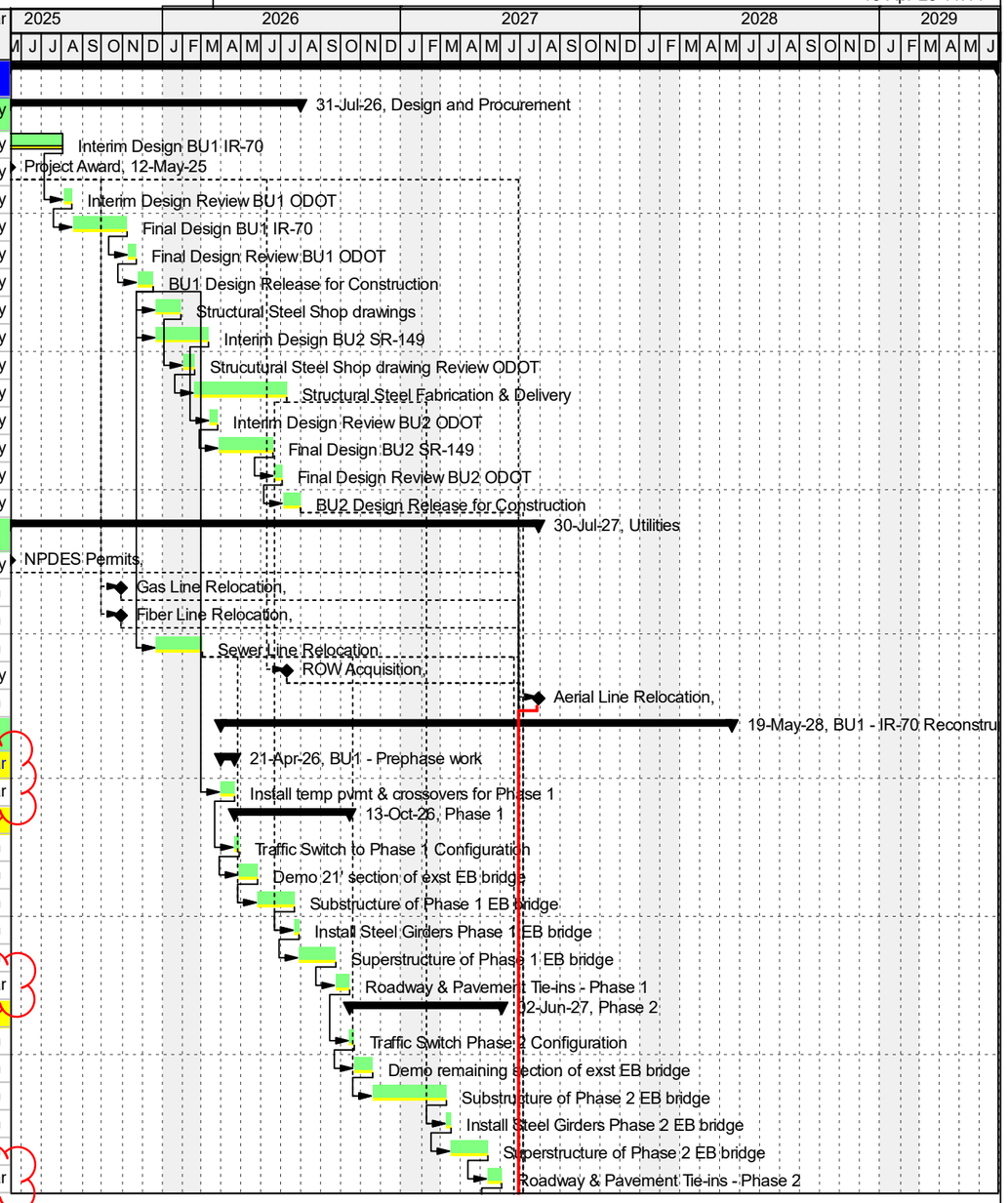
- **ATC 02** - Modification of curb type on SR-149
- **ATC 05** – Reuse of existing drainage facilities
- ~~ATC 06A - Flexibility in bridge beam selection - Steel Beams shown on plans; prestressed concrete will be considered in pricing phase.~~
- **ATC 07** - Alternative bridge structure type
- ATC 09 - Modification of bridge skew – ~~No skew is shown on the plans but is still being considered.~~
- **ATC 13** - Modification of side slopes along IR-70, SR-149, Reco Drive, and Ramps
- **ATC 14** – SS 863 Reinforced Soil Slopes

Commented [AB11]: ATC 06A has been removed from the Technical Proposal per the comment on ODOT PTI response.

Commented [AB12]: Skew has been included in the plan sheets in Technical Proposal Part B.

BEL70 - 9.35 Prelim Schedule | Submittal Schedule Layout | 13-Apr-25 11:14

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
BEL70 - 9.35 Prelim Schedule		216	0	12-May-25	29-Jun-29	
Design and Procurement		64	57	12-May-25	31-Jul-26	5 day w/ holiday
A1000	Interim Design BU1 IR-70	12	56	12-May-25	01-Aug-25	5 day w/ holiday
A1270	Project Award	0	0	12-May-25		5 day w/ holiday
A1010	Interim Design Review BU1 ODOT	2	56	04-Aug-25	15-Aug-25	5 day w/ holiday
A1020	Final Design BU1 IR-70	12	56	18-Aug-25	07-Nov-25	5 day w/ holiday
A1030	Final Design Review BU1 ODOT	2	56	10-Nov-25	21-Nov-25	5 day w/ holiday
A1620	BU1 Design Release for Construction	4	56	24-Nov-25	19-Dec-25	5 day w/ holiday
A1040	Structural Steel Shop drawings	6	61	22-Dec-25	30-Jan-26	5 day w/ holiday
A1530	Interim Design BU2 SR-149	12	56	22-Dec-25	13-Mar-26	5 day w/ holiday
A1050	Strucutural Steel Shop drawing Review ODOT	3	61	02-Feb-26	19-Feb-26	5 day w/ holiday
A1060	Structural Steel Fabrication & Delivery	20	61	20-Feb-26	09-Jul-26	5 day w/ holiday
A1540	Interim Design Review BU2 ODOT	2	56	16-Mar-26	27-Mar-26	5 day w/ holiday
A1550	Final Design BU2 SR-149	12	56	30-Mar-26	19-Jun-26	5 day w/ holiday
A1560	Final Design Review BU2 ODOT	2	56	22-Jun-26	03-Jul-26	5 day w/ holiday
A1630	BU2 Design Release for Construction	4	56	06-Jul-26	31-Jul-26	5 day w/ holiday
Utilities		116	0	12-May-25	30-Jul-27	
A1510	NPDES Permits	0	0		12-May-25*	5 day w/ holiday
A1280	Gas Line Relocation	0	0		31-Oct-25*	5 Day w/Holidays & Winter Shutdown
A1290	Fiber Line Relocation	0	0		31-Oct-25*	5 Day w/Holidays & Winter Shutdown
A1310	Sewer Line Relocation	2	63	22-Dec-25	03-Mar-26	5 Day w/Holidays & Winter Shutdown
A1570	ROW Acquisition	0	0		10-Jul-26*	5 day w/ holiday
A1300	Aerial Line Relocation	0	0		30-Jul-27*	5 Day w/Holidays & Winter Shutdown
BU1 - IR-70 Reconstruction		112	58	01-Apr-26	19-May-28	
BU1 - Prephase work		3	42	01-Apr-26	21-Apr-26	BEL70 Asphalt Calendar
A1070	Install temp pvmt & crossovers for Phase 1	3	42	01-Apr-26	21-Apr-26	BEL70 Asphalt Calendar
Phase 1		25	59	22-Apr-26	13-Oct-26	
A1080	Traffic Switch to Phase 1 Configuration	1	51	22-Apr-26	28-Apr-26	5 Day w/Holidays & Winter Shutdown
A1090	Demo 21' section of exst EB bridge	4	51	29-Apr-26	26-May-26	5 Day w/Holidays & Winter Shutdown
A1100	Substructure of Phase 1 EB bridge	8	51	27-May-26	21-Jul-26	5 Day w/Holidays & Winter Shutdown
A1110	Install Steel Girders Phase 1 EB bridge	1	51	22-Jul-26	28-Jul-26	5 Day w/Holidays & Winter Shutdown
A1120	Superstructure of Phase 1 EB bridge	8	51	29-Jul-26	22-Sep-26	5 Day w/Holidays & Winter Shutdown
A1130	Roadway & Pavement Tie-ins - Phase 1	3	42	23-Sep-26	13-Oct-26	BEL70 Concrete Calendar
Phase 2		33	65	14-Oct-26	02-Jun-27	
A1140	Traffic Switch Phase 2 Configuration	1	56	14-Oct-26	20-Oct-26	5 Day w/Holidays & Winter Shutdown
A1150	Demo remaining section of exst EB bridge	4	56	21-Oct-26	17-Nov-26	5 Day w/Holidays & Winter Shutdown
A1160	Substructure of Phase 2 EB bridge	8	56	18-Nov-26	10-Mar-27	5 Day w/Holidays & Winter Shutdown
A1170	Install Steel Girders Phase 2 EB bridge	1	56	11-Mar-27	17-Mar-27	5 Day w/Holidays & Winter Shutdown
A1180	Superstructure of Phase 2 EB bridge	8	56	18-Mar-27	12-May-27	5 Day w/Holidays & Winter Shutdown
A1190	Roadway & Pavement Tie-ins - Phase 2	3	47	13-May-27	02-Jun-27	BEL70 Concrete Calendar



ODOT 253000
BEL-70-9.35 Interchange Improvement

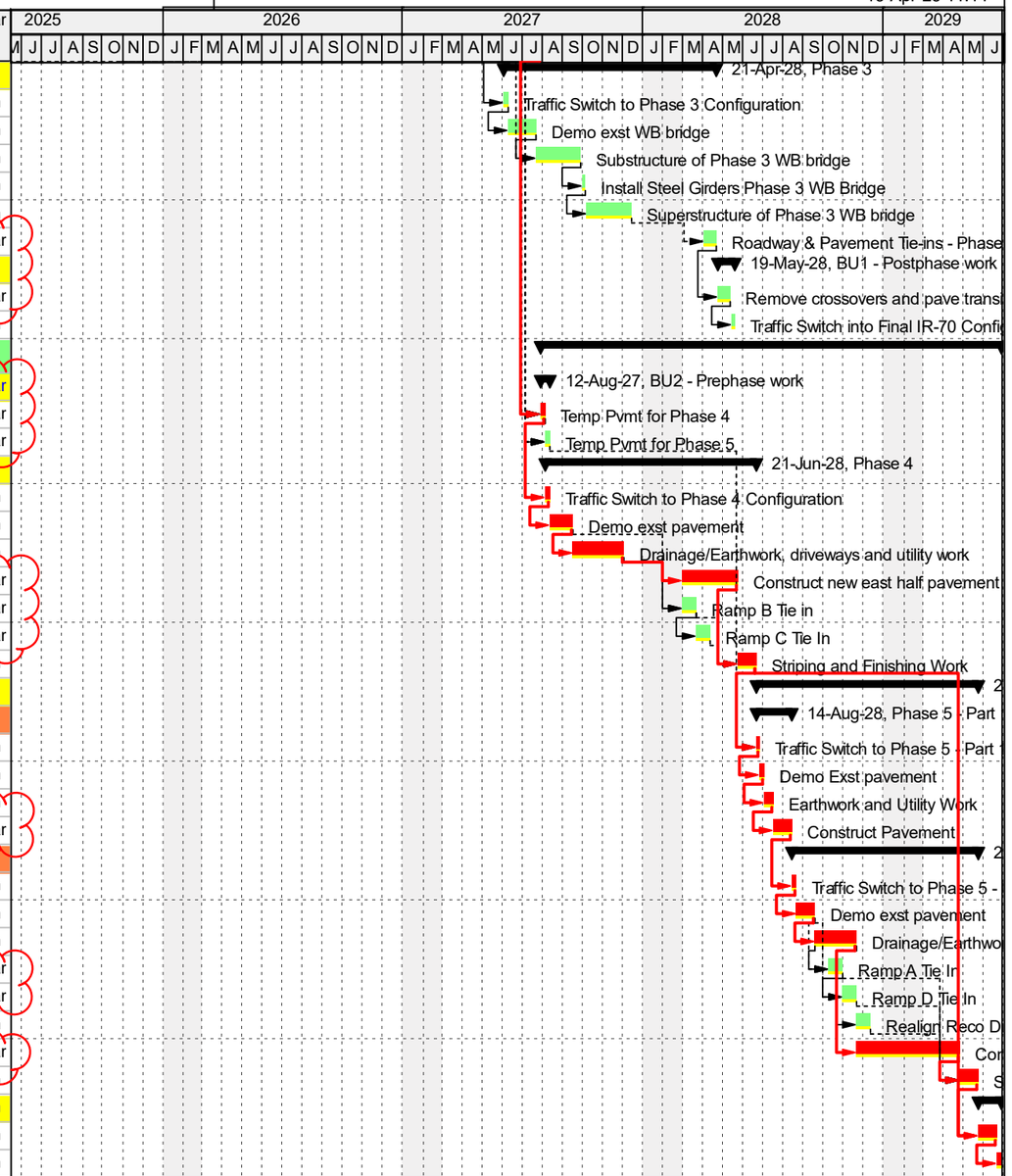
The Beaver Excavating Company

ODOT Bid Date 04/18/2025

The following changes have been made;
- Utility relocations have been updated as milestone dates.
- BEL70 Asphalt Calendar - Calendar added with winter shutdown for months of Dec, Jan, Feb & March.
- BEL70 Concrete Calendar - Calendar added with winter shutdown for months of Dec, Jan & Feb.

BEL70 - 9.35 Prelim Schedule | Submittal Schedule Layout | 13-Apr-25 11:14

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
Phase 3		46	58	03-Jun-27	21-Apr-28	
A1200	Traffic Switch to Phase 3 Configuration	1	56	03-Jun-27	09-Jun-27	5 Day w/Holidays & Winter Shutdown
A1210	Demo exst WB bridge	6	56	10-Jun-27	21-Jul-27	5 Day w/Holidays & Winter Shutdown
A1220	Substructure of Phase 3 WB bridge	10	56	22-Jul-27	29-Sep-27	5 Day w/Holidays & Winter Shutdown
A1230	Install Steel Girders Phase 3 WB Bridge	1	56	30-Sep-27	06-Oct-27	5 Day w/Holidays & Winter Shutdown
A1240	Superstructure of Phase 3 WB bridge	10	56	07-Oct-27	15-Dec-27	5 Day w/Holidays & Winter Shutdown
A1520	Roadway & Pavement Tie-ins - Phase 3	3	41	03-Apr-28	21-Apr-28	BEL70 Concrete Calendar
BU1 - Postphase work		4	58	24-Apr-28	19-May-28	
A1250	Remove crossovers and pave transitions	3	45	24-Apr-28	12-May-28	BEL70 Concrete Calendar
A1260	Traffic Switch into Final IR-70 Configuration	1	49	15-May-28	19-May-28	5 Day w/Holidays & Winter Shutdown
BU2 - SR-149 Reconstruction		100	0	30-Jul-27	29-Jun-29	
BU2 - Prephase work		2	27	30-Jul-27	12-Aug-27	BEL70 Asphalt Calendar
A1430	Temp Pvmt for Phase 4	1	4	30-Jul-27	05-Aug-27	BEL70 Asphalt Calendar
A1440	Temp Pvmt for Phase 5	1	27	06-Aug-27	12-Aug-27	BEL70 Asphalt Calendar
Phase 4		46	0	06-Aug-27	21-Jun-28	
A1320	Traffic Switch to Phase 4 Configuration	1	4	06-Aug-27	12-Aug-27	5 Day w/Holidays & Winter Shutdown
A1330	Demo exst pavement	5	4	13-Aug-27	16-Sep-27	5 Day w/Holidays & Winter Shutdown
A1340	Drainage/Earthwork, driveways and utility work	11	4	17-Sep-27	02-Dec-27	5 Day w/Holidays & Winter Shutdown
A1350	Construct new east half pavement	12	0	01-Mar-28	24-May-28	BEL70 Concrete Calendar
A1470	Ramp B Tie in	3	6	01-Mar-28	21-Mar-28	BEL70 Concrete Calendar
A1480	Ramp C Tie In	3	6	22-Mar-28	12-Apr-28	BEL70 Concrete Calendar
A1360	Striping and Finishing Work	4	0	25-May-28	21-Jun-28	5 Day w/Holidays & Winter Shutdown
Phase 5		48	0	22-Jun-28	25-May-29	
Phase 5 - Part 1		8	0	22-Jun-28	14-Aug-28	
A1370	Traffic Switch to Phase 5 - Part 1 Configuration	1	0	22-Jun-28	26-Jun-28	5 Day w/Holidays & Winter Shutdown
A1580	Demo Exst pavement	1	0	26-Jun-28	03-Jul-28	5 Day w/Holidays & Winter Shutdown
A1600	Earthwork and Utility Work	2	0	03-Jul-28	17-Jul-28	5 Day w/Holidays & Winter Shutdown
A1610	Construct Pavement	4	0	17-Jul-28	14-Aug-28	BEL70 Concrete Calendar
Phase 5 - Part 2		41	0	14-Aug-28	25-May-29	
A1590	Traffic Switch to Phase 5 - Step 2 Configuratior	1	0	14-Aug-28	21-Aug-28	5 Day w/Holidays & Winter Shutdown
A1380	Demo exst pavement	4	0	21-Aug-28	18-Sep-28	5 Day w/Holidays & Winter Shutdown
A1390	Drainage/Earthwork, driveways and Utility work	9	0	18-Sep-28	20-Nov-28	5 Day w/Holidays & Winter Shutdown
A1490	Ramp A Tie In	3	10	09-Oct-28	30-Oct-28	BEL70 Concrete Calendar
A1500	Ramp D Tie In	3	10	30-Oct-28	20-Nov-28	BEL70 Concrete Calendar
A1400	Realign Reco Dr	3	11	20-Nov-28	11-Dec-28	5 Day w/Holidays & Winter Shutdown
A1410	Construct new west half pavement	10	0	20-Nov-28	27-Apr-29	BEL70 Concrete Calendar
A1420	Striping and Finishing work	4	0	27-Apr-29	25-May-29	5 Day w/Holidays & Winter Shutdown
BU2 - Postphase work		5	0	25-May-29	29-Jun-29	5 Day w/Holidays & Winter Shutdown
A1450	Finishing work and Final Striping	4	0	25-May-29	22-Jun-29	5 Day w/Holidays & Winter Shutdown
A1460	Traffic Switch into Final SR-149 Configraution	1	0	22-Jun-29	29-Jun-29	5 Day w/Holidays & Winter Shutdown



ODOT 253000 BEL-70-9.35 Interchange Improvement	The Beaver Excavating Company	ODOT Bid Date 04/18/2025